BEAUFORT COUNTY
STORMWATER MANAGEMENT UTILITY BOARD AGENDA
Wednesday, February 15, 2017
2:00 p.m.
Executive Conference Room, Administration Building
Beaufort County Government Robert Smalls Complex
100 Ribaut Road, Beaufort, South Carolina
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 – January 18, 2017 (backup)

2. INTRODUCTIONS

3. PUBLIC COMMENT

4. REPORTS
   A. Utility Update – Eric Larson, P.E. (backup)
   B. Monitoring Update – Eric Larson, P.E. (backup)
   C. Stormwater Implementation Committee Report – Eric Larson, P.E. (backup)
   D. Stormwater Related Projects – Eric Larson, P.E. (backup)
   E. Upcoming Professional Contracts Report – Eric Larson, P.E. (backup)
   F. Regional Coordination – Eric Larson, P.E. (backup)
   G. Municipal Reports – Eric Larson, P.E. (backup)
   H. MS4 Update – Eric Larson, P.E. (backup)
   I. Maintenance Projects Report – David Wilhelm (backup)
   J. Financial Report

5. UNFINISHED BUSINESS

6. NEW BUSINESS
   A. Special Presentation: Management Decision Implications Following Stormwater BMP Analysis - Kim Jones

7. PUBLIC COMMENT

8. EXECUTIVE SESSION
   A. Receipt of legal advice relating to pending litigation.
   B. Matters incident to proposed contractual negotiations and the sale of real property – Project Fox Trot.

9. MATTERS ARISING OUT OF EXECUTIVE SESSION

10. NEXT MEETING AGENDA
    A. March 15, 2017 (backup)

11. ADJOURNMENT

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

January 18, 2017 at 2:00 p.m. in Executive Conference Room, Administration Building, Beaufort County Government Robert Smalls Complex, 100 Ribaut Road, Beaufort, South Carolina

Draft Minutes 01/23/2017

Board Members

Present	**Absent**
Patrick Mitchell	Don Smith
William Bruggeman	Allyn Schneider
Marc Feinberg	
Larry Meisner	
James Fargher	

Ex-Officio Members

Present	**Absent**
Kim Jones	Scott Liggett
Andy Kinghorn	Van Willis

Beaufort County Staff
Eric Larson
David Wilhelm
Carolyn Wallace
Rebecca Baker
Jason Wood
Meghan Taylor
Donald McKay
Danny Polk
John Miller
Daniel Brower

Visitors
Alice Howard, County Council District 4
Ellen Comeau, Clemson University
Libby Anderson, City of Beaufort
Lamar Taylor, City of Beaufort
Paul Moore, Ward Edwards

1. Meeting called to order – William Bruggeman

A. Agenda – Approved.
B. December 14, 2016 - Approved.

2. Introductions – Completed.

3. Public Comment(s) – Eric Larson

Mr. Eric Larson introduced the new additions to the stormwater department; Jason Wood, Meghan Taylor, Daniel Brower, and Luke McKay who are the new inspectors and inspection technicians that make up the MS4 inspection field staff and are supervised by Danny Polk, Stormwater Inspection Superintendent. Mr. Larson also introduced John Miller, whose previous title was Operations Supervisor for Solid Waste and Recycling and now holds a new title of Operations Manager for Public Works. His primary role will be to improve the County's efficiency by managing the productivity and operations of five crews (Roads and Drainage North and South, General Support, Stormwater and Solid Waste and Recycling) by working closely with the Superintendents of the individual departments to review workloads and share resources in an effort to increase productivity within Stormwater and Public Works.

4. Reports – Mr. Eric Larson and Mr. David Wilhelm provided a written report which is included in the posted agenda and can be accessed at:
http://www.bcgov.net/departments/Administrative/beaufort-county-council/boards-and-commissions/council-appointed/board-list/stormwater-management-utility-board/agendas/2017/011817.pdf

A. Utility Update – Eric Larson
Please reference the report which is included in the posted agenda. No additional updates.

B. Monitoring Update – Eric Larson
Please reference the report which is included in the posted agenda. No additional updates.

C. Stormwater Implementation Committee (SWIC) Report – Eric Larson
Please reference the report which is included in the posted agenda. No additional updates.

D. Stormwater Related Projects – Eric Larson
Please reference the report which is included in the posted agenda. No additional updates.

E. Professional Contracts Report – Eric Larson
Please reference the report which is included in the posted agenda. No additional updates.

F. Regional Coordination – Eric Larson
Please reference the report which is included in the posted agenda. No additional updates.

G. Municipal Reports – Eric Larson
Please reference the report which is included in the posted agenda. The information below is an update to the agenda which was provided via email.

1. Town of Hilton Head Island (From Jeff Buckalew, Town Engineer)
    i. The Town is currently constructing two major emergency repair projects caused by Hurricane Matthew, the Wren Pond dam breach and the Oak Creek Drive causeway failure.
    ii. The Town has applied for exigency funding from NRCS under the EWP and intends to begin work on those projects within the next two weeks (pending federal grant approval).
    iii. The Town has hired a new Stormwater Manager, Jeff Netzinger, formally a department director with consulting firm of Hussey Gay Bell in Savannah, GA.

H. Municipal Separate Storm Sewer System (MS4 Update) – Eric Larson
Please reference the report which is included in the posted agenda. No additional updates.

I. Maintenance Projects Report – David Wilhelm
Mr. David Wilhelm's noted that his maintenance report for January covers six projects, three major and three minor projects.

Berkely Hall Pond – The fourth and final pond of the HWY 278 project was completed. It is part of drainage improvement in the Okatie area. Details of the project will be provided at a later date.

Salem Drive East – The County now has all the easements that were needed in place and the plan is to start the project at the beginning of next month.

In response to a question regarding the material that is dug up from the outfall ditches, Mr. Wilhelm explained that the crew will bushhog and clear out a ditch to create a level surface and haul the material that is dug up back to the shop in dump trucks. The crew sorts the material and will reuse it as fill when completing projects; if it is a good material they will use for structural fill and if it is not as good they will use for side slopes.

Mr. William Bruggeman mentioned he noticed that there are two trees that have fallen into the new ponds on 278. Mr. Wilhelm indicated the County is aware of the situation and it is on a project list to be taken care of.

J. Financial Report – Chanel Lewis

Please reference the report which is included in the posted agenda. Mr. Larson noted that it is a comparison from the previous year.

5. Unfinished Business –

A. Redevelopment of Hilton Head National Golf Course – Mr. Marc Feinberg had a council member ask if the stormwater utility board talked about the redevelopment of the Hilton Head National Golf Course. Mr. Larson explained that he has provided staff review on the application for zone change, as various staff throughout the County, included his position, review a concept plan and make a land use decision (commercial, residential or recreational). Their application talked about how, in concept, they would handle their stormwater and recognized there are standards they will have to meet. The project is a mixed use development with a proposed village center which has a commercial office and residential blend, proposed convention center, entertainment venue and public facilities. They are fully aware of the stormwater requirements and standards and need to meet those in their development plans or it will not be approved. It has not come to this board because it is an application for land use and zone change.

B. Factory Creek Watershed - Mr. Meisner asked about the ponds for Factory Creek Watershed. Mr. Larson expressed the second pond at Academy Estates has not moved forward and Mr. Sample has not approached the County with a signed contract to date.

6. New Business

A. *Special Presentation: Lady's Island Wal-Mart* – Ms. Libby Anderson provided background information and the history of the development of the Lady's Island Wal-Mart and Island Shops site. The project is located near the corner of Sea Island Parkway and Airport Circle. The site is 26 acres, with 19 acres for the Wal-Mart site. The project was zoned as a planned unit development (PUD) in Beaufort County in 1994 and in 2003 was annexed into the City. In January 2008 a plan was submitted for a Wal-Mart. The plan was denied in February 2008, as it did not conform to the masterplan in the PUD. In March 2008 the applicant appealed to the Zoning Board of Appeals and the board upheld the staff's decision. The applicant and the City went back and forth through appeal processes, until 2010 when they entered into mediation. In

2011, the development agreement was revised and extended to 2021, where the density of the Wal-Mart site was reduced from 440,000 square feet to 260,000 square feet.

In 2003, the three parcels for the Island Shop and Wal-Mart development site and two properties across Sea Island Parkway were incorporated in the Airport Junction PUD. The 2003 masterplan approved 100,000 square feet in Area B and 340,000 square feet of commercial space in Area C. The 2011 masterplan allowed for 260,000 square feet total in Area B and Area C, addressing approved uses of the land. Included in the 2011 document was information indicating that the masterplan in 2003 was considered conceptual only and is no longer regulated, the smaller buildings concept is no longer relevant.

The City wanted to keep the four outparcels, which includes the Island Shops, Murphy Express and a cell phone store, to help screen the big building. The Wal-Mart will be about 150,000 square feet with approximately 56,000 square feet of space for parking, with a total of about 689 parking spaces between Wal-Mart and Island Shops. Two buildings are proposed at about 27,000 square feet for retail shops. Murphy Express is proposed to have 12,000 square foot of convenient store with 8 pump islands.

Mr. Meisner inquired about a traffic signal plan for this project. Ms. Anderson explained that there will be an access point on Sea Island Parkway between Island Shops and the gas station, there will be one further to east toward Harbor Island and a traffic signal will be installed at the intersection of Airport Circle and Sea Island Parkway. She mentioned that the City and County are actively doing a traffic study.

Mr. Kinghorn asked if the City incorporated property goes all the way out to the development on Sea Island Parkway. Ms. Anderson explained that it's a mix (i.e.: Grayco is not), but there is a long term annexation plan to fill in the gaps in the city limits along Sea Island Parkway (between Woods Bridge and Wal-Mart).

Mr. Paul Moore provided some history surrounding the project, as Ward Edwards helped review the plans. The Wal-Mart site plan did not meet the County's stormwater standards for effective impervious area and 10% threshold. Mr. Moore noted that the standards are very unique to this area, so it made it difficult for the out of town engineer working on the Wal-Mart site plan to understand. Their calculations were showing they were retaining 95th percentile of storm on site, but were still at 40% effective impervious. It was determined that they had some calculations incorrect and on behalf on the City geotechnical testing was done. In order to make the site work it was determined that they had to raise their outfall control structure, as they had three site ponds that are interconnected which needed to retain enough water to irrigate the onsite landscaping, so they had to increase the height of their structure. The site needed to be filled 7 feet, which allowed them to demonstrate they were able to meet the stormwater standards.

In response to a question regarding elevation rise, Mr. Moore explained that the elevation rise was not strictly for infiltration, that the site had to build up for the flood requirements as well. The stormwater standard is what required them to change the hydraulic function of their pond, to be able to retain more water on site.

Mr. Bruggeman asked where the outfall that comes toward Sea Island Parkway goes. Mr. Moore explained there is a culvert under the highway and there is a lot of wetlands and saltwater marsh that it drains to.

Mr. Meisner asked if the size of the Wal-Mart was constrained by stormwater considerations or were there other conditions that went into the decision to reduce from the original proposed size. Ms. Anderson explained the size limitation was set out in the development agreement which stated that no one building would be over 150,000 square feet. Mr. Moore

mentioned a certain number of parking spaces are required per square footage, which causes the site to become a limitation too.

Ms. Kim Jones asked if any of the 600+ parking spaces were porous, pervious or permeable. Ms. Anderson responded no.

