



BEAUFORT COUNTY
STORMWATER MANAGEMENT UTILITY BOARD

Wednesday, May 7, 2014

2:00 p.m.

Beaufort Industrial Village, Building 3 Conference Room
104 Industrial Village Road, Beaufort
843.255.2805



In accordance with South Carolina Code of Laws, 1976, as amended, Section 30-4-80(d), all local media was duly notified of the time, date, place and agenda of this meeting.

1. CALL TO ORDER – 2:00 p.m.

- A. Approval of Agenda
- B. Approval of Minutes – April 2, 2014 ([backup](#))

2. INTRODUCTIONS

3. EXECUTIVE SESSION

- A. “Discussion of negotiations incident to proposed contractual arrangements and proposed sale or purchase of property, the receipt of legal advice where the legal advice relates to a pending, threatened, or potential claim or other matters covered by the attorney-client privilege, settlement of legal claims, or the position of the public agency in other adversary situations involving the assertion against the agency of a claim.”

3. PUBLIC COMMENT

4. REPORTS

- A. Special Discussion – MS4 Permit Submittal, Eric Larson, P.E.
- B. Utility Update – Eric Larson, P.E. ([backup](#))
- C. Monitoring Update – Eric Larson, P.E. ([backup](#))
- D. Stormwater Implementation Committee Report – Eric Larson, P.E. ([backup](#))
- E. Stormwater Related Projects – Eric Larson, P.E. ([backup](#))
- F. Upcoming Professional Contracts Report – Eric Larson, P.E. ([backup](#))
- G. Regional Coordination – Eric Larson, P.E. ([backup](#))
- H. Financial Report ([backup](#))

5. UNFINISHED BUSINESS

- A. 10 Percent Effective Impervious Area discussion and application of the rule to the Bluffton Gateway Development Agreement – Eric Larson, P.E. and Tony Maglione, P.E. ([backup](#))

6. NEW BUSINESS

7. PUBLIC COMMENT

8. NEXT MEETING AGENDA

- A. June 4, 2014 ([backup](#))

9. ADJOURNMENT



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

April 2, 2014 at 2:00 p.m. in Beaufort Industrial Village Building #2 Conference Room
Draft April 24, 2014

Board Members

Present Absent

Don Smith
William Bruggeman
Patrick Mitchell
Allyn Schneider
James Fargher

Ex-Officio Members

Present Absent

Andy Kinghorn
Scott Liggett
Kimberly Jones
Van Willis

Beaufort County Staff

Eric Larson
Eddie Bellamy
Danny Polk
Carolyn Wallace
Alan Eisenman

Visitors

Lamar Taylor, City of Beaufort
Bryan McIlwee, Town of Hilton Head Island
Paul Moore, Ward Edwards
Reed Armstrong, Coastal Conservation League
Danielle Mickel, USCB WQ Lab
Mike Monday, USCB WQ Lab
Bill Weiss, Low Country Institute

1. Meeting called to order – Don Smith

- A. Agenda – Approved.
- B. March 5, 2014 Minutes – Approved.

2. Introductions – Completed.

3. Public Comment(s) – Mr. Allyn Schneider voiced concerns that he read an article in the newspaper that the proposed shopping center at the intersection of Highway 46 and 278 is requesting to be allowed to have 20% effective imperviousness (EI). Mr. Eric Larson said this development agreement is mentioned in his SW Manager report. The drainage plan has been submitted for his review for the Natural Resources Committee meeting on Friday. However, he was still reviewing and not prepared to speak to the finding of his review. He will be reviewing the drainage plan on three criteria; volume control, release rate, and water quality. The drainage plan may meet the required numbers for all three of these criteria but not the 10% EI. Discussion ensued. The board member's understanding when the BMP Manual was revised, was that the 10% EI was not a target but a requirement. Mr. Larson said he understood the sentiment of the board and would consider when providing his report to the Natural Resources Committee on Friday.

4. Reports –

- A. **Town of Bluffton** – Ms. Kim Jones provided a presentation on the town's stormwater program ([please see attachment](#)). She discussed the town's inspection program, the May River modeling project, the town's community outreach efforts, and maintenance and street sweep projects performed by the town's Public Works Department.
- B. **Monitoring Update** – Mr. Eric Larson

Mr. Larson submitted his written report in advance ([please see attachment](#)). He discussed the USCB lab and the coordination with the Town of Port Royal on a monitoring plan near shellfish station 15-25.

C. Utility Update – Eric Larson

Mr. Larson submitted his written report in advance ([please see attachment](#)). He provided an update on the implementation of the MS4 program, the development of a pet waste brochure and the purchase of “dog-bone” bag dispensers in partnership with the Solid Waste and Recycling Department to be distributed to new pet owners that adopt from the County Animal Shelter and as giveaways for the upcoming Earth Day events.

Promotions - Mr. Larson also congratulated Danny Polk on his promotion to Stormwater Utility Inspection Supervisor and Seth Stanbery promotion to Stormwater Infrastructure and MS4 / GIS Data Manager. These promotions are some of the first changes to be made to implement the MS4 permit and reflect the utility’s changing needs in inspection and data management. Evelyn Sutton was also promoted to Utility Operations Coordinator to reflect a change with her job duties related to utility locates and pending implementation of providing 811 locates of our stormsewer system.

Jellyball - Mr. Larson is in the process of reviewing the stormwater pollution prevention plan for the proposed Carolina Jellyball processing facility in Lobeco and unloading facility on Golden Dock Road in St. Helena Island.

D. Stormwater Implementation Committee Report – Eric Larson

Mr. Larson submitted his written report in advance ([please see attachment](#)). The SWIC met last month. Mrs. Carolyn Wallace presented the Stormwater Management fee budget for FY15 and the members discussed Illicit Discharge, Detection, and Elimination (IDDE) MCM program needs.

E. Upcoming Professional Contracts Report – Eric Larson

Mr. Larson submitted his written report in advance ([please see attachment](#)).

US 278 retrofit ponds – Bid due date has again been extended again pending changes to one of the ponds and access changes to all four of the ponds. Mr. Polk is trying to get the addendum issued and obtain an easement from Berkeley Hall to use their maintenance road as one of the access points for the pond.

Administration Building Complex Parking Lot – Project still out for bid.

Okatie East Monitoring Program – Mr. Larson has received the proposal from the consultants, Ward Edwards and is in the process of executing the contract.

Trask Parkway and Paige Pointe Overtopping studies – Andrews and Burgess are finishing up these two projects. Results will be added to the list of potential retrofit projects.

A. Financial Report - Alan Eisenman – Mr. Eisenman presented the un-audited February interim financial statements for the Stormwater Utility ([please see attachment](#)). Following are the highlights from his presentation:

- Actual February FY14 revenues are \$381K more than Actual February FY13 revenues. Mr. Eisenman met with the Deputy Treasurer and they analyzed the data and determined that more property owners paid their taxes before the tax sale this last year and more property owners are currently paying their taxes earlier this year causing this surge in revenue.
- Actual February FY14 expenses are at 53% of budget for FY13.
- Unrestricted Fund Balance from Balance Sheet Increased by \$580,000 or 25% since last FY at this time.

Cash from Balance Sheet Increased by \$386,000 or 10% since last FY at this time.

F. Fiscal Year 2015 Proposed Budget – Mrs. Carolyn Wallace

In her presentation of the proposed FY 2015 budget ([please see attachment](#)), Mrs. Wallace presented three proposed new or expanded programs: MS4 Program, Expansion of the Extent of Service (EOS),

and becoming a provider for the South Carolina 811 (SC811) system. She detailed the budgetary needs to include these expanded or new programs.

She reported on ongoing and upcoming accounting changes. This year a third fund is being created for the Capital Improvement Fund. In FY 2016 it is anticipated that a fourth fund for the Regulatory Section will be created to better account for the section's efforts and expenditures and will include all efforts to address the MCMs in the new MS4 permit.

Mr. Schneider asked about the efforts to address the military installations' delinquent SWU fees. Mr. Van Willis said he feels that every citizen benefits to a certain extent from the efforts of the SWU and a portion of the SWU fees should be paid by the military installations. But he also feels that a portion of the fees can be abated if they can get the military to discuss this with the utility.

Discussion ensued concerning the Capital Improvement Fund and the need for a Reserve Policy.

Staff will be working on developing a reserve policy in the future.

Mr. Scott Liggett asked about the timeline for the update to the Stormwater Management Master Plan (SMMP). Mrs. Wallace said this is a 10-year plan and the update is due in FY2016. The cost of the SMMP is in the FY 2016 budget but it is crucial that the scope is determined by the SWIC in this upcoming fiscal year 2015 so that the contract can be advertised for bids at the start of FY 2016, to give the consultant, county and municipalities ample time to develop the management plan in FY2016.

- G. Maintenance Projects Report** – Mr. Eddie Bellamy reported on (2) major projects, Okatie East Retrofit and Forrest Field Subdivision. He presented (13) minor and/or routine maintenance projects in a shortened format. He also mentioned that they investigated the drainage issues for Big Estate. The cause of the drainage issue may be the improvements to the duck ponds in the area. They still have not identified a solution.

5. Unfinished Business – Eric Larson

A. Regional Coordination - Eric Larson

Mr. Larson submitted his written report in advance ([please see attachment](#)).

Battery Creek Pond – Mr. Paul Moore said the surveying is on-going. The wet weather has delayed this effort but they should soon have what they need to start the design work.

B. Forby Tract Land Acquisition – Eric Larson

After receiving two proposals it was decided not to pursue the study or the purchase of the site using Stormwater Utility Funds. Costs for the study work were rather high, probably due to the short deadline, and we were concerned that the project need would not be justified.

- 6. New Business** – Mr. Don Smith mentioned that there will be four mechanical BMPs installed on the Albergotti Bridge project.

7. Public Comment – None.

- 8. Next Meeting Agenda** – Mr. Larson changed the order of his report on the upcoming agenda so that his presentation will flow better. ([Please see attachment](#)).

If possible, the board would like the County Attorney to appear to discuss the military installations' delinquent SWU fees. Agenda approved with this possible addition to the agenda.

9. Meeting Adjourned.

Town of Bluffton-

Stormwater Management Activities 2013 - 2014

April 2, 2014



2013 Projects/Program Overview

- 319 Phase 1 New Riverside Pilot Project Completed
- Inspection Programs
 - Sediment & Erosion Control
 - Stormwater Infrastructure GPS
 - Verdier Cove Flow
 - Water Quality Monitoring
- May River Watershed Modeling Project
 - Land Use Inventory
 - XPSWMM Modeling
- Community Outreach & Participation Programs
 - Septic System Assistance Program/Sewer Master Plan
 - Educational Outreach & Community Participation
- Public Works
 - Ditch Maintenance
 - Street Sweeper & Wash Rack



319 Phase1: New Riverside Pilot Project

Constructed stormwater pond to treat 300 acre sub-watershed



Sediment & Erosion Control

Conducted >2,000 S&EC inspections



GPS Infrastructure & Verdier Cove Flow Monitoring

Collected >1,600 GPS SW infrastructure sites

Conducted >200 Verdier Cove flow inspections



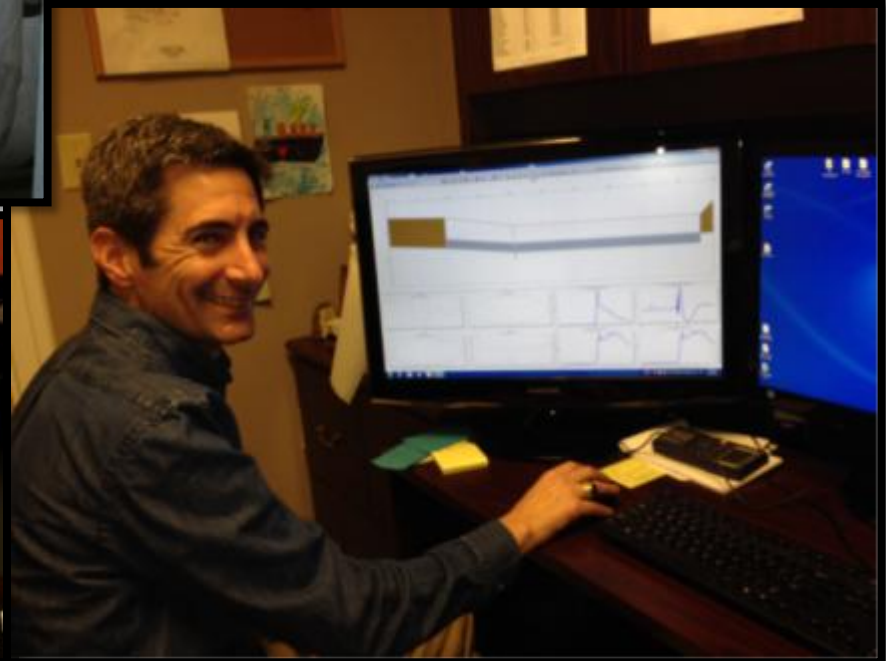
Water Quality Monitoring

Collected nearly 700 water quality test samples



Land Use Inventory & Modeling

Created land use inventory of 2002 & modeled headwaters conditions



Septic System Maintenance Assistance & Sanitary Sewer Connection

Facilitated 20 septic system inspections and pump-outs/repairs within the Town's jurisdiction in the Buck Island/Simmons ville Roads area. Phase 3 of CDBG-supported sewer connection is underway.



May River Watershed Sewer Master Plan – BJWSA & Town of Bluffton



Educational Outreach

Conducted ~50 speaking engagements reaching ~3,000 participants



Community Participation

Coordinated 2 community clean-ups with >300 participants and 2 ½ tons of debris collected



Public Works

Purchased an equipment
Wash Rack and Street
Sweeper which is used on
~16 miles of roads.



May River Watershed Action Plan 2014

- Outreach/Participation
 - 14th Annual May River Cleanup & Earth Day Celebration
 - Educational Kiosk for Town Hall
 - Stormwater Educational Video
 - May River Watershed Road Signs
- Retrofit Projects
 - 319 Phase 2 Pine Ridge
 - RFQ Stormwater Consulting Services
- Funding




14th Annual May River Cleanup & Earth Celebration

Saturday, April 26th

- 9 AM – Noon:
Cleanup @ Oyster Factory Park
- 11 AM – 4:00 PM:
Earth Day Celebration
off Calhoun St.

Join us at
OYSTER FACTORY PARK
for the
**May River Cleanup
Elementary School Challenge**


Battle against your fellow elementary schools to help clean up and protect the May River. The school with the most participation will win a free Critters of the Lowcountry presentation from Joe Maffo with Critter Management.



where:
Oyster Factory Park, Bluffton

when:
April 26, 2014 from 9AM-12PM

r.s.v.p.
blewis@townofbluffton.com



Educational Kiosk for Town Hall

- Developed with SWU partnership
- Content from Carolina Clear & PRSF



Stormwater Educational Video

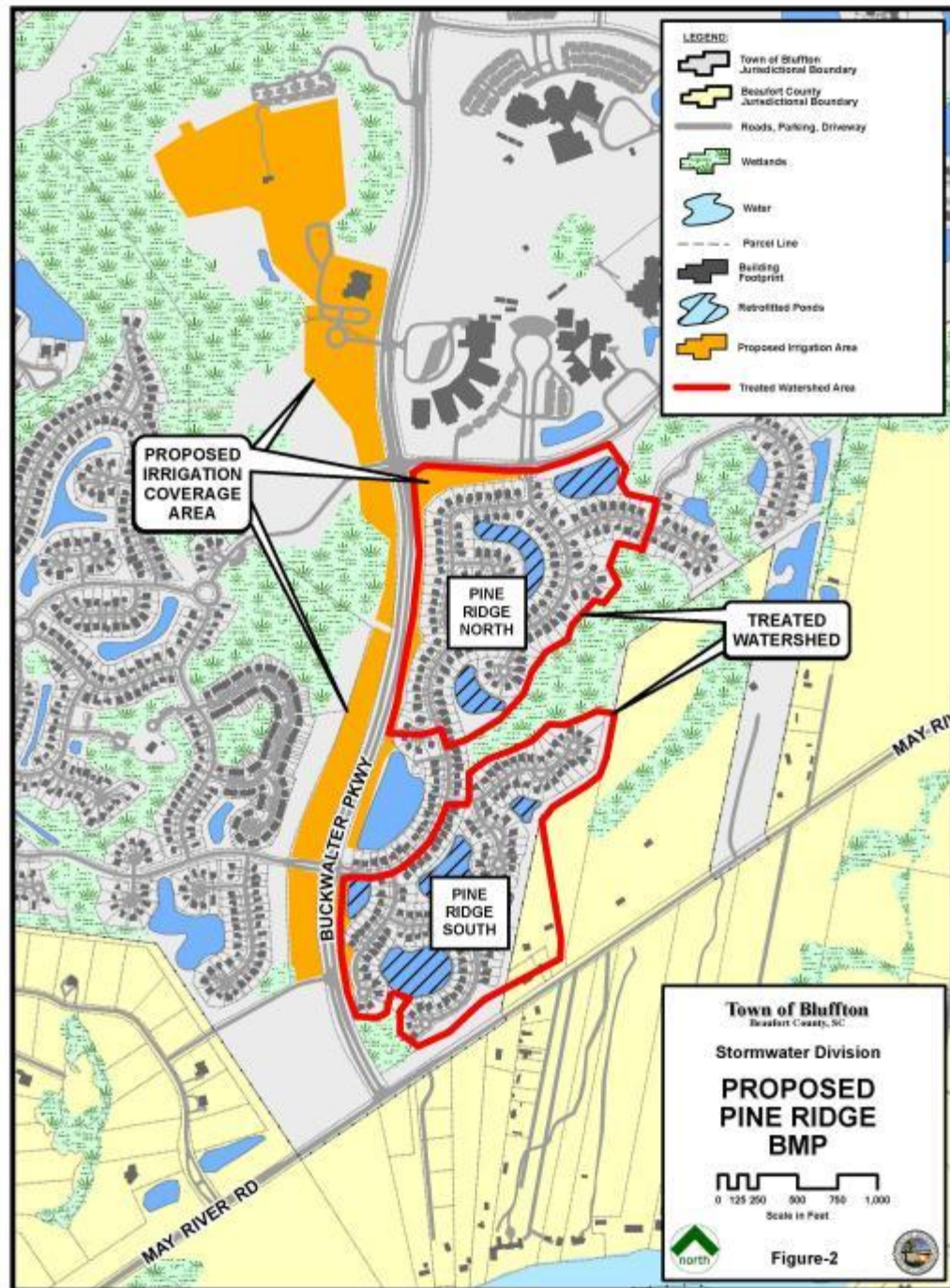


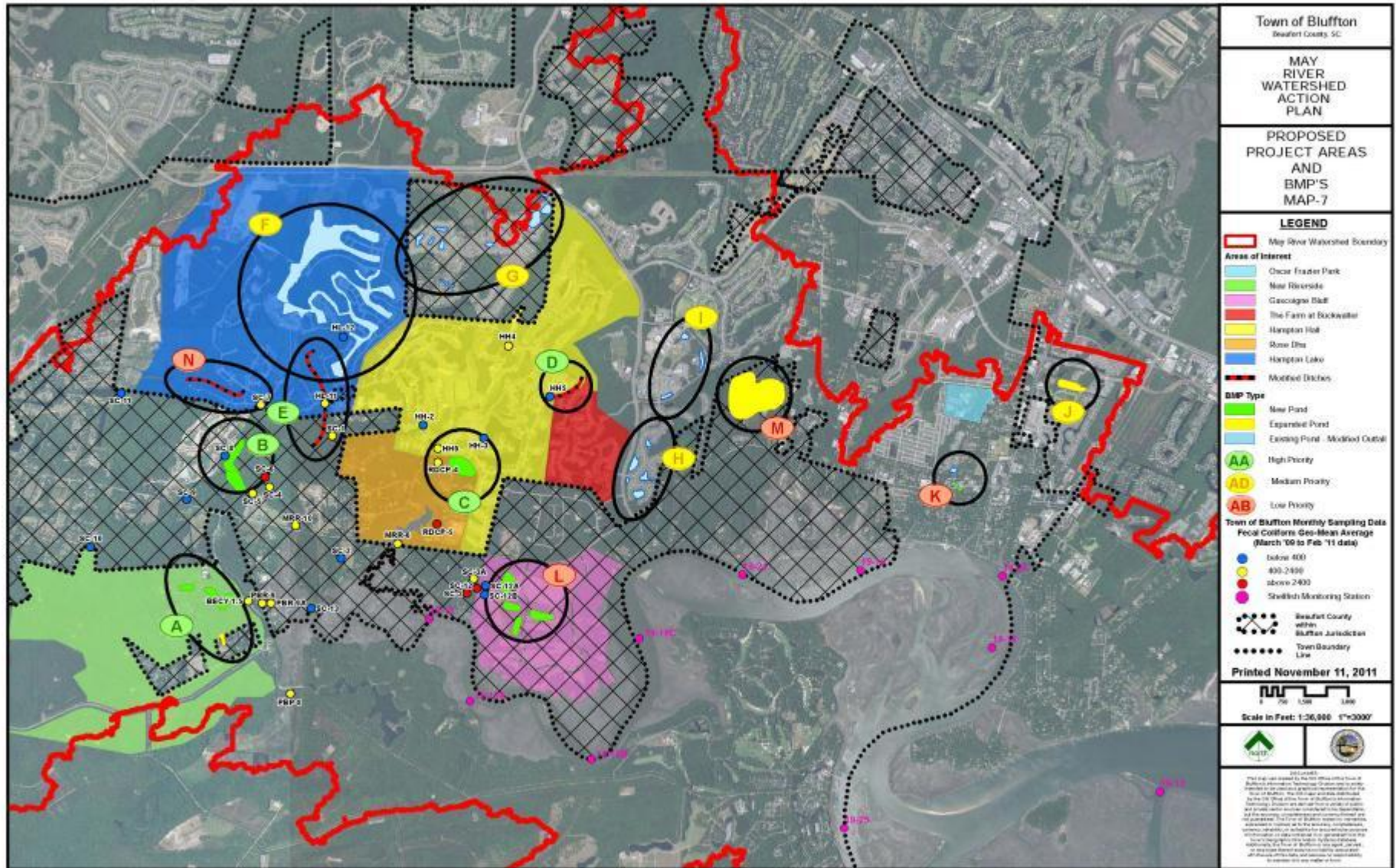
May River Watershed Signs



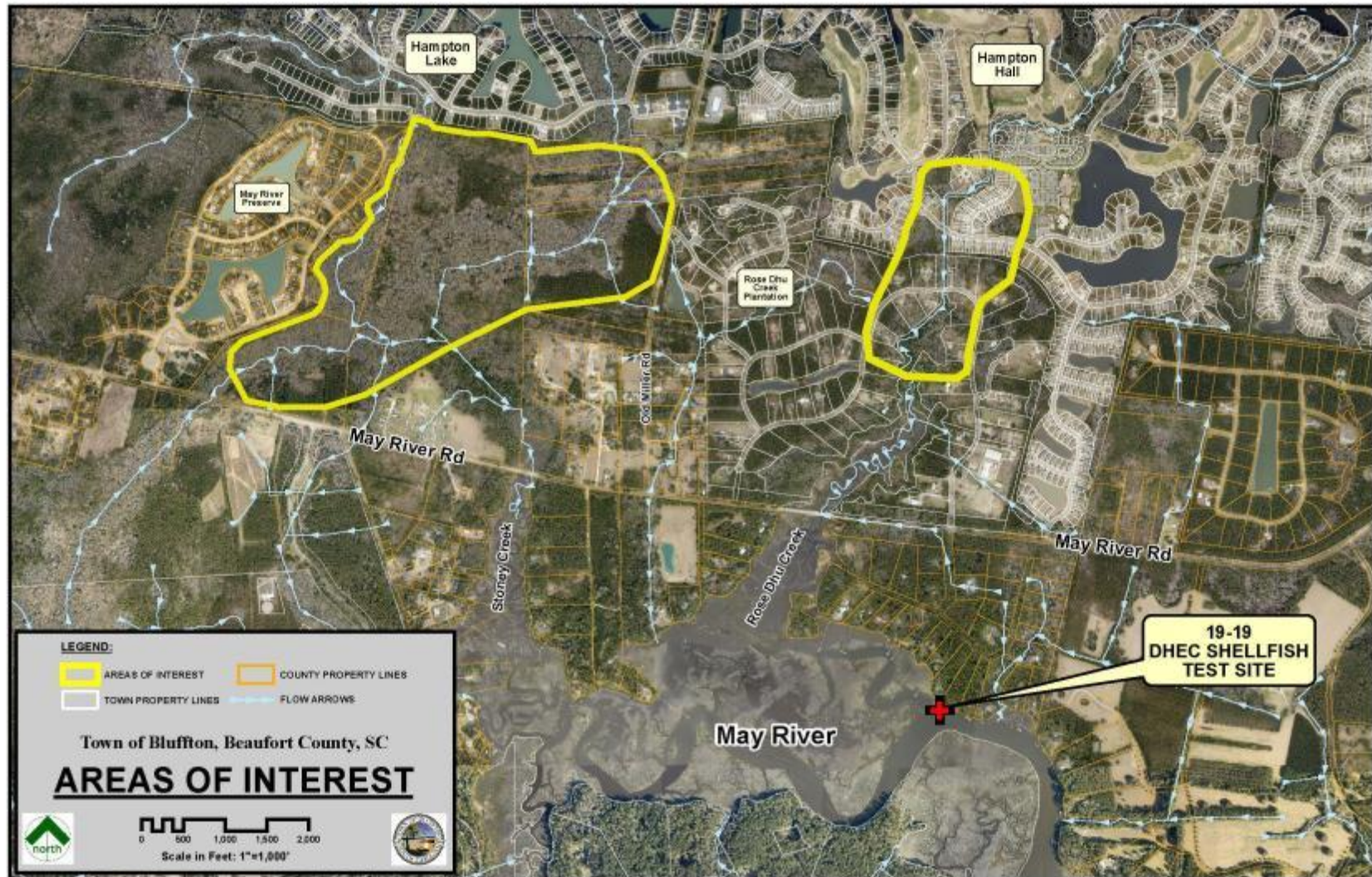
319 Grant Phase 2 Pine Ridge

- Easement signed by Town and POA
- Next Steps -
 - Pre-project flow monitoring
 - Design contract
 - Construction