Mr. Larson indicated that a change in the new BMP manual is that you must do treatment training with one green practice, one infiltration practice and one volume reduction practice. (This was not in place during the review of this project.) In reviewing strictly to the (previous) standards, they met it with the infiltration and irrigation reuse.

Mr. Bruggeman asked where the water that drains from the building and parking lot goes. Mr. Moore explained the collection system goes into the ponds.

Mr. Kinghorn asked if the is any oil and trash collection incorporated into the pond. Mr. Moore mentioned there is no forebay like we would like to see, but the ponds do provide some treatment.

The Lady's Island Wal-Mart special presentation is attached to the minutes.

7. Public Comment(s) – None.

8. Next Meeting Agenda – Approved.

9. Meeting Adjourned

Stormwater Utility Board Presentation

Lady's Island Walmart

LADY'S ISLAND WALMART

Walmart – Location Map

HISTORY

- The property was zoned PUD in Beaufort County in 1994
- Property was annexed into the City in 2003 and zoned PUD
  - Property included in development agreement to expire in 2008
- January 2008, a plan was submitted for a 195,00 sq ft Walmart

HISTORY (continued)

- February 2008, site plan was denied
  - In staff's opinion, it did not conform to the master plan in the PUD
- March 2008, applicant appealed to ZBOA
  - ZBOA upheld staff decision
- November 2008, arbitration panel decided for the applicant
  - The City did not approve the settlement

HISTORY (continued)

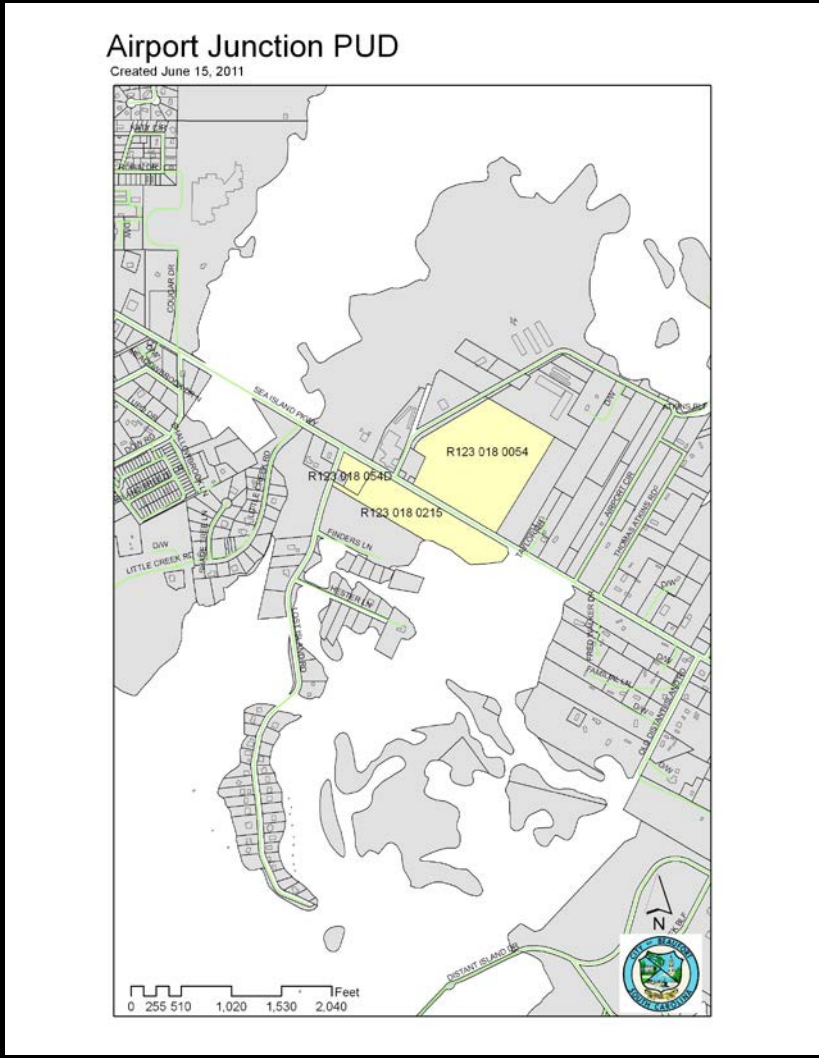
- 2009, applicant appealed ZBOA decision to Circuit Court
- December 2009, Circuit Court awarded summary judgement to plaintiff
- February 2010, City appealed decision to SC Court of Appeals
- July 2010, Court of Appeals affirmed Circuit Court's decision in favor of applicant

HISTORY (continued)

- 2010, City and applicant entered into mediation
- 2011, the development agreement was revised and extended to 2021
  - Walmart site density reduced from 440,000 sq ft to 260,000 sq ft
  - Specific language added that original master plan was conceptual only, and that the current regulating plan applies