Recent DHEC Funding - \$100,000







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



April 2, 2014

Stormwater Manager's report for the Stormwater Utility Board Meeting

Utility Update

1. DHEC and MS4 update – We continue to develop a plan for implementation of the MS4 program. I have been interviewing other MS4 programs across the state to learn how others are implementing their programs and how they are sharing tasks between multiple jurisdictions. I will be addressing the Natural Resources Committee in May to provide an overview of the MS4 program and the status of our County Stormwater program.
2. Budget for FY15 – Submitted in early March. We are awaiting feedback from the County Administrator's office.
3. Public Education Effort / Dog Waste Education – We recently partnered with the Solid Waste Division to create a brochure educating pet owners about pollution from fecal deposits. Recycling paid for baggie dispensers that clip onto leashes and Stormwater paid for printing of the brochures. They will be distributed to new pet owners that adopt from the County Animal Shelter.
4. Earth Day 2014 – I am considering partnering with the Friends of the Bluffton Dog Park to distribute dog waste baggie dispensers and brochures during the May River Clean-Up and Earth Day Celebration on Saturday April 26th. We may also distribute materials at other events associated with Earth Day.
5. Larson, Wallace, and Polk will be attending the SESWA spring conference next week. It includes a session by EPA Region 4.
6. Larson, Polk, Kim Jones (Bluffton) and Jeff Buckalew (HHI) attended the quarterly meeting of the SCASM earlier this month. Topics ranged from a DHEC update, post-construction BMP design and inspection, and BMP inventory
7. I attended a training seminar on March 25th. "Current Stormwater Issues in South Carolina". This was training intended for me to get better acclimated to state regulations.
8. Promotions – Danny Polk was promoted to Stormwater Utility Inspection Supervisor and Seth Stanbery was promoted to Stormwater Infrastructure and MS4 / GIS Data Manager. These promotions are some of the first changes to be made to implement the MS4 permit and reflect our changing needs in inspection and data management. Evelyn Sutton was also promoted to Utility Operations Coordinator to reflect a change with her job duties related to utility locates and pending implementation of providing 811 locates of our stormsewer system.

Monitoring Update

1. USCB Lab – County Council has established an action item to develop a strategic plan for the “next steps” of the water quality lab, specifically the implementation of the plan to utilize the lab for all water quality monitoring efforts by the County and others. I have met with Dr. Warren and begun the process of outlining the plan. The Council would like to see the plan in place by January 2015.
2. The Town of Port Royal has asked me to revisit a monitoring plan for the area near shellfish station 15-25. It is located in the Dowlingwood Tributary of Battery Creek. It is the only site impaired within the watersheds within the limits of the Town of Port Royal. Danny Polk and Dan Ahern had looked into this before and performed sampling at several locations in the vicinity of Parris Island Gateway and Savannah Highway intersection. As we move forward, we will try to identify sources of fecal contamination and develop potential project concepts.

Stormwater Implementation Committee (SWIC) Report

1. The SWIC met on March 12th. The topics were the [Stormwater Management fee budget for FY15](#) and Illicit Discharge, Detection, and Elimination (IDDE) program needs. ([See attached draft minutes](#))

Stormwater related Projects

1. Proposed Carolina Jellyball processing facility in Lobeco and unloading facility on Golden Dock Road in St. Helena Island – No action since last report.
2. Drainage issue on H.E. McCracken Circle in Bluffton – I recently met with Town staff to discuss recent field investigations and potential solutions. Town of Bluffton staff is going to conduct more field work. County staff will be assisting with providing cost estimates for alternatives.
3. Bluffton Gateway Development Agreement – I am in the process of reviewing the stormwater design for the proposed site. The applicant has requested a modification to the “10% effective imperviousness” requirement in the BMP Manual. Therefore, before the development agreement is approved by the County Council, the Natural Resources Subcommittee for the agreement has asked me to prepare an opinion on the design and the modification request. A meeting with the sub-committee and the applicant is scheduled for April 4, 2014.
4. Infrastructure crew performed on-going maintenance needs. There are several needs throughout the County that I, as the Stormwater Engineer, will be involved in over the next couple of months trying to find a solution.

Professional Contracts Report

1. US 278 retrofit ponds – Bid due date has again been extended again pending changes to one of the ponds and access changes. Changes are made and an addendum is pending.

Permit modifications with DHEC and the County DRT are in process. SCDOT permits are approved but likely not needed due to plan changes.

2. County Admin. Complex Retrofit Project – The project is currently out for bid. A Per-bid conference was held March 17th.
3. Consultant procurement for the Carolina Jellyball application is still on hold pending a submittal from the applicant.
4. A RFP for a stormwater consultant to assist with the setup of the MS4 program is also on hold pending development of a MS4 implementation strategy.
5. Water Budget Study – I have received a draft of the final report and will be reviewing it over the next month. Dr. Badr will be presenting the findings to the Board in the upcoming months.
6. Okatie East BMP monitoring – I am awaiting a proposal from Ward Edwards to assist the County with data collection and analysis for the volume control study recommended by the Board last month.
7. Forby Tract – After receiving two proposals from firms with previous experience with the site and issues, I, along with the County Administrator's office, decided not to pursue the study or the purchase of the site using Stormwater Utility Funds. Costs for the study work were rather high, probably due to the short deadline, and we were concerned that the project need would not be justified.
8. Trask Parkway and Paige Pointe Overtopping studies – Andrews and Burgess are finishing up these two projects initiated by Mr. Ahern and Mr. Klink last year. Results will be added to our list of potential retrofit projects.

Regional Coordination

1. Battery Creek Pond – Still in design phase. (Lamar Taylor may report)
2. Stoney Creek – RFP for consultant currently is being advertised. (Kim Jones may report)
3. Salinity Study - On going. Nothing new to report.
4. Sea Level Rise and future planning – On going. Nothing new to report.
5. Okatie 391 Grant – Nothing new to report.



SW Utility Funding For FY2015

SWIC Meeting
March 12, 2014

Outline

- 2013 Accomplishments
- On-going Projects and Issues
- Major Challenges
- Total SW Fees Collected in TY2012
- Calculating the Single Family Units (SFUs)
- FY2015 Deliverables
- FY2015 Budget and Budget/SFUs
- FY2015 (& FY2016) Cost-Shares
- Questions

2013 Accomplishments

- Funded development of USCB Lab
- Okatie East Retrofit project
- Cost share with CoB on Battery Creek 319 grant project
- Lidar and 2013 DEM
- Began Salinity Study and Water Budget Study
- Others?

Initiatives In Progress

- Complete the Salinity and Water Budget Studies
- Implementing the WQ Lab
- Improve mapping / determine MS4 outfalls
- Develop a pond maintenance system
- MS4 permit development
- Establishing MS4 programs (IDDE, Const. RO, PC-BMP)

Initiatives In Progress Con't

- Implement priority WQ retrofit projects to include establishing a CIP Fund
 - Highway 278 ponds
 - County Admin Bldg.
 - Others in planning stages

Initiatives In Progress Con't

- Battery Creek, Okatie River, and May River watershed restoration activities
- Expand County's EOS
- Implement 811 system for utility locates
- Others?

Major Challenges

- Continue implementation of the Watershed Restoration Plan
 - Explore incentives
- Developing a new 10-Yr SW Management Plan (FY16)
- Implementing the expected MS4 permit
- Incorporating findings of Water Budget Study and Salinity Study

Major Challenges

- Evolve the SWIC and Utility Board
- Increase level of partnerships on Stormwater programs
- Others?

TY2012 Total Collected (as of Oct. 31, 2013)

	TY2011	TY2012
Port Royal	\$162,333	\$168,765
Beaufort	517,771	840,810
HHI	3,566,876	3,564,900
Bluffton	1,064,664	1,098,409
Unincorp BC	2,834,164	2,818,178
Total Collected	\$8,145,808	\$8,491,062

Single Family Unit Analysis (TY2012 as of Oct. 31, 2013)

Jurisdiction	Collected	SFUs	SFU %
Port Royal (50)	\$ 168,765	3,375	3.02%
Beaufort (105)	840,810	8,008	7.17%
HHI (108.7)	3,564,900	32,796	29.35%
Bluffton (98)	1,098,409	11,208	10.03%
Unincorp BC (50)	2,818,178	56,364	50.44%
Total Billing	\$8,491,062	111,751	100.00%

County Division of Duties

- 3 different units
 - Management
 - Activities (Infrastructure)
 - Capital Projects
- Regulatory (coming later next year)

FY2015 Deliverables

- Implementation of the SMMP
 - Control Regulations – Step 2 Exemptions, Web-program Updates, etc.
 - MS4 program elements
 - IDDE
 - Const. Runoff
 - Post Construction BMPs

FY2015 Deliverables Con't

- Implementation of the SMMP cont.
 - WQ Monitoring – County-wide and weekly fecal testing. This will expand to include the MS4 outfalls and parameters
 - WQ Controls (Existing Development) – Restoration Activities
 - Annual Maintenance (O&M) – Coordination & reimbursement

FY2015 Deliverables Con't

- Public Information/Outreach – Contract management, webcasts, presentations, etc.
- Drainage (PSMS) Enhancement – Review of identified overtoppings, coordination, etc.
- Additional Studies – Water budget study, salinity study, etc.
- Coordination on all levels
 - Meetings/presentations/conference calls

FY2015 Deliverables Con't

- Fee Collection/Distribution
 - Reconciliation & reporting, monthly distributions, tax sale costs, identifying & pursuing delinquent fees
- Fee Determination/Rate Increase
 - 3,586 parcel change reviews, 32,052 reviewed from requested exception reports, SFU rate change, incorporating ordinance change if necessary

FY2015 Deliverables Con't

- Credits
 - Respond to implemented changes to the Credit and Adjustment Manual
- Fee Inquiries
 - 104 inquiries, 84 fee modifications
- Fiscal Requirements
 - Annual budget, budget reconciliation, presentations (SWIC, SW Board), contract reviews

FY2015 Deliverables Con't

- Maintain Easement/Drainage Layers
 - Identifying/incorporating work into drainage Review/incorporating drainage easements
- Admin Support to SW Board
 - Agenda, presentation development, minutes, broadcast & recording
- Maintaining SWU Website
 - Posting documents, updating information, review of usage

FY2015 SFUs

Requested Budget: \$313,460

Requested Budget/SFU: \$2.80

Port Royal (50)	\$	9,468	(5.61%)
Beaufort (105)		22,462	(4.32%)
HHI (108.7)		91,992	(2.58%)
Bluffton (98)		31,439	(2.86%)
Unincorp BC (50)		<u>158,100</u>	<u>(5.61%)</u>
Total		\$313,460	

Cost Share Proposals for FY2015

- Public Education / Outreach
- Water Quality Monitoring (No. of Broad)

FY2015 Cost-Share Estimate

Public Education/Outreach: \$50,000

		To Be Billed in FY2015
Port Royal	\$1,510	
Beaufort	3,583	
HHI	14,674	
Bluffton	5,015	
Unincorp Beaufort	25,218	
	\$50,000	

FY2015 Cost-Share Estimate

WQ Monitoring North of the Broad: \$60,000

		To Be Billed in FY2015
Port Royal	\$5,001	
Beaufort	11,906	
Unincorp Beaufort	43,093	
	\$60,000	

FY2016 Cost-Share Estimate

SMMP Revision: \$100,000

		To Be Billed in FY2016
Port Royal	\$3,020	
Beaufort	7,166	
HHI	29,347	
Bluffton	10,030	
Unincorp Beaufort	50,437	
	\$100,000	

Deadline Reminders

- Budget Numbers from Towns and City
 - Amount budgeted for County SWI to perform work within your jurisdictional boundary
 - Need ASAP – County budget due NOW!

Deadline Reminders

- Per the IGA, written agreement with the proposed administrative fee is due back to the County by April 15
- Report to the County on SWU fee expenditures for the previous fiscal year due Sept. 1 (for ToHHI, ToPR, and CoB; ToB upon request)

DRAFT Minutes for SWIC March 12, 2014
BJWSA Community Room, 6 Snake Road, Okatie, SC 29909
1:30 pm - 3:30 pm

1. Introductions
Attending: Kim Jones (ToB), Bryan McIlwee (ToHHI), Bates Rambow (ToHHI), Carolyn Wallace (BC), Seth Stanbery (BC), Danny Polk (BC), Eric Larson (BC), Lamar Taylor (CoB), and Tony Maglione (representing ToPR)
2. Approval of Minutes from Jan. 31, 2014
Approved by common consent
3. County Management fee budget for FY 2015 -Presentation by Larson (See attachment of slide presentation)

Comments on accomplishments:

- Seth to coordinate LIDAR delivery.
- Other accomplishments by the County not previously mentioned - education (Kiosk), monitoring.
 - Port Royal mapped all of Outfalls and developed a restoration repair plans for all Outfalls.
 - Town of Bluffton finished their first May River 319 grant.

Other Initiatives in progress not mentioned in the presentation:

- **Danny suggested attending an annual conference offered for pond maintenance. Danny and Eric will get details and share with the group.**
- Town of Bluffton has the Stoney Creek wetland project. RFQ for consulting out now.
- Town of Bluffton has second 319 grant on May River underway.
- Town of Bluffton has continuing system inventory and public outreach.
- ToHHI working on the Upper Broad Creek 319 grant.
- ToHHI is developing an inventory of gated areas.
- Everyone has water quality monitoring ongoing.
- City of Beaufort has several LID projects underway. Duke Street Phase II and Allison Road.
- Town of Bluffton Public Works has ongoing ditch maintenance, CDBG grants for sanitary sewer, streetscape projects with LID.
- ToPR has a new PD station project that will have demonstration project in parking lot. (pervious pavement likely)
- ToPR- ORCM has agreed to allow larger regional stormwater facilities in the Cypress Wetland to reduce need for small on-site detention by development. This is a type of stormwater "banking" for quantity. On site water quality pre-treatment still likely. First project is the Parker's gas station.
- ToPR - Feasibility project underway to intercept Ribaut Road run off and divert to the Cypress Wetland from creek on Old Shell Road. This will allow to restoration of the existing creek.

Major challenges

The concept of an "evolved" Utility Board" was discussed. There is concern that the Board would start mandating how the municipalities would spend their money. Eric noted that this would not

be the intent but rather promote regional, partnering efforts to improve water quality, not day to day operations (partnering efforts on MS4 tasks may be the exception). Eric did note that if the Board was re-organized to have voting members from the Towns and City, there would be implied accountability back to the Board. This is a topic to be discussed further at future SWIC meetings.

Next Steps:

Larson noted the reporting requirements outlined in the IGA. **The format of the report needs to be defined.** This will be an agenda item for a future SWIC meeting.

Action Items for Eric:

Edit slides.

- **Fix City of Beaufort rate typo.**
- **Remove "What If" scenario from official handout.**

Email slides to group.

4. MS4 Program Elements MCM 3 through 5

1. Illicit Discharge Detection and Elimination (IDDE)

a. Ordinance

ToB has IDDE in code but doesn't effectively cover enforcement. CoB, ToPR, and the County don't have one.

ToHHI has draft Ordinance based on Carolina Clear template.

ToB - Regulation is online on their website. Sect 5.10.5 of the Unified Development Ordinance. Language prohibits illicit discharge, allows exceptions, etc. Enforcement is through Article 8 and performed by Code Enforcement.

ToB does not have a written screening program.

ToHHI - Draft ordinance has prohibition and exceptions. They do not have a written screening program.

IDDE SOP / Written Plan - Eric suggested partnering to develop the plan. All agreed. The use of a consultant is questionable. Some think doing in-house is possible and use of a consultant may not be necessary. County may hire someone for them if doing alone and offered to help others no cost. Group consensus was that this is an opportunity to partner and show a cost savings and therefore it should be the **SWIC working together to develop the draft** without consultant help. This can be a working topic for a future SWIC meeting.

b. System Mapping

Beaufort County has GIS mapping that includes ditches, pipes, easement, but it not complete. County is willing to share data with everyone. Seth and Eric noted that the County is migrating to an ArcServer so that all can view data over the web.

ToHHI has inventory. They are mapping all pipes, structures, etc. About 1/3 done.

Should be done by FY19. Study includes master planning, modeling with XPSWWM.

They are using Mark Renew with Sea Island Surveying as consultant for field work.

Using an Arc Pad mobile app. for data collection. They are willing to share application.

County says they also have access to that application. ToHHI is willing to share data.

ToB has two tech doing GIS in house. Doing inventory, citizen complaints, etc. Focus has been in headwaters in May River, which means they are doing un-incorporated areas too. Modeling using XPSWWM. They are willing to share data.

CoB uses County services.

ToPR has mapped Outfalls. They do not have map of all of system but adding as time permits. No deadline. Gives data to County and therefore willing to share. They do not have a GIS system.

c. Public Reporting Mechanism(s)

Beaufort County has phone number and email on website. No one else has a "hotline" phone number or website but do have contact information on their websites.

Eric noted tools such as web based reporting system for citizen use. This might be another opportunity to find a good reporting tool for citizen use and share among the group.

Kim suggested speaking with the "Clean Marine" event from a few years ago. They had a way for citizens to report to public agencies needs for clean-up. Contact information is Amber Von Harten, formerly Sea Grant locally but now in a different division. Carol Murphy with the County may know as well.

d. Inspection program

ToB has two techs. doing inventory and one inspector doing EPSC inspections. They are not planning to expand staff this year. Maybe in FY16.

ToHHI - Existing staff of three, likely to use Code Enforcement for enforcement action. Asking for one new staff in FY15 but may not get funded.

CoB, ToPR, and County don't have anything in place.

e. Staff Training - Not discussed. However, this is a likely need to enable staff to implement the written programs.

2. Construction Run-off - Not discussed.

3. Post-Construction Water Quality - Not discussed.

5. Future meeting schedule

Continue to meet monthly. Next month April 9 won't work due to SESWA conference. Next mtg. April 3 at 1:30pm. **Eric will confirm meeting space.**

Next topic. Public Education and Outreach. It was decided to meet and discuss options before bringing in others to discuss potential partners.

6. Carpooling to SCASM March 19, 2014 - Eric, Danny, Lamar, Kim, Jeff Buckalew, and Jeremy Ritchie going. **Eric offered carpooling.**

7. Adjourn

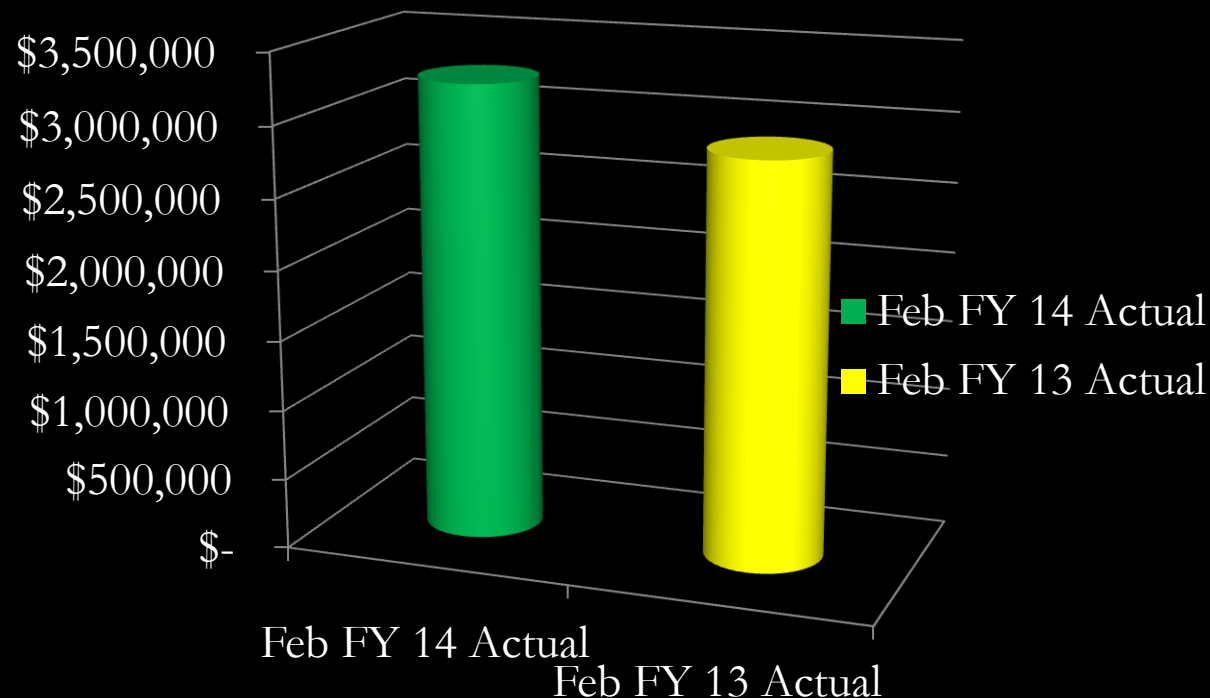


Stormwater Management Utility Meeting Board

STORMWATER FINANCIALS

February Unaudited Financials

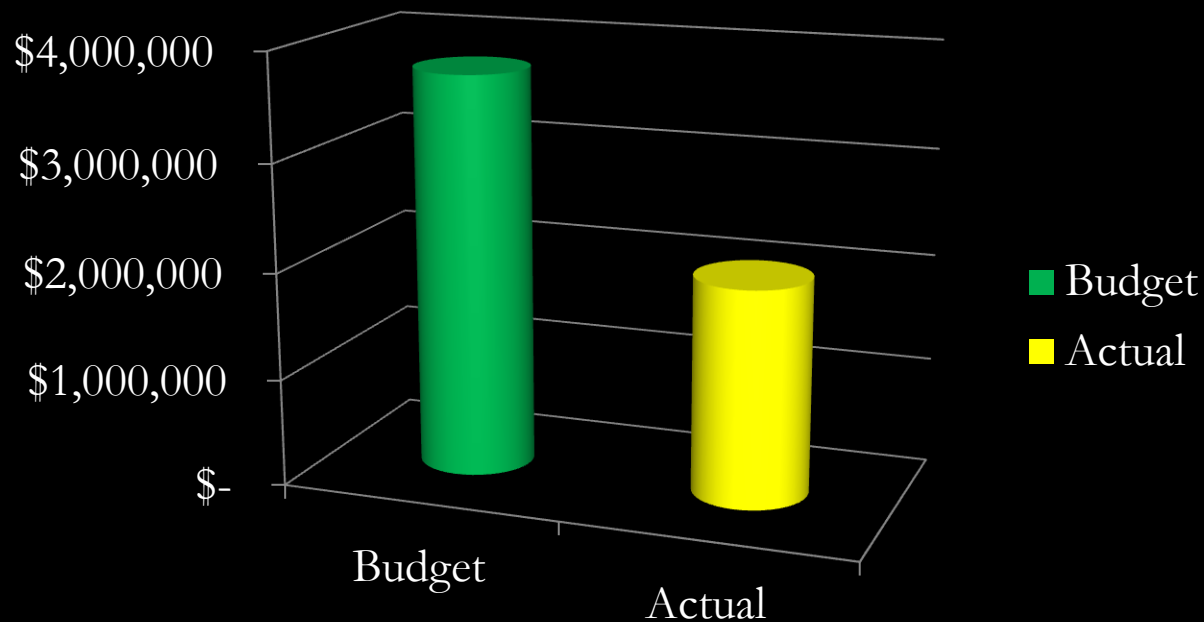
Feb FY 14 Rev vs. Feb FY 13 Rev



Actual FY14 revenues are \$381,000 more or 13% than Actual FY 13 revenues

February Unaudited Financials

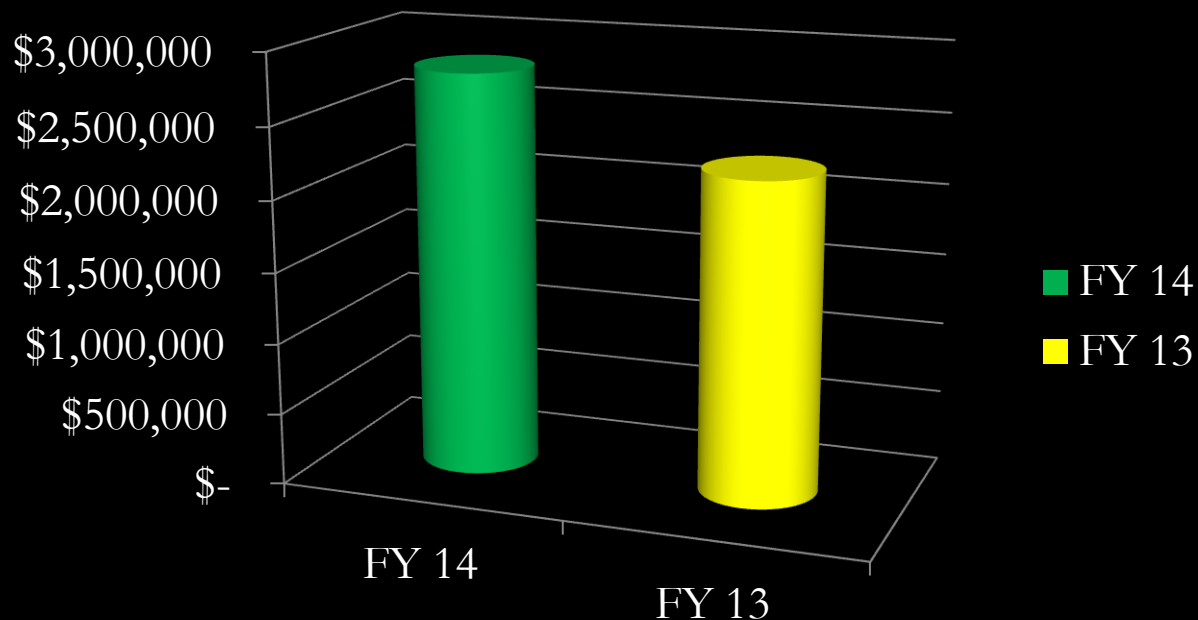
February FY 14 Expenses vs. FY 14 Budget