Lady's Island Development – Airport Junction PUD

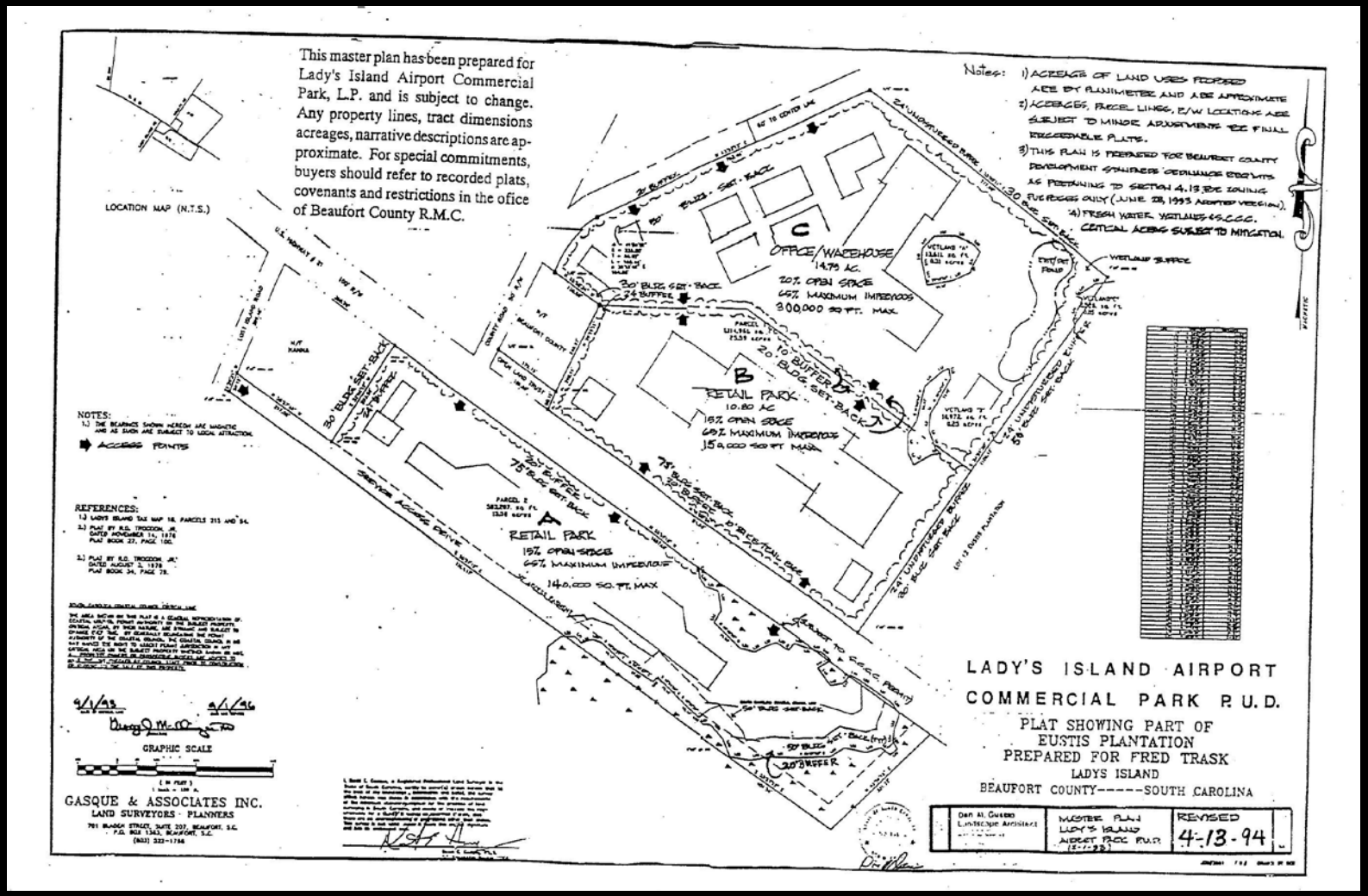
PUD History



Airport Junction PUD – Location Map

Lady's Island Development - Airport Junction PUD

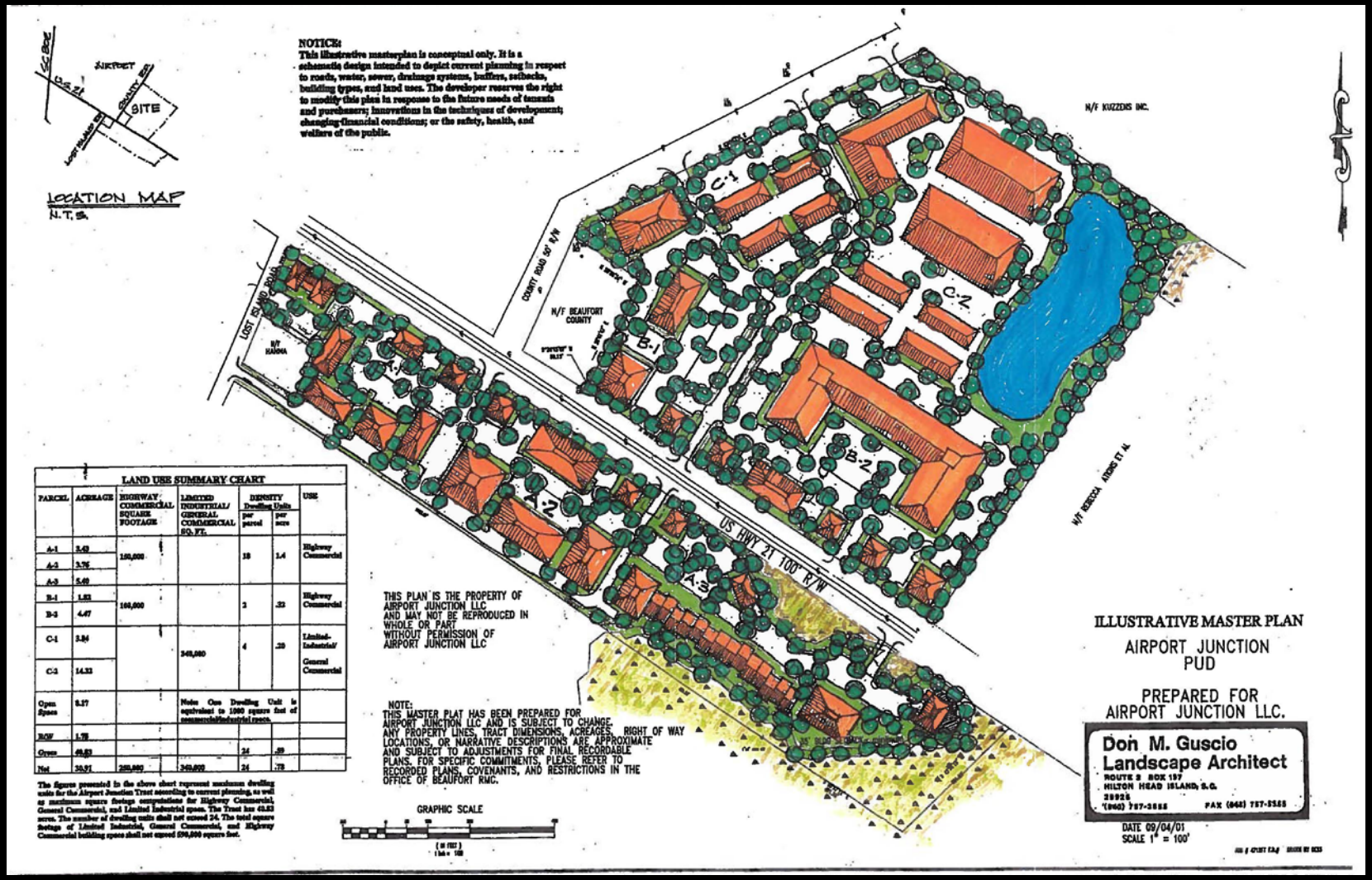
PUD History



1994 County PUD Site Plan

Lady's Island Development - Airport Junction PUD

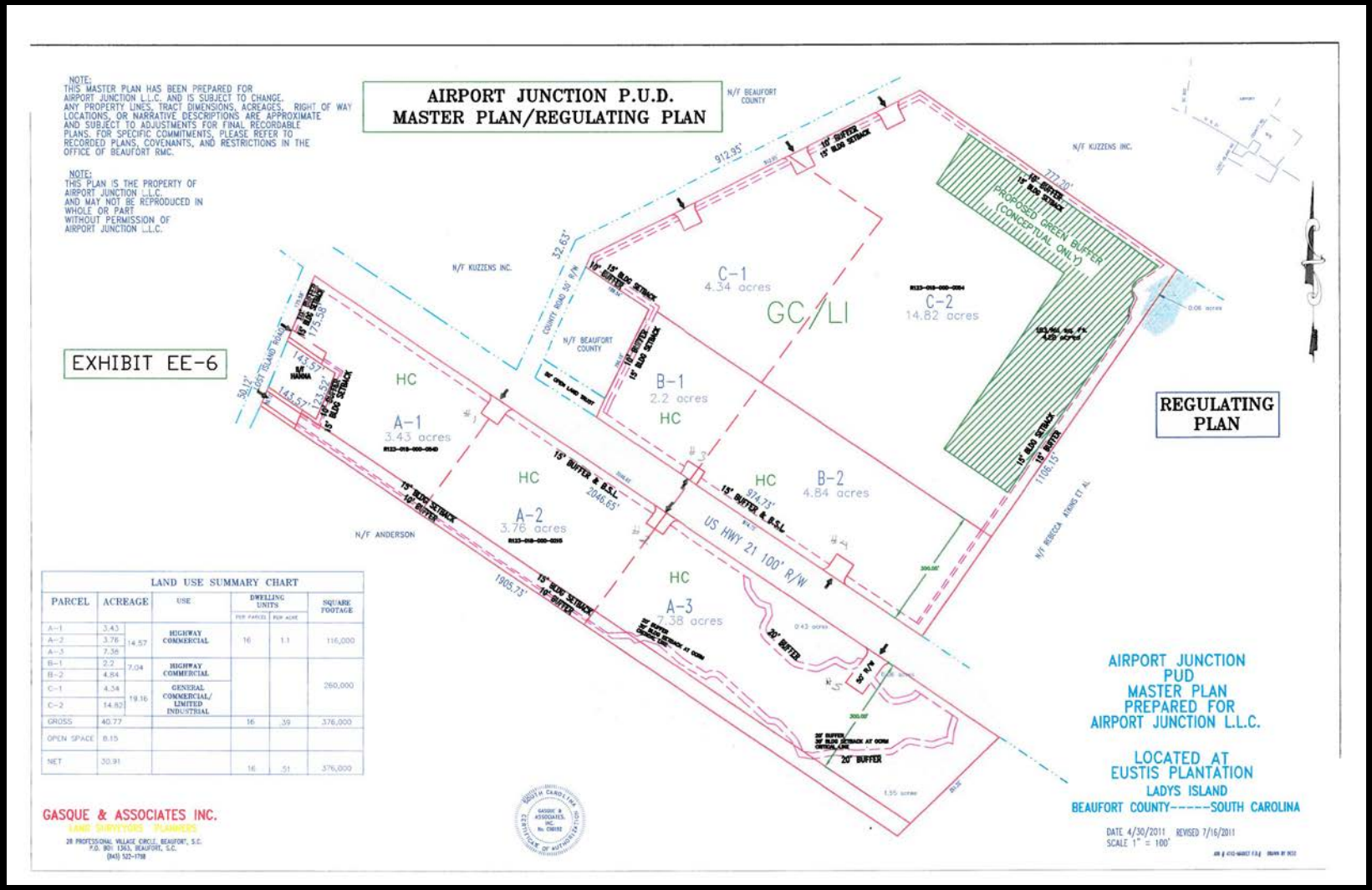
PUD History



2003 PUD Illustrative Master Plan

Lady's Island Development - Airport Junction PUD

PUD History



Current PUD Regulating Plan--2011

Lady's Island Development – Airport Junction PUD

PUD History

EE-6A **AIRPORT JUNCTION PUD**

ILLUSTRATIVE MASTER PLAN

Omitted Intentionally. The Illustrative Master Plan initially submitted with the original Development Agreement was conceptual only, and such plans are no longer required by the UDO. The Master (Regulating) Plan governs.

EE- 7 **THOROUGHFARE STANDARDS**

Private Roads, Right-of-Way and Pavement Widths

The Airport Junction street system will be constructed by the Developer to City of Beaufort standards. They may remain private or be dedicated to the City of Beaufort. All streets will be designed by a Professional Engineer licensed in the State of South Carolina with experience in roadway design and will be engineered to meet the paving, safety, and drainage goals of the City. They shall have a surface designed for the soil conditions. Low speed limits and traffic mitigation devices may be employed. All two-way streets that are the primary or sole access to a lot must have a minimum pavement width of 20 feet.

There may be several types of streets, including, but not limited to, the following:

Type	Pavement Width	Right-of-way Width
Road	20 feet	50 feet
Small Road	18 feet	40 feet
Alley	12 feet	20 feet
Pedestrian Path	5 feet	12 feet

Minimum ROW width: 40 feet
Minimum two-way street pavement width: 20 feet
Minimum street pavement width (non alley): 18 feet
Minimum alley pavement width: 12 feet

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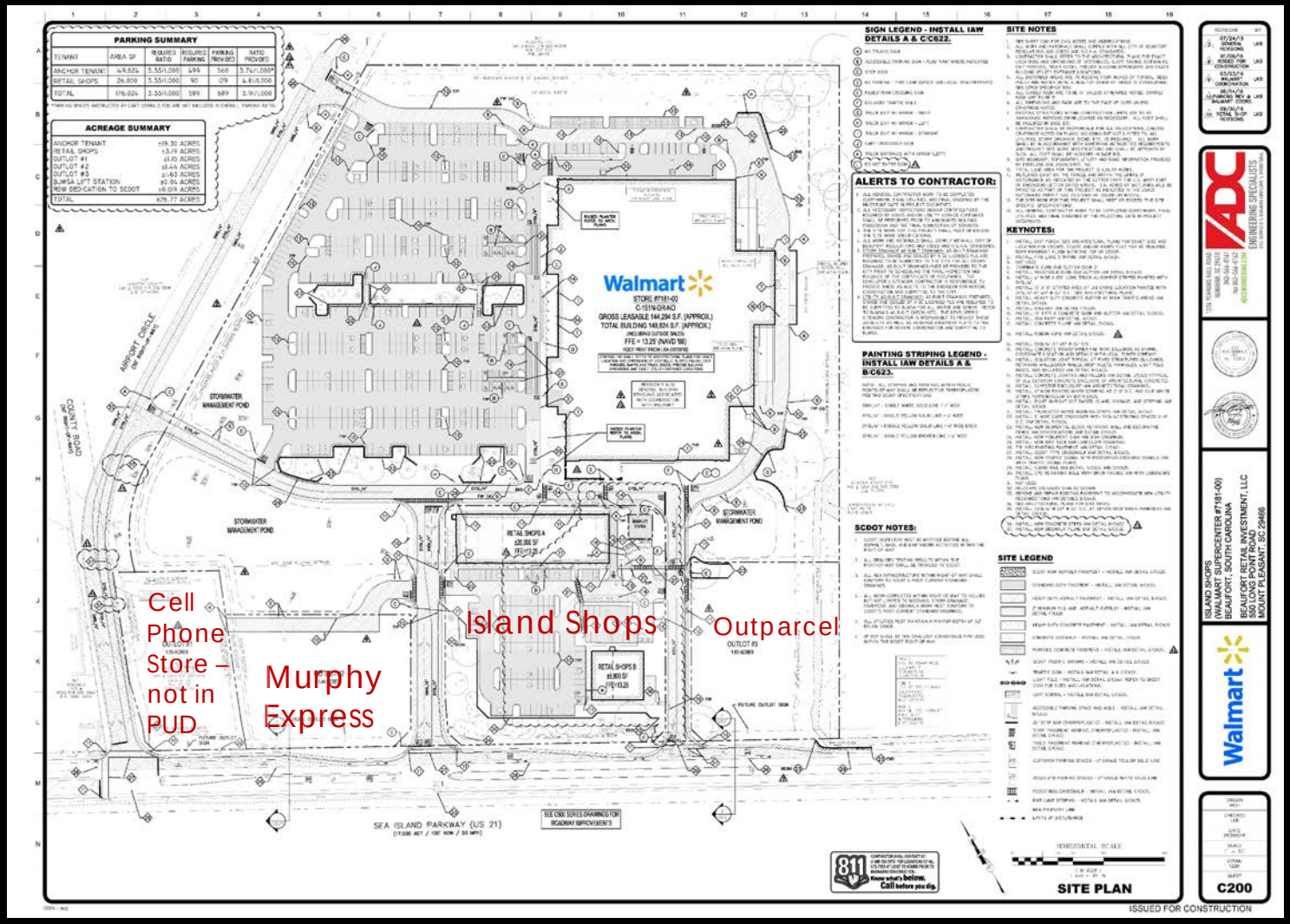
Airport Junction PUD – Location Map