Actual Feb FY14 expenses are at 53% of budget for FY 14

February Unaudited Financials

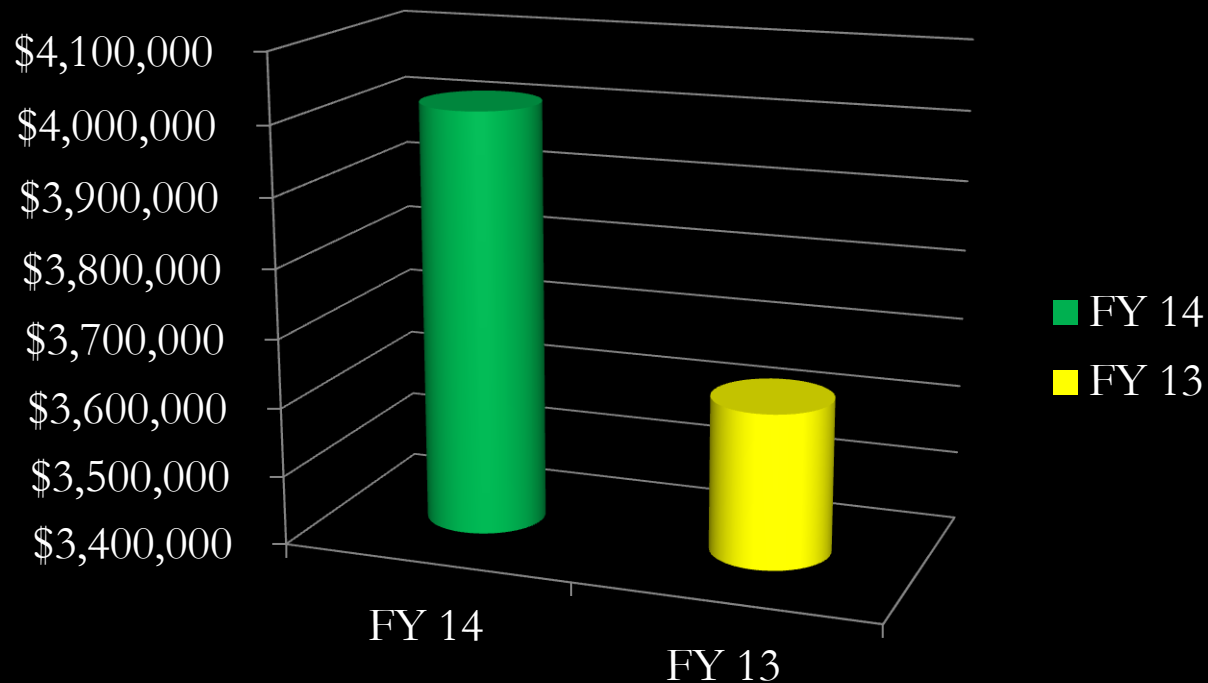
Unrestricted Fund Balance from Balance Sheet



Increased by \$580,000 or 25%

February Unaudited Financials

Cash from Balance Sheet



Increased by \$386,000 or 10%



Stormwater Management Utility FY 2015 Proposed Budget

Outline

- New or Expanded Programs
- Proposed Accounting Changes
- Projected Revenue
- Stormwater Management Proposed Budget
- Utility Activities Proposed Budget
- Change in Capital Assets

New or Expanded Programs

- MS4 Program
 - SW Inspection Superintendent
 - Infrastructure Inspection Technician
 - GIS and MS4 Data Manager
 - Support
 - Professional Services

New or Expanded Programs Con't

- Expansion of the EOS
 - (7) Positions being Re-Funded
 - No additional equipment
 - Support

New or Expanded Programs Con't

- SC811
 - Utility Operations Coordinator
 - Utility Locates Technician
 - PUPS Membership
 - No additional Equipment
 - Support

Proposed Accounting Changes

- Stormwater Management
- Utility Activities
- Capital Improvement Fund
- Regulatory – FY 2016

Proposed Acctg Changes Con't

- Regulatory
 - Control Regulations and MS4 Program
 - Water Quality Monitoring
 - Public Education and Outreach
 - Inventory of Secondary Stormwater System

Projected Revenue

Source	Amount
Admin SWU Fees	\$ 313,460
Utility Activities SWU Fees	2,814,138
Total Revenue from SWU Fees	3,127,598
Reimbursable Projects	2,500
Interest	2,955
Cost-Share for Joint Efforts	41,689
Reserve Utilization	413,581
Total	\$ 3,588,323

SWM & Utility Activities' Budget

Effort	Amount
Stormwater Management	\$ 323,941
UA/Control Regulations	257,274
UA/WQ Monitoring	120,000
UA/Annual Maintenance	2,803,088
UA/Public Education & Outreach	50,000
UA/Drainage Enhancement	19,000
UA/Additional Studies	35,000
Utility Activities Total	3,264,382
Total	\$ 3,588,323

Capital Expenditures & Depreciation

Change in Capital Assets	Amount
Equipment Replacement	\$ 216,944
Regulatory Section	93,660
WQ Monitoring Equipment	30,000
Capital Expenditures Total	340,604
Depreciation	(192,181)
Net	\$ 148,423

Questions?



BEAUFORT COUNTY
STORMWATER MANAGEMENT UTILITY BOARD

Wednesday, May 7, 2014

2:00 p.m.

Beaufort Industrial Village, Building 3 Conference Room
104 Industrial Village Road, Beaufort
843.255.2805

In accordance with South Carolina Code of Laws, 1976, as amended, Section 30-4-80(d), all local media was duly notified of the time, date, place and agenda of this meeting.

1. CALL TO ORDER – 2:00 p.m.
 - A. Approval of Agenda
 - B. Approval of Minutes – April 2, 2014 ([backup](#))
2. INTRODUCTIONS
3. PUBLIC COMMENT
4. REPORTS
 - A. Special Presentation – Bryan McIlwee, Town of Hilton Head Island
 - B. Utility Update – Eric Larson, P.E. ([backup](#))
 - C. Monitoring Update – Eric Larson, P.E. ([backup](#))
 - D. Stormwater Implementation Committee Report – Eric Larson, P.E. ([backup](#))
 - E. Stormwater Related Projects – Eric Larson, P.E. ([backup](#))
 - F. Upcoming Professional Contracts Report – Eric Larson, P.E. ([backup](#))
 - G. Regional Coordination – Eric Larson, P.E. ([backup](#))
 - H. Financial Report ([backup](#))
 - I. Maintenance Project Report – Eddie Bellamy ([backup](#))
5. UNFINISHED BUSINESS
6. NEW BUSINESS
7. PUBLIC COMMENT
8. NEXT MEETING AGENDA
 - A. June 4, 2014 ([backup](#))
9. ADJOURNMENT





BEAUFORT COUNTY STORMWATER UTILITY
120 Shanklin Road
Beaufort, South Carolina 29906
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May 7, 2014

Stormwater Manager's report for the Stormwater Utility Board Meeting

Utility Update

1. DHEC and MS4 update – We continue to develop a plan for implementation of the MS4 program. I have been interviewing other MS4 programs across the state to learn how others are implementing their programs and how they are sharing tasks between multiple jurisdictions. I will be addressing the Natural Resources Committee in May to provide an overview of the MS4 program and the status of our County Stormwater program.
2. Budget for FY15 – Submitted in early March. We are awaiting feedback from the County Administrator's office.
3. Public Education Effort / Dog Waste Education at Earth Day events – We partnered with the Solid Waste / Recycling Division and the Friends of the Bluffton Dog Parks to distribute dog waste baggie dispensers and brochures during the Farmer's Market opening and Carb Festival in Port Royal on April 19th and the May River Clean-Up and Earth Day Celebration on April 26th. We distributed approx. 500 dispensers and 3,000 brochures at the Port Royal Event. At the Bluffton event, we distributed approx. 175 dispensers and 400 brochures.
4. Larson, C. Wallace, and E. Miller attended the SESWA spring conference on April 8 and 9, 2014. Notable "take-aways" are included in the attached memo. ([backup](#))
5. Larson attended the American Planning Association's National Conference last week in Atlanta, GA. Larson was a presenter on the topic of Green Infrastructure. Beaufort County's program was part of the presentation.
6. May River Watershed signs by the Town of Bluffton and Beaufort County – The Town of Bluffton Stormwater Program is making watershed entry signs, similar to what the Port Royal Sound Foundation did, at select locations within the watershed. The County has agreed to partner with the Town on the cost of future signs.

Monitoring Update

1. USCB Lab – The last piece of equipment arrived the week of April 14th. Training on this equipment will occur May or June. Other monitoring activities are on-going.
2. D. Polk and I met with representatives with the Town of Port Royal to revisit the monitoring plan for the area near shellfish station 15-25. It is located in the Dowlingwood Tributary of Battery Creek. It is the only site impaired within the watersheds within the limits of the Town of Port Royal. As we move forward, we will try to identify sources of fecal contamination and develop potential project concepts.

Stormwater Implementation Committee (SWIC) report

1. The SWIC met on April 3rd, 2014. The topic was Public Education. ([See attached draft minutes](#))
2. Public Education Branding – The SWIC has recommended the shared use of the Town Of Bluffton’s “Neighbors for Clean Water” slogan for all public education efforts county wide. Our County Administration concurs. I recommend the Board’s support of the joint branding effort.

Stormwater related Projects

1. Proposed Carolina Jellyball processing facility in Lobeco and unloading facility on Golden Dock Road in St. Helena Island – The Golden Dock site went before DRT the week of April 7th, 2014. I offered comments to Planning staff. The added concrete pad was below the threshold of our requirements for a stormwater plan. However, I did offer advice on requirements that could be included in an environmental study that would cover the process water and potential spills of the water, by-products, or other industrial use related to the site.
2. Drainage issue on H.E. McCracken Circle in Bluffton – Nothing new to report since last month.
3. Bluffton Gateway Development Agreement – I provided my review to the Natural Resources Sub-Committee April 4th, 2014. ([See attached report](#)). I presented to the sub-committee again on April 24th. ([See attached presentation](#)). ATM was hired to review our BMP Manual and present an opinion on my review. ([See attached memo](#)). The topic is continuing to be discussed.
4. US 278 at Kitty’s Crossing Overtopping issue – The Bluffton Gateway project design highlighted the overtopping issue first mentioned in the 2006 Master Plan. Like the Forby Tract site last month, I am looking into the issue, the need for upsizing, and alternative solutions that can be incorporated into the changes proposed by the Bluffton Gateway site.
5. Infrastructure crew performed on-going maintenance needs. Nothing significant to report.

Professional Contracts Report

1. US 278 retrofit ponds – Bid due date is June 5, 2014. A Second pre-bid meeting was held on April 24th to go over the changes to the project. The addendum with the new plans was published. Permit modifications with DHEC and the County DRT are complete.
2. County Admin. Complex Retrofit Project – The project received no bids. We are evaluating the reasons behind the lack of response and we are discussing options to negotiate a contract with interested contractors.
3. Consultant procurement for the Carolina Jellyball application for the Lobeco site is still on hold pending a submittal from the applicant.
4. A RFP for a stormwater consultant to assist with the setup of the MS4 program is also on hold pending development of a MS4 implementation strategy.
5. Water Budget Study – Dr. Badr will be presenting the findings to the Board at the June Board meeting.

6. Okatie East BMP monitoring – D. Polk and I met with Ward Edwards to kick-off the monitoring project.
7. Trask Parkway Overtopping study – Results pending.
8. Paige Pointe Overtopping study – Report from Andrews and Burgess confirmed the overtopping issue and provided sizing and construction cost options. This project will be added to our list of CIP needs.

Regional Coordination

1. Battery Creek Pond – Still in design phase. (Lamar Taylor may report)
2. Stoney Creek – RFP for consultant currently is being advertised. (Kim Jones may report)
3. Salinity Study - On going. Nothing new to report.
4. Sea Level Rise and future planning – On going. Nothing new to report.
5. Okatie 391 Grant – The final report was accepted by DHEC.