Lady's Island Development – Walmart & Outparcels

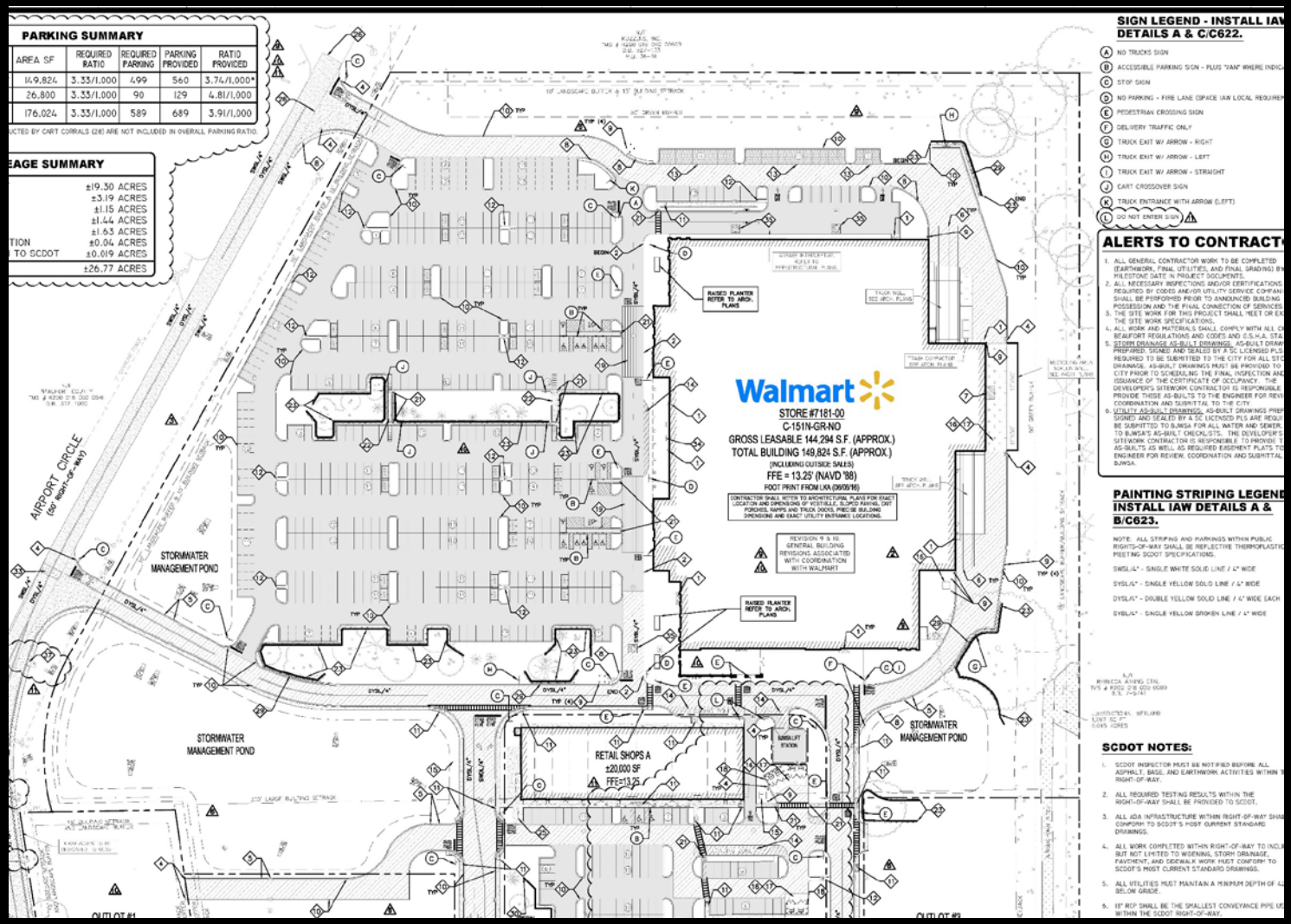
PUD History



Walmart and Island Shops Site Plan

Lady's Island Development - Walmart

PUD History

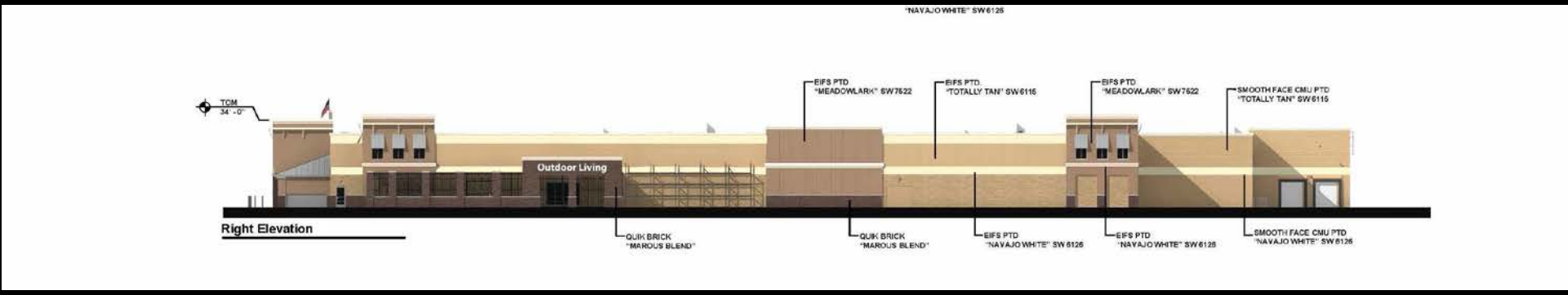


Walmart Site Plan – 149,824 SF

Lady's Island Development - Walmart

PUD History

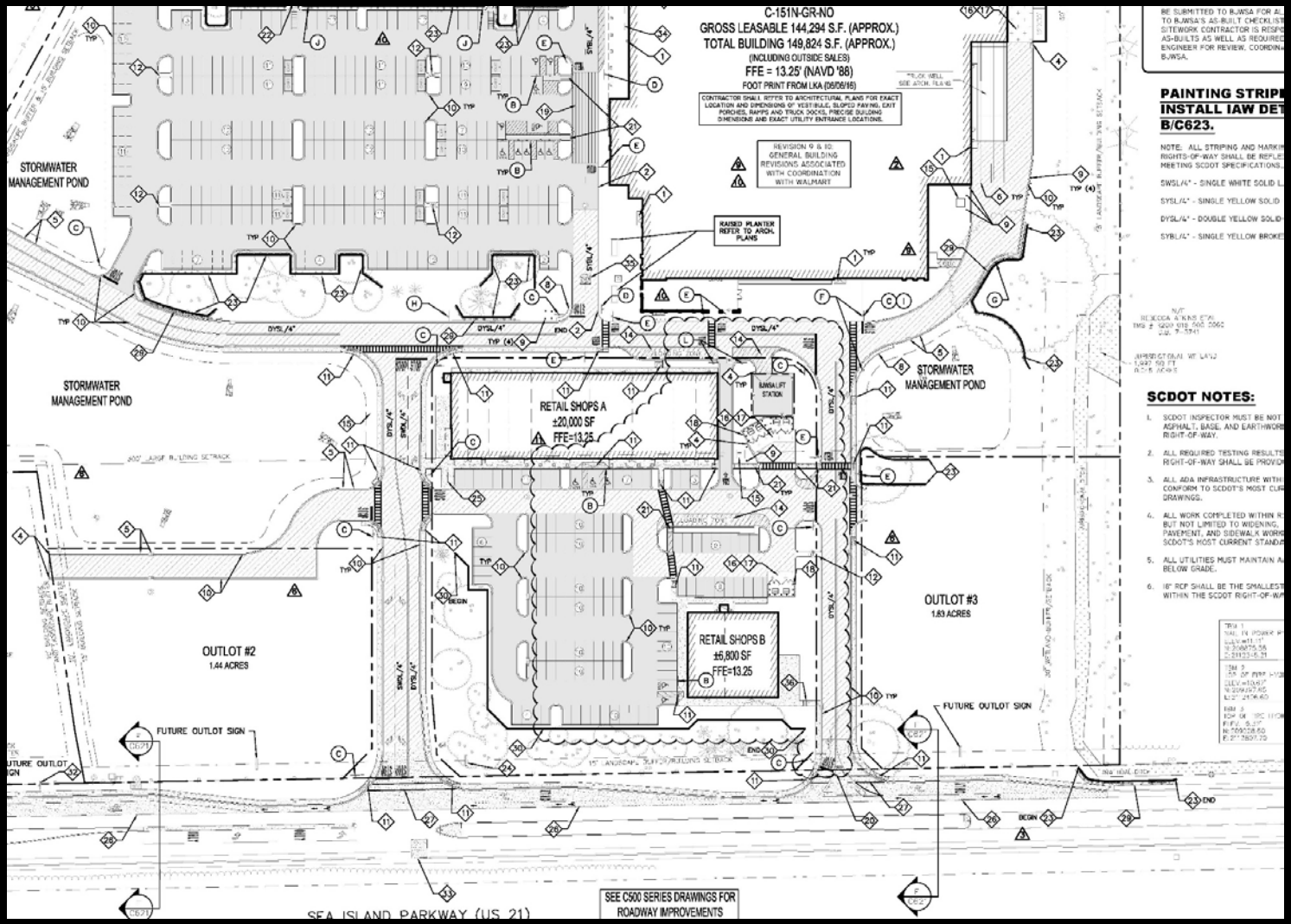
Walmart Front (Parking Lot) Elevation



Walmart Side (Access Drive) Elevation

Lady's Island Development – Lady's Island Retail Shops

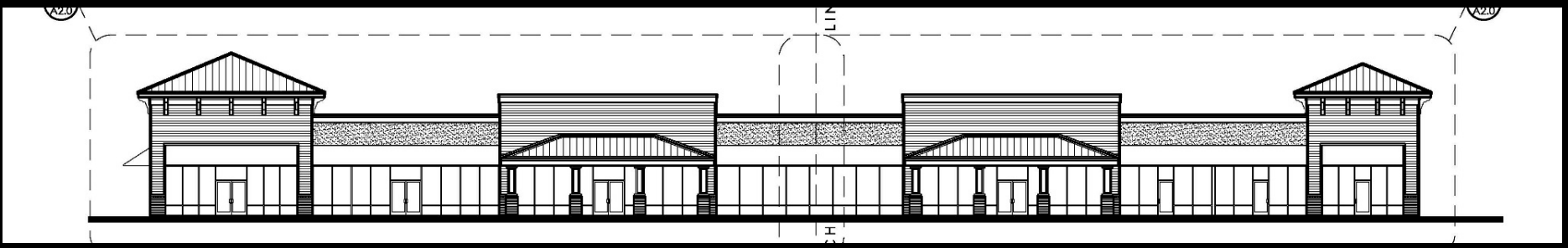
PUD History



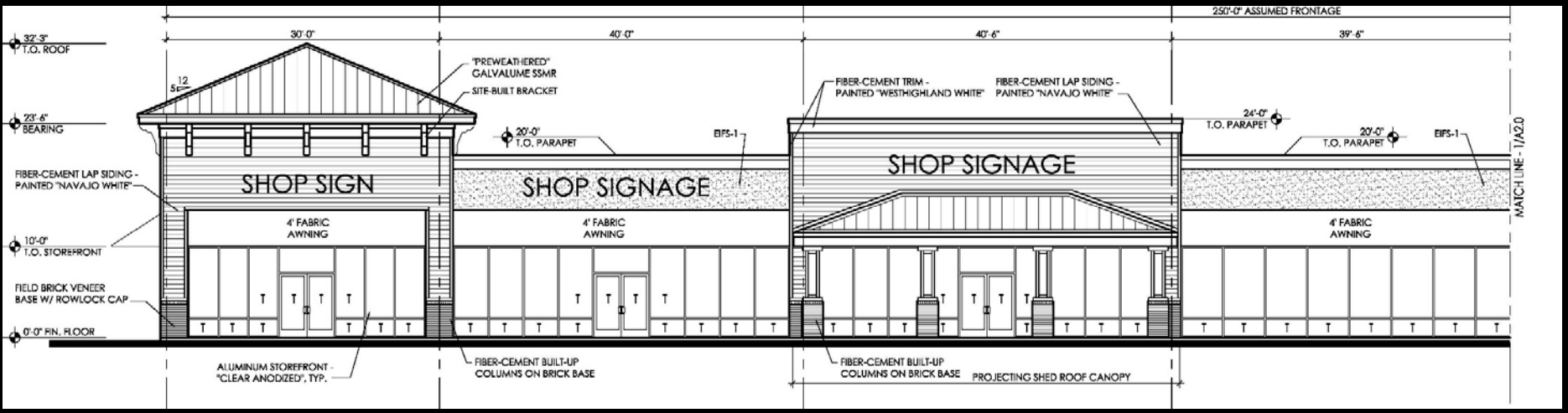
Lady's Island Retail Shops Site Plan – 26,800 SF in 2 buildings

Lady's Island Development – Lady's Island Retail Shops

PUD History



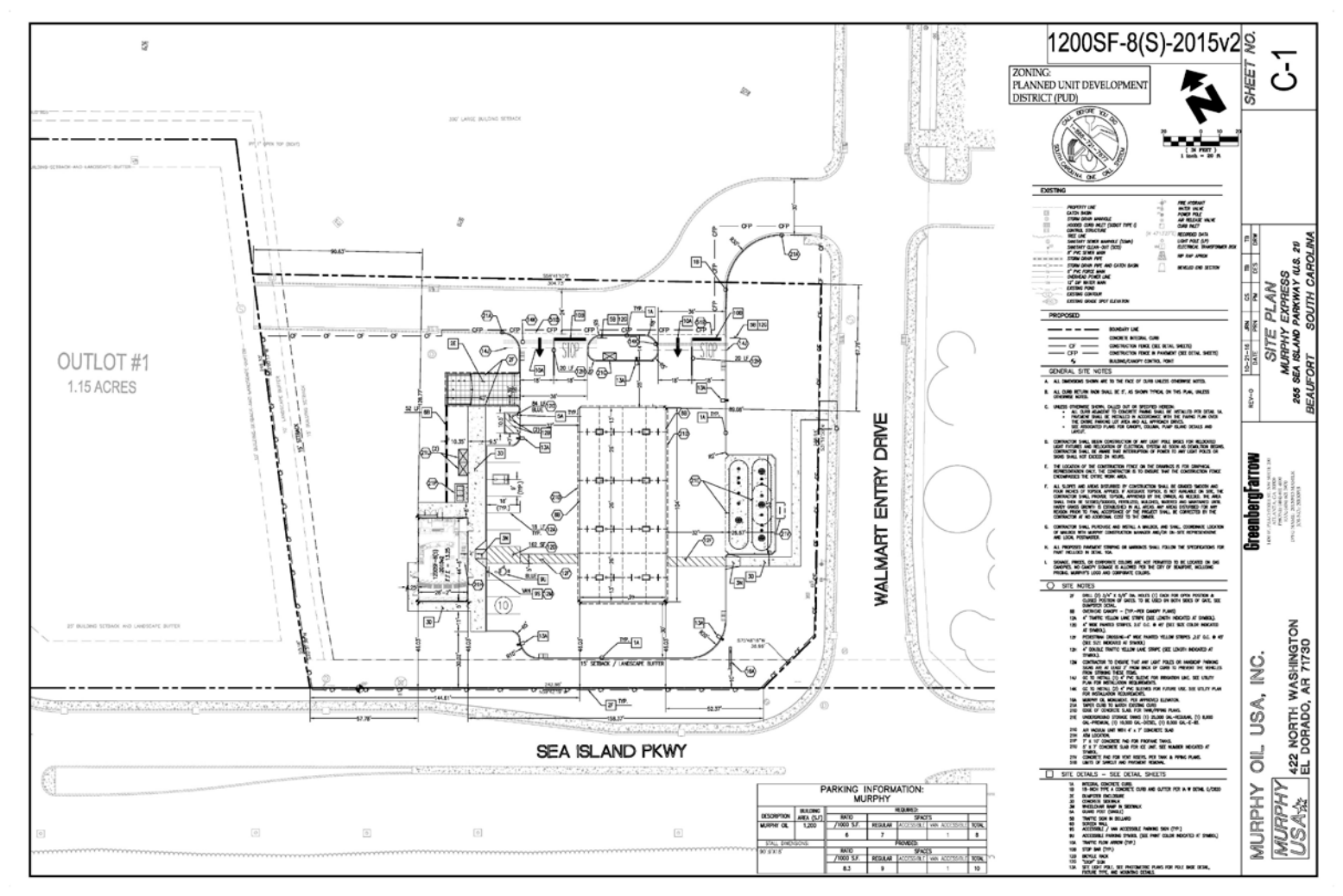
Lady's Island Retail Shops Concept Elevation - not yet approved



Lady's Island Retail Shops Concept Elevation Detail - not yet approved

Lady's Island Development – Murphy Express Gas Station

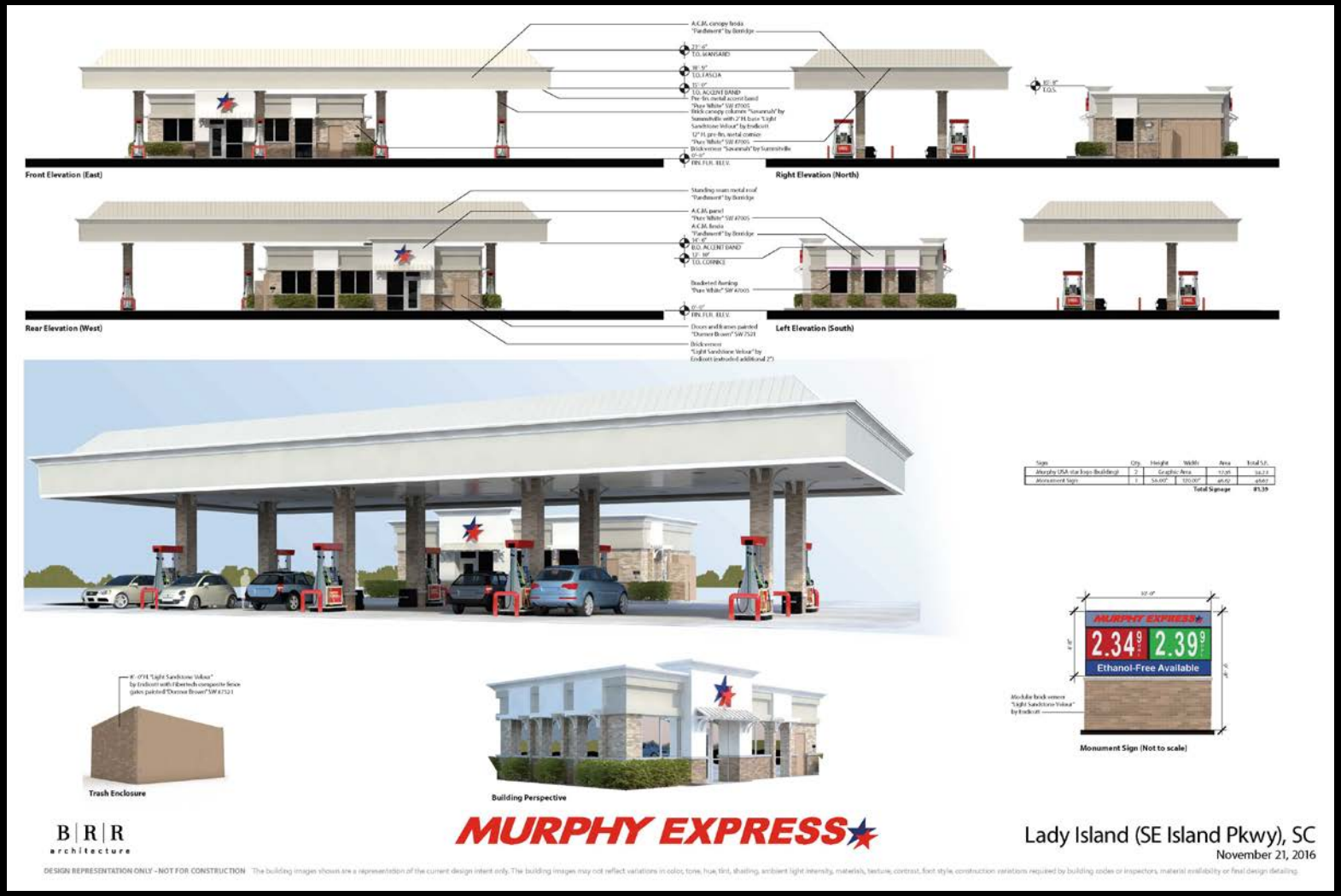
PUD History



Murphy Express Gas Station and Convenience Store – preliminary site plan – 16 pumps, 1,200 SF convenience store

Lady's Island Development – Murphy Express Gas Station

PUD History



Murphy Express Gas Station and Convenience Store – preliminary rendering –in design review

QUESTIONS?

BEAUFORT COUNTY
STORMWATER UTILITY
120 Shanklin Road
Beaufort, South Carolina 29906
Voice (843) 255-2805 Facsimile (843) 255-9436

February 15, 2017

Stormwater Manager's Report for the Stormwater Utility Board Meeting

Utility Update

1. The Stormwater Department submitted the top 5 successes in 2016 to the County Council as part of their annual retreat. The list is attached to this report.
2. Eric Larson attended the Public Facilities Committee workshop to discuss stormwater projects to be added to the County's Priority Investment Plan, a part of the Comprehensive Plan.
3. Hurricane Matthew Response and Recovery – The Stormwater Department submitted application for USDA/NRCS Emergency Watershed Protection (EWP) funds to clear the debris along our system. Funding is similar to FEMA, 75%. Via mutual aid agreements, this will include any work needed within Town of Bluffton, City of Beaufort, and Town of Port Royal. A decision from USDA is pending. The Town of Hilton Head Island has also applied for this funding. The Town did receive a small amount of funding from the program from funds available prior to the Hurricane.
4. Carolyn Wallace and Eric Larson have begun the annual budget process. A management fee budget is due to the SWIC on February 15th. A summary report of TY 2015 billing and collection was due on February 1st. That report has been delayed due to Hurricane workload and the delay in issuing of the County's CAFR, which is also delayed due to the Hurricane.

Monitoring Update

1. Lab Update (From Dr. Alan Warren and Lab Manager Danielle Mickel) - No information was available at the time of this report.
2. The Town of Bluffton identified multiple failing septic tanks in the Rose Dhu subwatershed feeding into May River. This was field work following up on results of Microbial Source Tracking tests done in January. The County Staff, USCB Lab staff, and DHEC staff are coordinating sampling and enforcement.
3. The County and Town of Bluffton are developing an MOA to share monitoring points for the New River, May River, and Okatie River watersheds.
4. Battery Creek 319 Grant project - The USCB lab technicians will be retrieving samples on a weekly basis for 9 months as a requirement of the 319 grant to determine the effectiveness of the new pond.

Stormwater Implementation Committee (SWIC) Report

1. The SWIC committee has not met since the last Board meeting.

Stormwater Related Projects

1. Okatie West / SC 170 Widening Retrofit (Design and Construction = $915,000 Budget) – Permitting is pending. Timeframe for approval is unknown.
2. Easements – Staff is working on numerous easement requests. A significant project will be addressed in Executive Session. Staff held a monthly coordination meeting with the Right of Way Manager.
3. Ongoing capital projects – The County is working on advancing one of the many projects on the CIP list. An update on one such project will be discussed in Executive Session.
4. Eric Larson met with Councilmen York Glover to review stormwater projects in the St. Helena Island area.
5. Salem Drive East – The County has cleared all easements and began construction of the pipe last week.