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INTEROFFICE MEMORANDUM

TO: Rob McFee, Director of Engineering and Infrastructure

FROM: Eric W. Larson, Stormwater Manager

SUBJECT: Re-Cap of the spring 2014 SESWA Seminar in Atlanta, GA on April 8-9, 2014

DATE: April 21, 2014

Carolyn Wallace, Ezekial Miller, and I attended the SESWA spring seminar in Atlanta, GA on April 8 and 9, 2014.

Noteworthy discussions from EPA representatives revolved around three central topics: 1) Stormwater Rulemaking and permit changes, 2) monitoring programs, and 3) audits/inspections of MS4 programs. EPA has withdrawn its proposal for a revised stormwater rule and is focusing on strengthen permit programs through integrated planning with water and wastewater, promoting LID, and creating a community based incentive program similar to a LEED certification but for a "green community". They also stated that going forward EPA will be focusing on "three pillars of sustainability" including the environment, social, and economics, which to me means they are aware of the pressures of the development community and the cost of stormwater regulations on development.

Strengthen the MS4 permits going forward has many components. Audits of program have found deficiencies in inspection by unqualified staff, failure to perform adequate biological assessment, not performing dry weather screening, and lack of quality assurance in monitoring programs. New permit language will have specific performance standards for BMPs and monitoring. They intend to stress improving programs by utilizing incentive programs to encourage LID and volume control. These were key components of the new stormwater rule they have now withdrawn.

One incentive mentioned that is of particular interest to us is the EPA Campus Rainworks Challenge competitions on college campuses. Since we have the WQ lab, maybe USCB may be interested in forming teams to compete. County could assist in selecting judges and providing prizes. This would be a public education & outreach opportunity and the projects would demo green infrastructure designs.

The City of Chattanooga has a credit program based on volume reduction, not a percentage based on deploying certain BMPs. Part of their credit program includes an annual design challenge to promote LID use. They also have a LID Excellence award, which is a financial award to development for using LID. A program such as this, providing competitive grants to local rate payers interested in retrofitting their site for volume control, could be an opportunity for Beaufort County.

An awareness program mentioned by EPA were project signs highlighting water quality enhancement projects. We could use these signs during and after construction to educate the public on what is being done and demonstrating the use of Utility Fees.

Steve Leo with Gwinnett County, GA spoke on asset management. He stressed the importance of mapping and assessing the system to find maintenance needs and identify capital projects. I agree with that approach and intend to implement an asset management program in FY 2015.

DRAFT Minutes - SWIC Meeting April 3, 2014 - BJWSA Community Room 1:30 pm - 3pm

1. Introductions
 - a. Attendees: Kim Jones, Beth Lewis, Bryan McIlwee, Lamar Taylor, Eric Larson, Tony Maglione
2. Minutes from March 12, 2014 - approved by common consent
3. Public Education and Involvement
 - a. Message(s)
 - i. Pet waste
 - ii. Septic
 - iii. Construction erosion
 - iv. Stormwater 101 (as done previously by ATM) for general audience
 - v. Stormwater Utility credit program
 - vi. Wildlife – “don't feed wildlife”
 - vii. Agricultural / silviculture activities (erosion control)
 - viii. Pesticide and herbicide on AG property, golf courses, residential and commercial applications
 - ix. IDDE - used oil, detergents, straight pipe of washers
 - x. Stormwater pond maintenance
 - b. Audience(s)
 - i. Greater Island Committee
 - ii. Neighbors for Clean Water
 - iii. Friends of Port Royal Sound Foundation
 - iv. SC Coastal Conservation League
 - v. Beaufort County Schools - ToB does all 3rd and 7th grade classes (in Bluffton only) annually
 - vi. Home Builders Associations
 - vii. POA / management companies
 - viii. Golf course managers
 - ix. Festivals throughout the year
 - x. Local Audubon Foundation
 - c. Methods
 - i. It was decided to have the agencies propose back to us on how to best deliver the message rather than dictate how to do it.
 - ii. Possible ideas (not discussed during this meeting but mentioned in past meetings)
 1. Hard copy mailers, stuffers
 2. Video and Audio ads for TV, County Channel, Radio
 3. River Clean Up days
 4. Public Meetings
 5. School Curriculum
 - d. Partners
 - i. Internal Resources
 1. ToHHI has Sally Krebs but OK using something like Carolina Clear to assist.
 2. ToB has Beth Lewis. Due to small cost, will likely join the cost share and OK with using outside consultant.
 - ii. Carolina Clear

1. Overwhelming support by the SWIC on the past efforts of the Carolina Clear program and recommended their continued use.
 2. It was noted the scope from past contract was acceptable to all. Carolina Clear knows the MS4 program and what is needed to satisfy DHEC reporting.
 3. Tony suggested that perhaps Carolina Clear is used to organize efforts and reporting and utilize local organizations to do the work.
 4. It was noted that the last contract had a requirement to utilize local groups (Port Royal Sound Foundation, Low Country Institute, etc.)
 - iii. USCB-might be useful for student involvement as part of course work.
 - iv. Technical College of the Low Country - same as USCB but likely to lesser degree due to courses offered.
 - v. Friends of Port Royal Sound / Port Royal Sound Foundation - no one is sure what they're doing.
 - vi. SC Coastal Conservation League - No. Advocacy group, not educators.
 - vii. Sea Grant Consortium - would be good for content, but probably wouldn't do administrative effort of the education program. They do have grant funding and could probably help with funding. Contacts are Rick DeVoe and April Turner.
 - viii. Low Country Institute - Chris Marsh's group. Could be a local contributor but likely not an administrator of the reporting.
 - ix. Together for Beaufort – No. Committee of others, not a stand alone group.
 - x. Neighbors for Clean Water - simply branding of ToB stormwater education program.
 - xi. Beaufort Soil and Conservation District (Denise Parsick) - would be a good option. Kim pointed out they have the skills but not sure about the reporting aspect.
 - xii. Others
 1. Tony suggested Waccamaw SW Consortium. Supported by Coastal Carolina University and Dr. Susan Libes.
 2. Hillary at Town of Mount Pleasant was also mentioned as a reference and advice. Danny Polk stated she ran their education program.
 3. It was suggested to ask Cary Gaffney with ToHHI. He has past knowledge of County educational efforts.
4. Procurement
 - a. Eric should get the past Carolina Clear contract and see how it was laid out.
 - b. Scope should define measurable goals to determine success.
 - c. Would it be possible to sole source someone without going through the RFP process? Eric will ask County Purchasing.
 5. Cost Sharing and Collaboration
 - a. To get CoB and ToPR to buy in, Rob McFee needs to work with Scott Dadson and Van Willis to explain why the contract with Carolina Clear was canceled and why they should voluntarily participate again.
 6. Other issues
 - a. Bryan says we need a consortium name to identify effort, such as Neighbors for Clean Water. Kim says ToB willing to expand the effort and name to all. Kim will look into the ability to expand the use of the name to all.
 7. Next Meeting - May 14, 2015. Topic: MS4 Data Management



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INTEROFFICE MEMORANDUM

TO: Beaufort County Administration
Natural Resources Sub-Committee on the Bluffton Gateway Development Agreement
County Council

FROM: Eric W. Larson, Stormwater Manager

SUBJECT: Bluffton Gateway Development Project – Stormwater Design review

DATE: April 4, 2014

Summary

This report includes a review of the Kimley-Horn and Associates stormwater plan for the proposed site. Review included verification that the plan meets the requirements found in the Beaufort a County BMP Manual for stormwater run-off peak flow rate for the 25 year, 24 hour storm event, pollutant removal criteria for Phosphorus, Nitrogen, and Fecal Coliform Bacteria, and volume reduction for the 95th percentile storm event volume of 1.95". Effective impervious area calculations were reviewed as part of the volume reduction criteria. Sizing of the cross drains for the proposed Connector Road was also reviewed. Additional issues, including the inclusion of the Connector Road in volume and water quality design calculations and the impacts of the required Brownfield mitigation, were considered.

The stormwater design has met the BMP Manual requirements for peak run-off flow rate reduction, pollutant removal, and volume reduction through the use of various BMPs including a wet detention pond, water capture and re-use through irrigation, porous pavement, and bio-retention cells. The effective impervious area calculations indicate that the design of the BMPs has met the criteria of "Maximum Extent Practicable" at an effective impervious rate of 14.4%. The proposed plan appears to meet the "spirit" of the BMP manual through the use of multiple BMPs although the effective impervious area calculation does not demonstrate achieving the target of 10% effective impervious area. The design parameters for irrigation storage and reuse are reasonable, however more information will be needed during the design submittal the Technical Review Team to assure the design will achieve the proper results.

Additional review is needed concerning the cross drains proposed for the proposed Connector Road to assure upstream flooding of structures and diversion of waters into adjacent watersheds does not occur.

Introduction

I have completed a review of the Kimley-Horn and Associates (KH) submittal received March 26, 2014 and subsequent submittals made April 1, 2, and 3 in response to preliminary review comments I made to KH. The following is a summary of my review and recommendations concerning the report.

My review was intended to assure compliance with our current requirements for stormwater design, found in the Beaufort County Manual for Stormwater Best Management and Design Practices (BMP Manual). Review was three parts:

1. Peak Run-off rate reduction for the 25 year – 24 hour storm event
2. Pollutant removal for Phosphorus, Nitrogen, and Fecal Coliform Bacteria, and
3. Volume reduction for the 95th percentile storm event, or the 1.95" volume.

Included in the volume reduction analysis, I reviewed the effective impervious area calculations. This requirement is in the BMP Manual and compliments the review of the 95th percentile storm volume reduction.

Peak runoff rate analysis

Our BMP Manual requires the analysis of the discharge rates from a detention basin for the 25 year - 24 hour storm event. KH provided analysis for the 2, 10, 25, 50 and 100 year - 24 hour events to satisfy County requirements as well as those of the USCAE, DHEC and SCDOT. With the exception of the 100 year storm event, which we do not regulate, the post-development rate of discharge from the site is below pre-development conditions. Therefore, this criterion has been met.

Storm Events	Pre Development Discharge (cfs)	Post Development Discharge (cfs)
2-Year, 24-Hour	18.45	16.04
10-Year, 24-Hour	42.39	41.98
25-Year, 24-Hour	66.91	61.12
50-Year, 24-Hour	92.68	92.10
100-Year, 24-Hour	122.02	138.04

Pollutant Removal

KH has provided pollutant removal efficiency calculations for a series of effective imperviousness scenarios as part of a cost - benefit analysis (see more discussion below). In the 10%, 14.4%, 15.2% and 19.8% effective imperviousness analysis, removal requirements for Phosphorus, Nitrogen, and Fecal Coliform Bacteria have been met. Nitrogen removal requirements were not met in the 24.5% effective imperviousness analysis. Therefore, any level of effective imperviousness at or below 19.8% will meet this criterion.

Volume Reduction

Our BMP Manual requires that the post-development run-off volume not exceed that of pre-development. The run-off volume is calculated based on the 95th percentile rain event. For this area, it is generally accepted as 1.95" of rainfall and is defined within the manual as the standard. Based on the development of the site, KH has calculated a post-development volume of 67,631 cf, or an increase of 43,442 cf from the pre-development condition.

Volume Reduction is met through a combination of pervious BMPs implementation and water capture and re-use through irrigation. The wet detention pond has a permanent irrigation pool with a volume of 156,233 cf; therefore the BMP for irrigation re-use has the potential to store all runoff, not just the increase from pre-development. The irrigation re-use volume is based on capturing 4" of rainfall from

approximately 10 acres of roof tops and impervious pavements on the site. This equates to a volume of 145,200 cf, which exceeds the post-development runoff volume and is contained within the irrigation basin.

In order to assure that the capture and re-use volume is appropriate, I requested an analysis of the application of the irrigation water and drawdown of the irrigation pond. KH has quoted 2013 weather data of approx. 52" of annual rainfall, which is consistent with the generally accepted 50"/yr., 20 year average for the area. They are recommending an application rate of 1.5"/week over approx. 8.2 acres. It is also generally accepted that irrigation rates of 1" - 2" / week are acceptable for the area, therefore the recommendation is reasonable. Based on an analysis of pump drawdown and horizontal infiltration into the soil, KH has estimated that the 4" volume within the irrigation pool could be drained dry within 15 days. Given the average annual rainfall of approx. 48"-52" and a 95th percentile event of 1.95", the area averages a design storm event every 14 days. Therefore, it is a reasonable assumption that the basin will have adequate capacity to store most storm events.

The Design Review Team may choose an additional step to assure compliance with the volume reduction proposed by the applicant. In similar irrigation re-use BMPs in the County, the issuance of stormwater fee credits to several residential developments has included the condition of annual reporting to verify the minimum irrigation volume was collected and re-used over the previous year. This would give the County the opportunity to revisit the design approval should the BMP fail to function as designed.