Professional Contracts Report

1. Stormwater Management Plan (Master Plan) Update – ($475,000 Budget; $239,542 County portion) – ATM continues to work on the next steps of the plan. Staff meet with ATM last week to review the deliverables on Task 5, Hydrology Modeling of the 7 priority watersheds. As part of Task 5 of the project, ATM submitted a final stormwater management plan recommendation for priority watersheds, pollutants of concern, and monitoring locations
2. Mint Farm Basin B Modification – ($8,000 Budget) – Construction should be complete within the next 30 days. No issues during construction.

Regional Coordination

1. Factory Creek Watershed Regional Detention Basin "Phase II" (Design Cost = $63,390, Tree Mitigation Cost is pending, Construction Cost by the Developer) – The project was to be designed and constructed in three "stages". Stage 1 is under construction. Stage 2 and 3 design is pending submittal and review.
2. Plantation Business Park – Staff has been working on a series of exhibits to further define the limited responsibility the County will have in the stormsewer system for the Plantation Business Park as voted on and approved by County Council last May.
3. Hilton Head National – Eric Larson presented to a County Council subcommittee the basics of the stormwater BMP Manual and how it would be applied to this development.
4. CDBG 2017 Projects – Stormwater staff attended a briefing concerning the annual offering of CDBG funding. Stormwater related projects are eligible, however none

are ready for submittal at this time.

5. Capital Plan Projects – The next two projects on the 2006 CIP plan are now located within the municipal limits of Town of Port Royal and City of Beaufort. County staff and Town / City staff need to discuss the future need of these projects as part of the 2016 Management Plan update.
6. Staff attended a meeting to discuss stormwater issues on Fripp Island.

Municipal Reports

1. Town of Hilton Head Island (From Jeff Netzinger, Stormwater Manager)
   i. No information was available at the time of this report.

2. Town of Bluffton (From Kim Jones, Watershed Management Division Director)
   i. Excerpts from the February 14, 2017 Engineering Department report to Town Council is attached to this report.

3. City of Beaufort (From Neil Desai, Asst. Public Works Director)
   i. Battery Creek Pond Funded by an EPA 319 Grant ($132,609 Budget – County Portion) – The project is nearly complete. There is a potential contractor claim related to the excavated quantity of material that is being resolved by the consultant design engineer. There was also a concern raised about the aesthetics of the required fencing along Old Jericho Road. No changes to the proposed plan have been made at this time.

4. Town of Port Royal (From Van Willis, Town Manager)
   i. No information was available at the time of this report.

MS4 Report

1. Plan Review - There were 9 projects reviewed and 3 stormwater permits issued in January.

Name	Date	Type	Results
Beaufort County Church of the Naz.	1/18/2017	Discussion	Approved with conditions
Bridge Point Condos	1/18/2017	Discussion	Approved
Church of the Nazarene	1/18/2017	Discussion	Approved with conditions
St. James Pritchardville S/D	1/25/2017	Final	Approved with conditions
Ernest Mine Drive	1/18/2017	Special Use	Deferred
Moss Creek Buffer 65 Royal Point	1/18/2017	Discussion	Tree removal conditions
Sea Miles Pediatric	1/18/2017	Final	Approved with conditions
Mint Farm (In House)	1/24/2017	Stormwater Permit	Approved
Turtle Lane (In House)	1/24/2017	Stormwater Permit	Approved

2. Inspection summary for January 11, 2017 to February 7, 2017
   Number of active permits = 33
   Number of inspections performed = 11
   Number of drainage related complaints investigated = 7
   Number of certificates of completion = 2

3. MS4 Program Inspections - Staff is in the process of inspecting the County owned facilities. All Convenience Centers have been inspected and will be issued an evaluation report in February for proposed improvements and suggestions.

4. Public Education – Low Country Partners Consortium quarterly meeting was held on January 5th. Below is a list of items that were discussed.
   - Two rain garden workshops and one rain barrel workshops are in the planning stages for spring/summer of 2017.
   - Master Pond Manager Coming to Beaufort County Spring 2017. Course starts on March 22nd. Registration is required. Registration will begin sometime in mid-January.
   - Facebook name has been changed from Neighbors for Clean Water to Low Country Partners.
   - The New Low Country Partners website is located at: http://www.clemson.edu/extension/carolinaclear/regional-consortiums/lsp/index.html.

- A mission statement and vision statement are in the process of being developed.

Also, County staff, Ellen Comeau, and members of the Together for Beaufort Water Quality subcommittee met to discuss coordinated efforts.

5. MS4 Annual Report – The County's first annual report was submitted to SCDHEC on 1/31/2016. A copy of the report is attached to this report for your information.

6. Training – Most Stormwater and Public Works staff attended a training session on stormwater pipe installation. The training was hosted by ADS Pipe. Training such as this is required by our MS4 permit.

7. DHEC NPDES permitting transition – Staff held a conference call with representatives from DHEC to discuss the transition to DHEC's optional MS4 review process for NPDES permits. Staff is awaiting DHEC to decide when to make this effective.

8. BMP Manual adjustments – With implementation of any new requirements, adjustments may be needed to "tweak" the plan. We are in the process of compiling a group of minor revisions to the Manual to present later this year. Of note, we are working on revised checklists for drainage plan submittal.

Department "Top 5" Achievement Report

January 1, 2016 – December 31, 2016

Section 1

Department Name:	Stormwater
Department Head Name:	Eric W Larson
Number of Full-time Staff:	49
Number of Part-time Staff:	0

Section 2

Attach a 1-page organizational chart for your department.

Section 3

Provide a brief overview of the programs and services offered by your department (1-2 paragraphs).

The Stormwater Utility is made of three distinct areas: Management, Regulatory, and Operations. Management staff guide the utility in the Vision and Mission statements along with the oversight of the Utility fee billing and collection. Regulatory staff oversee capital projects and are evolving into the role of MS4 compliance. The Infrastructure operations crew oversee maintenance and construction of small to medium sized capital reconstruction projects. The Department is funded solely by the Stormwater Utility Enterprise Fund.

Vision Statement
Efficient Utility Addressing the Stormwater Needs of the County, while Protecting its Water Resources.

Mission Statement
Dedicated to the management, construction, maintenance, protections, control, regulation, use, and enhancement of stormwater systems and programs in Beaufort County in concert with other water resource management programs.

Section 4

If applicable, list and describe any completed or ongoing projects initiated since January 1, 2016, and include the following: project name, start date, anticipated completion date, location, and funding source. If not applicable, mark "N/A".

PLEASE PROVIDE BRIEF STATEMENTS AND/OR ATTACH NO MORE THAN ONE (1) SUPPLEMENTARY PAGE FOR EACH PROJECT.

Okatie West Stormwater Pond, November 2015, December 2017, located off of SC 170 on the former New Leaf LLC tract, funded by a EPA Section 319 grant and the Stormwater Utility CIP fund.

US 278 Widening Stormwater Retrofit Ponds, November 2013, January 2017, 4 sites located along US 278 at Pinckney Colony Road, Berekley Hall, and Barrel Landing Road, constructed by the Stormwater Infrastructure section, funded jointly by the 1 cent sales tax funding for the US 278 widening and the Stormwater Utility Fund.

Best Management Practices Stormwater Manual and Stormwater Ordinance update, January 2016, November 2016, this was a policy and standards update for MS4 permit compliance performed in-house with support from our stormwater consultant Applied Technology and Management, funded by the Stormwater Utility fund.

Battery Creek Stormwater Pond, February 2016, January 2017, located off of Old Jericho Road in Beaufort, managed by the City of Beaufort Public Works, jointly funded by a EPA Section 319 grant and the Stormwater Utility CIP funds for the County and City.

Stormwater Management Plan 2016 update, July 2015, July 2017, this is a long term planning study for the stormwater programs throughout the County, performed by our stormwater consultant Applied Technology and Management, funded by the Stormwater Utility fund.

ACHIEVEMENT 1 OF 5

Department Name: Stormwater

PLEASE PROVIDE BRIEF STATEMENTS AND/OR ATTACH NO MORE THAN TWO (2) SUPPLEMENTARY PAGES IN RESPONSE TO THIS ACCOMPLISHMENT.

1. Provide an overview of the achievement.

Update of the Manual for Stormwater Best Management and Design Practices and the Stormwater Utility Ordinance. With the implementation of the Municipal Separate Stormsewer System (MS4) permit from DHEC, the County updated our regulations and guidance documents to meet certain technical and enforcement criteria.

2. Describe any interesting findings or opportunities.

The manual update provided an opportunity to re-format the document to be more user-friendly. The older format was a complex discussion of theory intertwined with the regulation. The regulation was condensed into an easy to follow "cradle to grave" narrative while supporting guidance, forms, etc. were placed as appendices as needed.

3. Describe any challenges and how they were addressed or how you plan to address them in the future.

The Stormwater Utility Ordinance was found to be lacking key components of enforcement and did not have basic components of technical standards needed by the MS4 permit. The ordinance was set up to reference the BMP Manual, allowing minor technical standards to be "tweaked" over time and approved by the Stormwater Utility Board without the extensive process of ordinance revision.

4. Describe benefits to internal and/or external customers.

Internal customers include the staff needed to enforce and implement the MS4 permit and BMP manual. the format of the manual is clear, concise, well organized and complete without the needs for additional manual, documents, and guidance materials. External customers will be able to use the BMP manual as a single source of stormwater requirements for Beaufort County. The newer technical guidance only format allows users to quickly review and comply with our requirements without the confusion of theory and non-regulatory opinion being intermixed within the text. All needed forms and tables are easily found in the appendices.

ACHIEVEMENT 2 OF 5

Department Name: Stormwater

PLEASE PROVIDE BRIEF STATEMENTS AND/OR ATTACH NO MORE THAN TWO (2) SUPPLEMENTARY PAGES IN RESPONSE TO THIS ACCOMPLISHMENT.

1. Provide an overview of the achievement.

Expansion of the MS4 Regulatory Staff and automation of processes. With the issuance of the MS4 permit to Beaufort County in 2015, the stormwater department has been "ramping up" to the requirements of the permit. This included the hiring of 4 inspection staff members and implementation of multiple processes using software and hardware tools, along with creating a new Stormwater permit process that will assist inspectors on tracking projects.

2. Describe any interesting findings or opportunities.

MIS/GIS developed a tool, Beaufort County Connect, a smartphone application with an internal desktop dashboard. The MS4 permit requires the County to have a "hotline" for citizens to submit complaints. Both B.C. Connect and MUNIS have the ability to produce reports of permit, inspection, and complaint activity so that it can be reported to DHEC. This will reduce the time needed to prepare the MS4 annual report.

3. Describe any challenges and how they were addressed or how you plan to address them in the future.

The County uses a software system MUNIS, which is used for everything from accounting to building permitting. While MUNIS is capable of doing permit issuance and inspection documentation, it did not have a standard template for stormwater permitting. Staff from MIS/GIS and Stormwater developed the permits and inspection forms in-house at no additional cost.
From a hiring standpoint, we found it extremely difficult to find qualified candidates due to the unique skill sets needed for a stormwater inspector. We were patient and thorough in our application and interview process and were able to find a well qualified team.

4. Describe benefits to internal and/or external customers.

Internal customers include our stormwater staff. The use of MUNIS and B.C. Connect, as well as the ESRI GIS Collector Application for iPad, our staff will be able to efficiently issue permits, perform inspections, and inventory our infrastructure. The data management will be easier with these softwares, reducing office time to process data and produce summary reports. External customers include the citizens that are applying for permits or reporting problems. B.C. Connect is easy to learn and use, provides an interactive, real time update on the problem, and allow the citizen to see the status of the issue throughout the process.

ACHIEVEMENT 3 OF 5

Department Name: Stormwater

PLEASE PROVIDE BRIEF STATEMENTS AND/OR ATTACH NO MORE THAN TWO (2) SUPPLEMENTARY PAGES IN RESPONSE TO THIS ACCOMPLISHMENT.

1. Provide an overview of the achievement.

Stormwater Utility Rate Structure Billing database upgrades. In 2015, the County conducted a major rate study that resulted in increased revenue. In 2016, we continued to develop a database and software model that would automate fee calculations and aid staff in billing, correcting bills, and managing changes to the data.

2. Describe any interesting findings or opportunities.

The process of improving the database allowed us the chance to review the base data, specifically the County's mapping of parcel lines and impervious cover. The County's consultant and staff worked to greatly improve the quality of the impervious layer. Staff in the stormwater, Assessor, and MIS/GIS departments are continue to work to improve the accuracy of the parcel mapping.

3. Describe any challenges and how they were addressed or how you plan to address them in the future.

While the County, the City of Beaufort, and the Town of Port Royal adopted the rate structure change from the 2015 report, the Towns of Bluffton and Hilton Head Island did not. This created the challenge of modifying the billing database to manage two types of rate structures. Additional coding to minimize the manual manipulation of data was performed.

4. Describe benefits to internal and/or external customers.

Internal customers include the staff of the Stormwater, Assessor, Auditor, and Treasurer offices. The improved database makes the billing determination process more efficient. External customers are the taxpayers. With the improvements made, the time to create the Stormwater bill and facilitate an earlier billing date. The processes in place also make it easier to answer citizen questions about the bill and make changes quickly if errors are found.

ACHIEVEMENT 4 OF 5

Department Name: Stormwater

PLEASE PROVIDE BRIEF STATEMENTS AND/OR ATTACH NO MORE THAN TWO (2) SUPPLEMENTARY PAGES IN RESPONSE TO THIS ACCOMPLISHMENT.

1. Provide an overview of the achievement.

Stormwater Public Education and Outreach. In 2016, the County entered into MOA with the City of Beaufort and the Towns of Bluffton, Hilton Head Island, and Port Royal to sign a contract and co-fund a program developed by Clemson University's Extension Service, Carolina Clear. Clemson hired a local agent to develop our education and outreach program, a requirement of the MS4 permit. The local Carolina Clear program is named the Lowcountry Stormwater Partners.

2. Describe any interesting findings or opportunities.

Carolina Clear is a program used by multiple MS4 communities across the State. We were able to share their materials and experiences to develop our program.

3. Describe any challenges and how they were addressed or how you plan to address them in the future.

Lowcountry Stormwater Partners is not only made up of the County, City, and Towns, it also includes many local non-profits, volunteer groups, and other government agencies. Differing goals and opinions tried to define the vision and mission of LCSP. The excellent leadership skills of our local agent, Ellen Comeau, was able to find consensus to develop our strategic plan.

4. Describe benefits to internal and/or external customers.

External customers, the public, will benefit the most from this program. The messages and involvement opportunities will be of the highest quality and value. Due to the economy of scale by having similar programs across the State, the cost of development of materials is lessened and reduces the cost of the program to the community. Internal customers, staff, are able to rely on the expertise of Clemson University to provide a MS4 compliant program.

ACHIEVEMENT 5 OF 5

Department Name: Stormwater

PLEASE PROVIDE BRIEF STATEMENTS AND/OR ATTACH NO MORE THAN TWO (2) SUPPLEMENTARY PAGES IN RESPONSE TO THIS ACCOMPLISHMENT.

1. Provide an overview of the achievement.

Creation and full implementation of the USCB Water Quality Lab. While this program began back in 2013, the County did not transition all sampling and testing until 2016. The USCB Lab is now performing all routine field sampling and testing and lab analysis.

2. Describe any interesting findings or opportunities.

Using the staff and faculty of USCB, specifically Dr. Alan Warren, the County is not only getting the production of a commercial quality lab, we are also getting expertise analysis of data and recommendation on how to modify our monitoring program. We also can use the analysis to design Best Management Practices to better treat stormwater runoff.

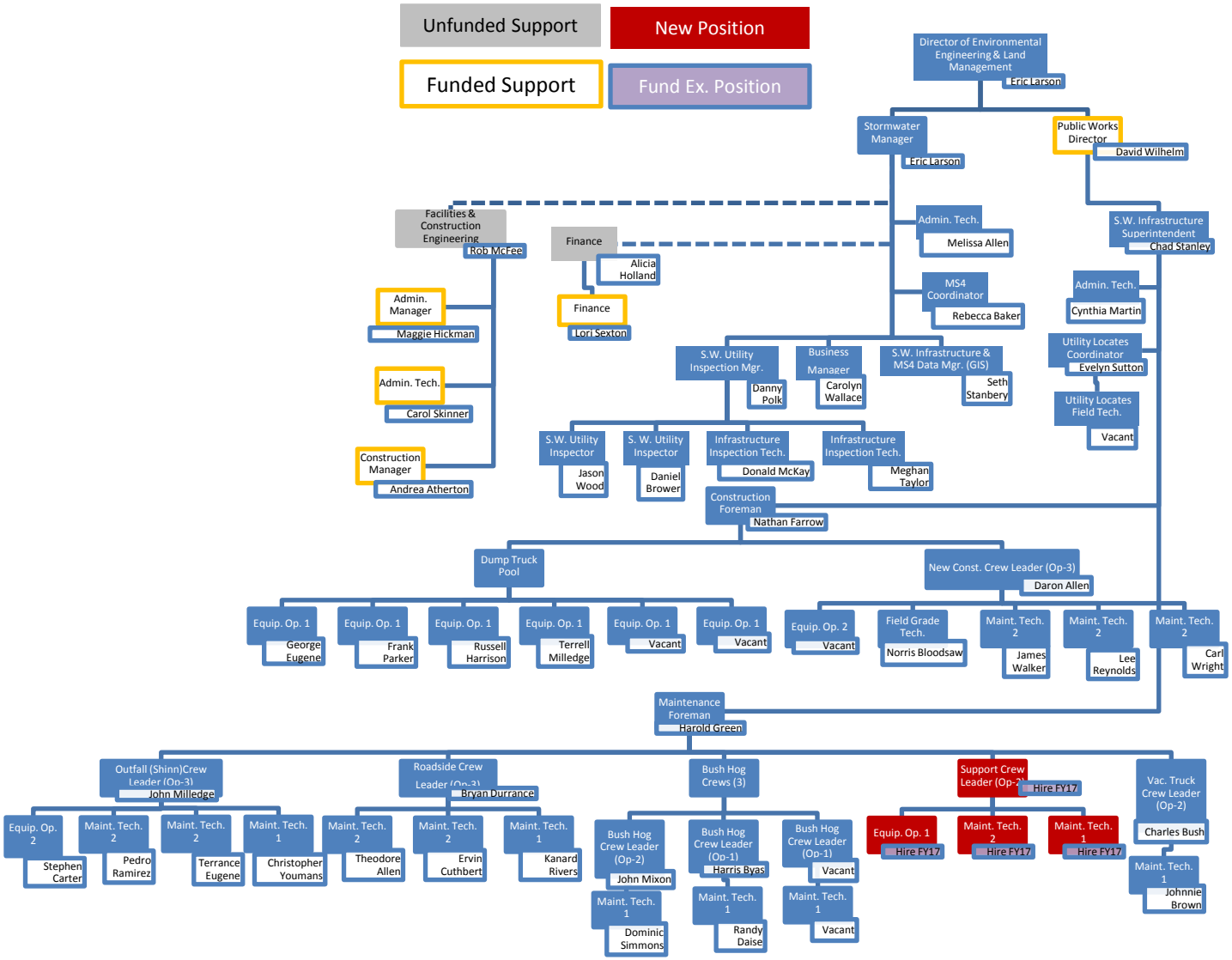
3. Describe any challenges and how they were addressed or how you plan to address them in the future.

County staff in conjunction with the Stormwater Master Plan provided by ATM was used to create the monitoring plan. There was a challenge in retrieving historical data as the Counties key personnel that was responsible for sampling resigned. USCB lab will now be responsible for all sampling and analyzing the data to ensure that this doesn't happen in the future.

4. Describe benefits to internal and/or external customers.

Use of the USCB Water Quality Lab has many tangible and intangible benefits. The cost of using the lab v. a commercial lab is lower. The expenses to operate the lab, pay salaries, etc. is kept local. USCB uses the lab not only for production work for the County, City, and Towns within Beaufort County, but they also use the lab for education. Students at USCB benefit from the lab, the University produces skilled graduates, and it is the hope that the students will stay in Beaufort County for their career.

Beaufort Stormwater Utility Organizational Chart
As of 1/19/2017



- Next Steps:
  - Continue design process with design team and staff.
  - Complete the preliminary pricing process and establish a solid budget.

WATERSHED MANAGEMENT

1. Stoney Creek Wetlands Restoration: Preliminary Design Phase
   - Final Summary Memo including conceptual design options are complete.
   - Staff, design consultant and property owners met onsite to review the conceptual designs on 1/13/17.
   - Property owners have released Staff to move forward with preliminary design.
   - Next Steps:
     - Issue notice to proceed for preliminary design on 2/06/2017.
     - Obtain easement, anticipated at March Town Council meeting.

2. 319 Grant Phase 2 (Pine Ridge) - Construction Phase
   - Staff submitted a 319 Grant amendment request to extend the grant deadline to 1/30/17 and reallocate unspent funds. The remaining 319 Grant Phase 2 funds will be reallocated to purchase engineered bacteria removal media filter socks to be installed in the wetland ditch downstream from the New Riverside Pond to maintain bacteria removal efficiency, and to install littoral shelf plantings within New Riverside Pond.
   - The grant amendment was approved by SCDHEC and the amended contract has been executed.
   - Pine Ridge reuse irrigation BMP retrofit complete.
   - SCDHEC approved the use of floating island wetlands to be used in place of littoral shelf plantings due to site constraints.
   - Next Steps:
     - Obtain easement for installation and maintenance of bacteria removal filter socks. Anticipated at March Town Council meeting.
     - Install engineered bacteria removal filter socks.
     - Purchase floating island wetlands and wetland plantings.
     - Install floating island wetlands in the Pine Ridge community and New Riverside Pond as needed.
     - Provide floating island wetlands and aid in planting and installation to interested communities within the May River watershed.

3. 319 Grant Phase 3 (May River Preserve Pond)
   - SCDHEC notified staff that the EPA has approved the grant application and the grant of $231,350 has been awarded.
   - After receiving property access approval, pre-project water quality and flow monitoring has commenced.
   - The grant contract has been approved by the EPA and executed by the Town.
   - Staff obtained verbal agreement from adjacent parcel property owner for a construction and maintenance easement.
   - Next Steps:
     - Obtain easement for construction and maintenance from property owner and adjacent parcel property owner. Anticipated at March Town Council meeting.
     - Public Education/Outreach Session with May River Preserve property owners on 3/13/2017.