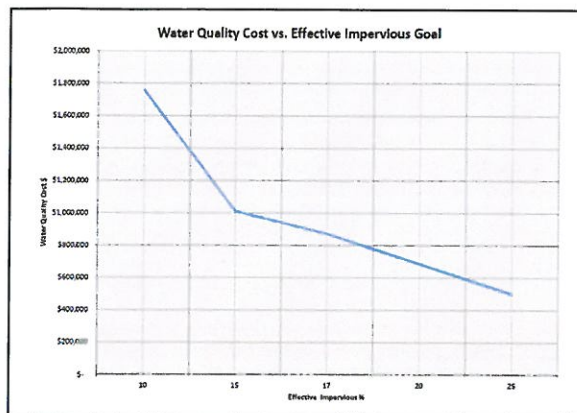
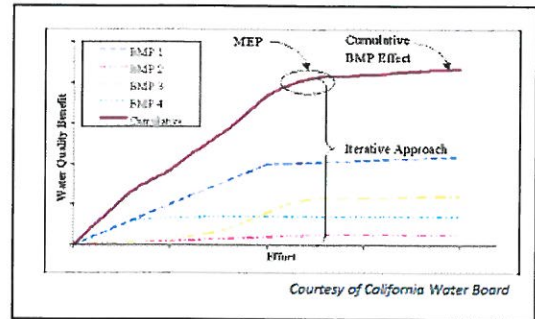
The method of irrigation pool filling has not been clearly defined. The plan seems to indicate that the basin will fill during a 25 year design storm event through gravity flow and will be captured and prevented from release via a berm within the wet detention pond. To be effective in volume reduction as proposed, the basin will need to be designed so that the irrigation pool is filled during every storm event either by gravity or pumping from the water quality portion of the basin.

Effective Impervious Area

KH has provided a series of effective impervious area calculations. 10%, 14.4%, 15.2%, 19.8%, and 24.5% effective imperviousness site designs are considered. With each analysis, a summary of the BMP practices to be used and the incremental cost of construction were provided. As stated above, any scenario with an effective imperviousness at approx. 20% would meet pollutant removal criteria. However, throughout Section 3 of the manual, the use of primary and secondary BMPs is outlined to reduce stormwater run-off volume to achieve a volume control target of 10% effective impervious area for the site. (Section 3.1, pg. 3-22). Further, the states that a post development site that reduces impervious surface runoff so that it is equivalent to the pre-development surface runoff would have an effective imperviousness of 0%. (Section 3.1, pg. 3.6). Therefore, based on the Volume Reduction discussion above, it could be assumed the effective impervious area for this site is 0%.

Through my review of the BMP Manual, I have concluded that the "spirit" of the BMP Manual is to promote Low Impact Development, or Green Infrastructure, to minimize our impact to the environment. The BMP Manual states that BMPs should be used to the Maximum Extent Technically Feasible (METF) to achieve the 10% effective impervious area target. I interpret that to mean that the extensive use of a variety of different BMPs in a treatment train should be utilized to achieve the target. To varying degrees, the five scenarios proposed by KH do this. KH has included the following BMPs within the scenarios: run-off reduction through irrigation reuse, bio-retention (rain garden), wet detention, and porous pavement.

Another important definition used in regulation by the US EPA and SC-DHEC is Maximum Extent Practicable (MEP) (EPA Stormwater Phase II Final Rule - 64 Federal Register 68722 & SC NPDES General Permit for Storm Water Discharges from Regulated Small Municipal Separate Storm Sewer Systems, January 1, 2014). Recently at a South Carolina Association of Stormwater Managers meeting (3/19/14), representatives from DHEC defined MEP as "if a permittee employs all applicable BMPs, except those which are not technically feasible for the location and whose cost would exceed the benefit of implementation, MEP has likely been met. If a permittee only selects a few, low cost and /or ineffective BMPs, MEP has likely not been met."



KH has provided a cost-benefit analysis for the 10%, 14.4%, 15.2%, 19.8%, and 24.5% effective impervious area scenarios. On a chart comparing cost to effective impervious area, there is a notable change in the slope of the curve at approx. 15% effective impervious area, meaning cost increases at a higher rate than the decrease in impervious area. Based on the definition of MEP, it can be applied that MEP is met at this inflection point along the slope. Given that the 14.4% scenario provided by KH includes the use of porous pavement, and the 15.2% scenario does not, I suggest that the 14.4% scenario should be considered MEP.

However, MEP, as defined by KH, does not meet the target of 10% effective impervious area. Therefore, I decided to explore the establishment of this threshold. The BMP Manual notes research by (Tom) Schueler that suggests that a relatively low percentage of impervious cover (10-15%) can induce adverse and irreversible changes in stream water quality. It is the continued discussion within the BMP Manual concerning pollutant loading as it relates to run-off volume that apparently established the 10% target (Appendix A, Section A.7). I read the article titled "The Importance of Imperviousness" authored by Schueler that this cite was apparently based on. In this article, it clarifies that the range of 10-15% impervious cover is that within a watershed that produces run-off volumes that being to degrade the receiving stream by destabilizing the stream bank through erosion (due to increased volume and velocity over a longer period of time). Ironically, the end of the article it cautions that "while the research on impervious cover and stream quality is compelling, it is doubtful whether it can serve as the sole foundation for legally defensible zoning and regulatory actions." Therefore, the KH scenario of 14.4% effective impervious area appears to meet the "spirit" of the BMP Manual.

Due to the lesser amount of pervious surfaces being utilized for infiltration and irrigation water absorption, and the extensive use of stormwater reuse by irrigation, the calculation of effective impervious area is skewed so that the criteria for volume control and pollutant reduction can be met without having to employ additional BMPs to reach the 10% target.

Connector Road Culvert Analysis

The stormwater design also includes the sizing of cross drains under the proposed Connector Road to convey upstream off-site water through the wetlands and downstream to the 2 existing 42" RCP culvert crossings under US 278. This location along US 278 is identified in the 2006 Beaufort County Master Plan as an insufficient pipe size that will result in an overtopping situation during a 100 year flood event.

Modeling by KH of the existing culverts under US 278 indicates that the impoundment of stormwater during the 50 year event (as required by SCDOT) at an elevation of 21.42 ft. Review of County GIS data shows the impoundment extending south towards the Bluffton Parkway and the May River watershed. Two notable issues currently exist - (1) the apparent watershed boundary between the Colleton River and the May River is above 22 ft., and (2) at least one structure is located in the flood impoundment area. Review via Pictometry suggests it is non-residential in nature, however I have not made any further review of the use or finished floor elevation.

KH has proposed two 4'x6' box culverts under the proposed Connector Road. KH modeling of the proposed culverts indicates the 25 year storm event will impound flood waters to an elevation of 22.32 ft. (The BMP manual only requires the evaluation of the 25 year storm event.). According to the KH report, it is the tailwater condition on the proposed culvert, a result of the undersized pipes under US 278, which hinders the proposed culverts to convey the flood waters without an increase in headwater (flood) elevation. Without more information, I am unable to determine if the increased flood elevation will cause additional impact to existing structures or result in flow of stormwater into adjacent watersheds.

Inclusion of the proposed Connector Road in the stormwater design

The impervious area of the new road has been included in the calculations for peak run-off rate reduction, pollutant removal, and volume reduction for the 95th percentile storm event. However, for the calculation of the effective impervious area, the impervious areas within the future County right-of-way were not included. As explained by KH, these areas were not included since they are not part of the developed site.

Impervious encapsulation for the Brownfield mitigation plan

The KH plan proposes several bio-retention cells within the area identified for encapsulation. According to an email provided by the environmental consultant for the mitigation plan, "installation of a few shallow rain gardens in the areas of contaminated ground water should not have an adverse effect on the environmental situation." Therefore, the need to create an approx. 5 acre impervious area on the site is not an issue for determining the effective impervious area.

Conclusion and Recommendation

The stormwater design prepared by Kimley-Horn and Associates has met the BMP Manual requirements for peak run-off flow rate reduction, pollutant removal, and volume reduction through the use of various BMPs including a wet detention pond, water capture and re-use through irrigation, porous pavement, and bio-retention cells. The proposed plan appears to meet the "spirit" of the BMP manual through the use of multiple BMPs although the effective impervious area calculation does not demonstrate achieving the target of 10% effective impervious area. The design parameters for irrigation storage and reuse are reasonable, however more information will be needed during the design submittal the Technical Review Team to assure the design will achieve the proper results.

Additional review is needed concerning the cross drains proposed for the proposed Connector Road to assure upstream flooding of structures and diversion of waters into adjacent watersheds does not occur.



Beaufort County Stormwater Design

Explanation of the review process
and its application on the Bluffton
Gateway Development Plan

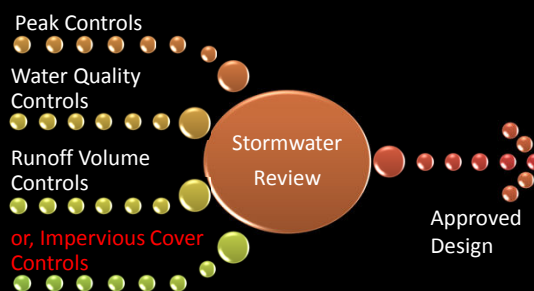
The Regulation

- Code of Ordinances
 - Chapter 106 – Z.D.S.O.
 - Article XIII – Sub'd & Land Development Stds.
 - Division 4 – Stormwater Mgt. Stds.
 - » Section 106-2856. Purpose
 - (c) All development and redevelopment shall provide adequate stormwater runoff water treatment and volume control in accordance with the **latest version of the county's manual for Stormwater Best Management Practices (BMPs).**

The Regulation, cont.

(d) To the maximum extent technically feasible, **no development or redevelopment shall cause post-development stormwater rates, quality or volume to increase above predevelopment levels** or to cause an adverse increase in the surface runoff reaching adjacent or surrounding property or receiving waters. Surface runoff rate and volume shall be dissipated by detention or retention on the development parcel, percolation into the soil, evaporation, transpiration, reuse or by transport by natural or manmade drainageway or conduit (protected by legal easement) to a county-approved point of discharge.

BMP Manual Principles



Note on Bluffton Gateway Design

- The site design prepared by Kimley – Horn includes the buildings, parking areas, outparcels, and the proposed Connector Road to be built and dedicated to the County
- The stormwater design routes all runoff from the site and the road through the primary BMP, a Wet Detention Pond
- Therefore, County Road and outparcels runoff **are** accounted for in the Peak, Water Quality, and Volume Reduction Controls
- However, the County Road and outparcel surface area **are not** included in the Impervious Cover Control analysis

BMP Manual Guidelines

- Peak Controls
 - BMP Manual Section 2.3.4 (2) – Peak discharge for post-development design storm **shall not exceed** the peak discharge of the pre-development or existing conditions (for the 25-year, 24-hour design storm event).

Bluffton Gateway - Peak Control

- Ordinance requires the 25-year, 24-hour event to be considered
- Kimley – Horn Design exceeds our requirements

Storm Events	Pre Development Discharge (cfs)	Post Development Discharge (cfs)
2-Year, 24-Hour	18.45	16.04
10-Year, 24-Hour	42.39	41.98
25-Year, 24-Hour	66.91	61.12
50-Year, 24-Hour	92.68	92.10
100-Year, 24-Hour	122.02	138.04

BMP Manual Guidelines

- Water Quality Controls
 - BMP Manual Section 3.2, supported by Appendix A.7 (paraphrased) – “Antidegradation” goal for total phosphorus and total nitrogen is based on annual average loads expected to be generated by land uses with an overall imperviousness of approximately 10%. The load **target** for fecal coliform bacteria should be based on an overall imperviousness of 5%. BMPs are selected based on removal efficiencies.

Bluffton Gateway - Water Quality Control

- Kimley – Horn Design utilizes a Wet Detention Pond as primary BMP for nutrient and bacteria removal
- This analysis considers % impervious cover
- Kimley-Horn submitted analyses for 10%, 14.4%, 15.2%, 19.8%, 24.5% effective impervious area
- Any level of effective impervious at or below 19.8% meet this criterion

BMP Manual Guidelines

- Runoff Volume Controls
 - BMP Manual Section 2.3.4 (4) – Facility design will control and retain total volume by retention and other methods so stormwater runoff levels will not exceed pre-development levels (for the design storm event).

Bluffton Gateway - Runoff Volume Control

- Based on the 95th percentile design storm event, Kimley – Horn determined:
 - Pre-Development Volume = 24,189 CF
 - Post-Development Volume = 67,631 CF
 - Increase = 43,442 CF
- Irrigation capture and reuse BMP provides 156,233 CF storage
- Therefore, 100% of site runoff volume is captured

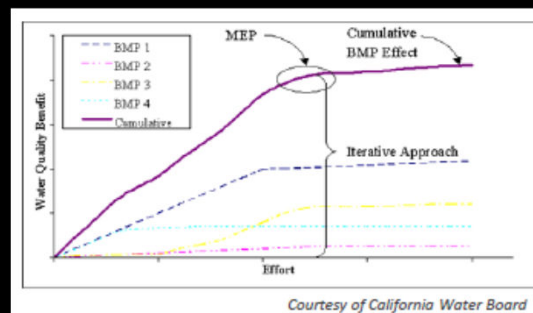
BMP Manual Guidelines

- Impervious Cover Controls
 - BMP Manual Section 3.1, supported by Appendix A.6 (paraphrased) – Volume control target is a threshold of 10% effective impervious area. It is consistent with the water quality framework in Appendix A.7 and consistent with the ordinance that requires post-development stormwater volume to be controlled for storm events up to the 95th percentile event, or daily rainfall of 1.95”.

Bluffton Gateway - Impervious Cover Control

- Kimley-Horn submitted analyses for 10%, 14.4%, 15.2%, 19.8%, 24.5% effective impervious area
- Design utilizes these BMPs:
 - Wet Detention Pond
 - Bio-swaes / Rain Gardens
 - Runoff capture and reuse for irrigation
 - Porous Pavement
- The range of values was intended to demonstrate Maximum Extent Practicable (MEP)

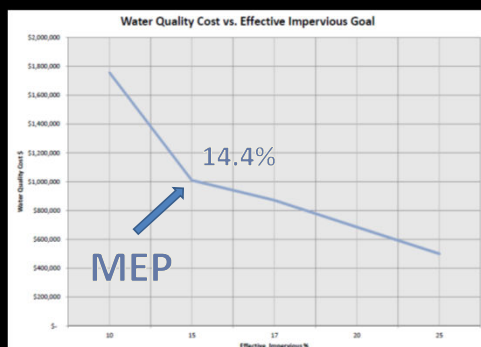
MEP defined



Courtesy of California Water Board

Provided by: SC-DHEC

MEP on Bluffton Gateway site



The Logic of the “10% Rule”

- ...runoff volume controls (are) a different way to handle stormwater runoff and not an additional set of controls.
- ...by utilizing volume controls, most water quality and some of the peak shaving requirements are also addressed.
- ...in addressing a runoff volume requirement, volume quantity and quality requirements can be integrated by utilization of Equivalent (effective) Impervious Cover (method).

- D. Ahern, R. Wagner, R. Klink (2012)

Conclusion

- 4 separate analyses, but
- Impervious Cover Control review has basis as an alternate approach to review the other three main components and applies a performance standard in those three components.
- The BMP Manual allows compliance with the three main components yet not meet the Impervious Cover Control approach.
- Section 3.1 Volume Control – “if post – development impervious surface runoff is equal or less than pre-development pervious surface runoff, then the effective impervious area is 0%.

Conclusion cont.

- The BMP Manual does not mandate the use of specific BMPs. Instead, it offers a variety of BMP alternatives that can be used on a project that have found to be effective in reducing volume and pollutants.
- All BMPs are engineered solutions that require maintenance to remain effective in reducing volume and pollutants.
- The BMP Manual does not prohibit the use of “engineered solutions” for BMPs.



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Technical Memorandum

To: Eric Larson, PE Stormwater Manager
From: Tony Maglione
Date: April 11, 20014
Re: Application of 10% Effective Impervious Concept
Gateway Development, Beaufort County, SC

Introduction:

ATM was requested to review the information prepared by the County Stormwater Staff related to the stormwater management system design for the Gateway development. Concerns have been raised by various parties as to whether or not the site should or could meet the 10% Effective Impervious Area concepts outlined in the County's Manual for Stormwater Best Management Practices. ATM has reviewed:

- Mr. Larson's *Bluffton Gateway Development Project – Stormwater Design review* dated April 4, 2011
- Section 106-2856 of the County ZDSO Stormwater Management Standards
- Section 106-2860 of the County ZDSO General Planning and Design Requirements
- Section 3 of the Stormwater Best Management Practices

Part of the stormwater design computations is preparation of a worksheet that computes the percentage of Effective Impervious Area. One major concern that has been raised is what percentage of Effective Impervious area that can be achieved on this site? Many believe that the project must demonstrate that it can achieve an Effective Impervious Area of 10%. However, the ZDSO does not address Effective Impervious Area. The Effective Impervious Area is only referred to the Stormwater Best Management Practices Manual. The Stormwater Best Management Practices Manual Section 1, 1.1 Background states "*The recommended goal set for new developments is 10% effective impervious.*" (*Emphasis added*). Thus an Effective Impervious area of 10% is not a requirement but is a goal to be strived for with the understanding, that because of nature of the computations used in the Stormwater Best Management Practices Manual, that not all sites will be capable of achieving the 10% Effective Impervious Area even if they meet all the other requirements for stormwater pollutant removal and discharge volume controls.

The Gateway project appears to be one such project. In reviewing Mr. Larson's analysis of the proposed project site contains some unique site conditions that may impact results of the Effective Impervious Area worksheet computations. In addition, based upon Mr. Larson's review, the calculations demonstrate that the site will meet the requirements for fecal coliform and nutrient removal as well as stormwater volumetric controls. However, the

worksheets for Effective Impervious Area contained in the Stormwater Best Management Practices Manual does not allow for adjustments for unique site conditions.

Recommendations:

The inability of the Gateway project to achieve the 10% Effective Impervious goal is a result of the mathematical calculations used to compute this value. As the Gateway project appears to meet all other critical stormwater pollutant and volume controls stipulated in the Stormwater Best Management Manual, it should not be forced to meet the 10% Effective Impervious Area goal simply because of a mathematical anomaly. We concur with Mr. Larson's review that the proposed stormwater system design is protective.

ATM was heavily involved with the development of the Stormwater Volume Control Ordinance but was not involved in the development of the Effective Impervious Area goals nor the changes to the Stormwater Best Management Practices that implemented the same. We believe that the 10% Effective Impervious Area concept is not supported in sound science and should have been studied more thoroughly before implementation. The computations presented in the Stormwater Best Management Practices Manual used to determine if a project can meet this goal leave no room for interpretation and, such as in the case of the Gateway project, creates unnecessary burdens on development that have no measurable benefits.

The Effective Impervious Area concept was developed after the Stormwater Volume Control ordinance was developed and was created by County staff who are no longer with the County. As there are a number of technical issues surrounding the practical application of the Effective Impervious Area process and given the complexity of the concept as presented in the Stormwater Best Management Practices Manual, we would strongly recommend that the County have an outside third party engineering firm revisit the Effective Impervious Area process, the 10% goal to determine if it is based on sound science, identify anomalies in the process and make recommendations to the County as to how best to modify this process so it can be properly applied, clearly understood and conflicts, such as the one surrounding the Gateway project, can be avoided in the future.

UNAUDITED AND PRELIMINARY
BEAUFORT COUNTY, SOUTH CAROLINA
STATEMENT OF NET ASSETS
Stormwater Utility
March 31, 2014 & March 31, 2013

	<u>March 31, 2014</u>	<u>March 31, 2013</u>
<u>ASSETS</u>		
Current Assets		
Cash and Investments with Trustee	\$ 3,383,996	\$ 3,294,338
Receivables, Net	110,934	2,334
Inventories	92,511	102,941
Total Current Assets	<u>3,587,441</u>	<u>3,413,906</u>
Capital Assets	2,867,057	2,841,893
Accumulated Depreciation	<u>(2,122,617)</u>	<u>(2,046,032)</u>
	744,440	795,861
Total Assets	\$ 4,331,881	\$ 4,209,767
<u>LIABILITIES</u>		
Liabilities		
Account Payable	55,036	101,072
Accrued Payroll	41,818	60,030
Accrued Compensated Absences	6,247	4,470
Total Current Liabilities	<u>103,101</u>	<u>165,572</u>
Long Term Liabilities		
Accrued Compensated Absences	55,379	64,937
Net Other Postemployment Benefits Obligation	<u>822,164</u>	<u>681,684</u>
Total Long Term Liabilities	<u>877,543</u>	<u>746,621</u>
Total Liabilities	980,644	912,193
<u>NET ASSETS</u>		
Invested in Capital Assets, Net of Related Debt	744,440	795,861
Reserved for Encumbrances	320,787	380,908
Unrestricted	<u>2,286,010</u>	<u>2,120,805</u>
Total Net Assets	<u>\$ 3,351,237</u>	<u>\$ 3,297,574</u>

Unaudited and Preliminary
 BEAUFORT COUNTY, SOUTH CAROLINA
 STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET ASSETS
 Stormwater Utility
 For the Period Ended March 31, 2014

	Budget FY 2014	March 31, 2014	Budget to Actual	Percent of Budget
Operating Revenues				
Stormwater Utility Fees	\$ 3,475,000	\$ 2,886,447	(588,553)	83%
Stormwater Utility Project Billings	60,023	110,272	50,249	184%
Total Operating Revenues	<u>3,535,023</u>	<u>2,996,719</u>	<u>(538,304)</u>	<u>85%</u>
Operating Expenses				
Personnel	2,160,475	1,422,662	(737,813)	66%
Purchased Services	961,864	402,525	(559,339)	42%
Supplies	381,446	250,249	(131,197)	66%
Depreciation	242,119	181,593	(60,526)	75%
Total Operating Expenses	<u>3,745,904</u>	<u>2,257,029</u>	<u>(1,488,875)</u>	<u>60%</u>
Operating Income (Loss)	(210,881)	739,690	950,571	-351%
Non-Operating Revenues (Expenses)				
Gain (Loss) on Sale of Capital Assets	-	(31,113)	(31,113)	-100%
Interest Earned	6,922	-	(6,922)	0%
Total Non-Operating Revenues (Expenses)	<u>6,922</u>	<u>(31,113)</u>	<u>(38,035)</u>	<u>0%</u>
Change in Net Assets	(203,959)	708,577	912,536	-347%
Net Assets, Beginning	<u>2,642,660</u>	<u>2,642,660</u>		
Net Assets, Ending	<u>\$ 2,438,701</u>	<u>\$ 3,351,237</u>	912,536	137%

Unaudited and Preliminary
 BEAUFORT COUNTY, SOUTH CAROLINA
 STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET ASSETS
 Stormwater Utility
 For the Period Ended March 31, 2013

	Budget FY 2013	March 31, 2013	Budget to Actual	Percent of Budget
Operating Revenues				
Stormwater Utility Fees	\$ 3,469,180	\$ 2,907,716	(561,464)	84%
Stormwater Utility Project Billings	370,664	19,900	(350,764)	5%
Total Operating Revenues	<u>3,839,844</u>	<u>2,927,616</u>	<u>(912,228)</u>	<u>76%</u>
Operating Expenses				
Personnel	2,014,323	1,361,538	(652,785)	68%
Purchased Services	1,296,188	596,436	(699,752)	46%
Supplies	426,597	200,550	(226,047)	47%
Depreciation	273,545	205,164	(68,381)	75%
Total Operating Expenses	<u>4,010,653</u>	<u>2,363,688</u>	<u>(1,646,965)</u>	<u>59%</u>
Operating Income (Loss)	(170,809)	563,928	734,737	-330%
Non-Operating Revenues (Expenses)				
Interest Earned	11,389	-	(11,389)	0%
Total Non-Operating Revenues (Expenses)	<u>11,389</u>	<u>-</u>	<u>(11,389)</u>	<u>100%</u>
Change in Net Assets	(159,420)	563,928	723,348	-354%
Net Assets, Beginning	<u>2,733,646</u>	<u>2,733,646</u>		
Net Assets, Ending	<u>\$ 2,574,226</u>	<u>\$ 3,297,574</u>	723,348	128%



BEAUFORT COUNTY
STORMWATER MANAGEMENT UTILITY BOARD

Wednesday, June 4, 2014

2:00 p.m.

Beaufort Industrial Village, Building 3 Conference Room
104 Industrial Village Road, Beaufort
843.255.2805

In accordance with South Carolina Code of Laws, 1976, as amended, Section 30-4-80(d), all local media was duly notified of the time, date, place and agenda of this meeting.

1. CALL TO ORDER – 2:00 p.m.
 - A. Approval of Agenda
 - B. Approval of Minutes – May 7, 2014 ([backup](#))
2. INTRODUCTIONS
3. PUBLIC COMMENT
4. REPORTS
 - A. Special Presentation – Water Budget Study, Dr. Bud Badr ([backup](#))
 - B. Utility Update – Eric Larson, P.E. ([backup](#))
 - C. Monitoring Update – Eric Larson, P.E. ([backup](#))
 - D. Stormwater Implementation Committee Report – Eric Larson, P.E. ([backup](#))
 - E. Stormwater Related Projects – Eric Larson, P.E. ([backup](#))
 - F. Upcoming Professional Contracts Report – Eric Larson, P.E. ([backup](#))
 - G. Regional Coordination – Eric Larson, P.E. ([backup](#))
 - H. Financial Report ([backup](#))
 - I. Maintenance Projects Report – Eddie Bellamy ([backup](#))
5. UNFINISHED BUSINESS
6. NEW BUSINESS
7. PUBLIC COMMENT
8. NEXT MEETING AGENDA
 - A. July 2, 2014 ([backup](#))
9. ADJOURNMENT