- Advertise Request for Qualifications for design, permitting and construction services.

4. Stormwater Utility Management Plan Update
   - Beaufort County is the managing partner for this county-wide stormwater master plan update by Applied Technology & Management (ATM).
   - Staff provided updated Best Management Practice locations throughout the watershed to the contractor.
   - Staff received a preliminary scope and budget estimate not to exceed $75,000 to complete the May River Watershed Water Quality Model from ATM.
   - Next Steps:
     - Staff will propose completion of the Water Quality Model in FY2018 Budget.
     - Staff will continue to participate in the county-wide effort to update the Beaufort County Stormwater Management Plan as needed.

DIVISION/STAFF UPDATES

Project Management

- Beautification Committee approved the purchase of 20 additional tabby planters to be installed in the spring of 2017.

Watershed Management

- Watershed Management Staff took part in the Lowcountry Stormwater Partners Education Regional Consortium Meeting held 1/5/17.
- Watershed Management Staff met onsite with Clemson Extension at the New Riverside Pond to discuss shorescaping and floating wetland opportunities with remaining 319 Grant funds.
- Watershed Management Staff met with Beaufort County Stormwater Staff to discuss ways these jurisdictions could partner to meet MS4 water quality monitoring requirements.
- Watershed Management Staff attended the monthly Keep Beaufort County Beautiful Board and Stormwater Utility Board meetings held on 1/12/17 and 1/18/17, respectively.
- Watershed Management Staff presented a Watershed Lesson to all MC Riley 5th Graders in January.
- January Data Collection –
  - Five ground water monitoring stations at Stoney Crest Property.
  - Thirteen in-stream flow/velocity measurements collected at sampling locations in the headwaters of the May River.
  - Pre-project monitoring for multiple parameters was conducted at two sites associated with the 319 Grant Phase 3 - May River Preserve Project.
- Municipal Separate Storm Sewer System –
  - Staff submitted Year 1 MS4 Annual Report to SCDHEC on 1/3/17.
- Microbial Source Tracking –
  - Results received from 1/3/17 sampling event from four (4) locations.
  - One (1) site – the bridge at Rose Dhu Creek – had evidence of a human biomarker detected in the water sample. Results were shared with senior staff and the Watershed Action Plan Advisory Committee (WAPAC).

- Due to location of the positive sample, Beaufort County assistance has been requested to inspect surrounding septic drain fields and coordination with BJWSA to inspect nearby lift station for proper functioning.
- Staff is evaluating the budget to pull additional MST samples.

<u>Public Works</u>

1. Ditch/Drainage Maintenance –
   - Performed weekly street sweeping on Calhoun Street, Highway 46, Bruin Road, Simmonsville Road, and Buck Island Road curbs and medians.
   - Cleaned and unclogged storm drains in Old Town, Buck Island and Simmonsville Road.
   - Performed inspection on the following ditches:
     - Brown's property ditch
     - Palmetto Bluff pond
     - Arrow ditch (2,569 LF)
     - Red Cedar ditch (966 LF)
     - Buck Island roadside ditch (15,926 LF)
     - Simmonsville roadside ditch (13,792 LF)
     - Removed approximately 1,000 lbs of illegally dumped landscaped debris from Arrow ditch
     - Dumped approximately 40 tons of (G.A.B) crush/run to repair roadway

2. Beautification Program –
   - Eagles Field - Mow and rake the field
   - Old Town - Ongoing trash cleanup
     - May River Road
     - Burnt Church Road
     - Highway 46
     - Simmonsville Road
     - Buck Island Road
   - Landscape Maintenance - Ongoing routine
     - Calhoun Dock
     - 1261 May River Road
     - 1264 May River Road
     - Law Enforcement Center
     - Reinstalling the old fence at Eagle's Field
     - Rotary Community Center
     - Public Works Facility
     - Pritchard Park

3. Town Trash and Recycling Program

   Waste management and the Town are in a transition in the handling of the service calls from Residents. As of the first of January all service calls for new service, broken and missing cart replacement and missed trash and recycle pickups are now being handled through the waste management call center.

BEAUFORT COUNTY STORMWATER UTILITY
120 Shanklin Road
Beaufort, South Carolina 29906
Voice (843) 255-2805 Facsimile (843) 255-9436
wstormwater@bcgov.net

January 27, 2017

South Carolina Department of Health and Environmental Control
Bureau of Water, Water Pollution Compliance Section
2600 Bull Street
Columbia, SC 29201-1708

RE: Beaufort County South Carolina NPDES Permit #SCR030000 Small Municipal Separate Storm Sewer System (MS4) Annual Report for year 12/01/2015 to 12/01/2016.

Dear Ms. Shakhlan Garane,

Beaufort County is pleased to submit our annual report for General permit SCR030000, the State of South Carolina NPDES General Permit for Storm Water Discharge from Regulated Small Municipal Separate Storm Sewer System (MS4). Please see attached one (1) original copy of the 12/01/2015 to 12/01/2016 annual report.

If you have any questions, please contact me or Rebecca Baker at (843) 255-2805.

Sincerely,

Eric W. Larson

Eric W. Larson, PE, CPSWQ, AICP, CFM
Director of Environmental Engineering and Land Management

cc: G. Kubic, County Administrator
Rebecca Baker, MS4 Coordinator
file

BEAUFORT COUNTY STORMWATER UTILITY
120 Shanklin Road
Beaufort, South Carolina 29906
Voice (843) 255-2805 Facsimile (843) 255-9436
wstormwater@bcgov.net

ANNUAL REPORT

Permit Coverage #SCR 030000

Reporting Period: 12/01/2015 to 12/01/2016

Permittee: Beaufort County

Program Name: Beaufort County MS4

D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health
and Environmental Control

National Pollutant Discharge Elimination System Permit
for Discharge to Surface Waters

This Certificate of Coverage Certifies That

Beaufort County

has been granted permission to discharge storm water to the Atlantic Ocean and to all receiving waters in the State of South Carolina from the municipal separate storm sewer system located in

Beaufort County, South Carolina

in accordance with effluent limitations, monitoring requirements and other conditions set forth in the State of South Carolina NPDES General Permit for Storm Water Discharges from Regulated Small Municipal Separate Storm Sewer Systems (MS4s), SCR030000. This coverage is granted in accordance with the provisions of the Pollution Control Act of South Carolina (S.C. Code Sections 48-1-10 *et seq.*, 1976), Regulation 61-9 and with the provisions of the Federal Clean Water Act (PL 92-500), as amended, 33 U.S.C. 1251 *et seq.*, the "Act."

Ann R. Clark

Ann R. Clark, Director
Storm Water, Construction and Agricultural Permitting Division
Bureau of Water

Issued:	**November 5, 2015**	**Expires:**	**December 31, 2018**
Effective:	**December 1, 2015**	**Certificate No.:**	**SCR031301**

South Carolina NPDES Permit # SCR030000
Small Municipal Separate Storm Sewer System (SMS4)
Annual Report Template

South Carolina NPDES Permit # SCR030000
Small Municipal Separate Storm Sewer System (SMS4)
Annual Report Template

Permit Coverage #SCR 030000 **Reporting Period:** 12/01/2015 to 12/01/2016

Permittee: Beaufort County

Program Name: Beaufort County MS4

Reporting for more than one Program: ☐
(Prepare copies of this page for each Program and attach to this report.)

Responsible Official Information
(Enter the information of the principal executive officer, mayor, or other duly authorized employee/elected official.)

Name: Gary Kubic **Title:** County Administrator

Telephone Number: 843-255-2026 **E-mail Address:** Gkubic@bcgov.net

Mailing Address: 100 Ribaut Road Beaufort, SC 29902

Program Manager Information
(Enter the information of the person who is responsible for daily implementation of the program.)

Name: Eric Larson **Title:** Stormwater Manager

Telephone Number: 843-255-2805 **E-mail Address:** Elarson@bcgov.net

Mailing Address: 120 Shanklin Road, Beaufort SC 29902

Certification
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Responsible Official Signature: Gary Kubic **Date:** 1/30/2017
(The responsible official may authorize another person or person occupying a specific position to certify this report if this authorization is made in writing and submitted to the Department. Please attach a copy of the authorization with this report, if applicable)

Submit the annual report to:
South Carolina Department of Health and Environmental Control
Bureau of Water, Water Pollution Compliance Section
2600 Bull Street
Columbia, SC 29201-1708

Questions? Contact (803) 898-4300

I. Special Conditions Applicable to Stormwater Discharges to Sensitive Waters

A. General (3.1)

1. Has an assessment been conducted to determine if the MS4 discharges to sensitive waters as described in the Permit Part 3? X Yes ☐ No *(what is the target date of completion of the assessment?)*_____

2. Does the SWMP specifically address these sensitive waters through BMP, system design, etc.? X Yes ☐ No

3. Does the MS4 discharge to waters classified as Outstanding Resource, Trout, or Shellfish Harvesting? If so, list the waters (3.5): ☐ No X Yes May River and Okatie River

B. TMDL Monitoring and Assessment Plan (3.2)

1. Does the MS4 discharge to receiving waters within a TMDL watershed? If yes, list the water body and the pollutant(s) of concern. ☐ No X Yes (Watershed) – Okatie River (Use) Shell Fish – (Cause) Fecal Coliform

2. Which of the TMDL pollutant(s) of concern listed above have the potential to occur within the MS4? Fecal Coliform

3. Report the current stage of development of a monitoring and assessment plan. Mark one or more that most accurately reflects the current status of the program as a whole:
☐ Not started ☐ Research/Development X Implementation

4. Has the plan been submitted to the Department?
X Yes ☐ No, target date for submission: _____

5. Has monitoring been conducted for the pollutant(s) of concern in the past reporting year?
☐ Yes (Exhibit A attached) X No, target date to begin monitoring: 12/01/2016

6. Are there any updates to the plan for this reporting year?
X No ☐ Yes (updates attached)

7. Provide a brief description of the progress made on the plan in this reporting year and evaluate its effectiveness. The County has prioritized potential monitoring sites based on historical data, current land use and previous land use and septic tanks. Please see attached the County's 5 year monitoring program (Exhibit A). To increase the accuracy of the sampling results the County has an agreement with the USCB lab to have all wet and dry sampling performed by a certified lab technician.

C. Discharges to Impaired Water Bodies (3.4)

1. Does the MS4 discharge to receiving waters on the 303(d) list of impaired waters? If yes, list the water body and the pollutant(s) of concern. ☐ No X Yes See Exhibit B map.

BASIN	HUC_12	DESCRIPTION	STATION	USE	CAUSE(S)
SAVANNAH	030601100202	NEW RIVER 3.4 MI SSE OF SC 170 BRIDGE OVER NEW RIVER	RT-06021	REC	ENTERO
SALKEHATCHIE	030601100201	NEW RVR AT SC 170 9 MI W OF BLUFFTON	MD-118	REC	ENTERO
SALKEHATCHIE	030601100201	NEW RVR AT SC 170 9 MI W OF BLUFFTON	MD-118	FISH	HG
SAVANNAH	030601100301	BEND IN MAY RIVER NEAREST HIGH BLUFF OF PALMETTO BLUFF	19-19B	SHELLFISH	FC
SAVANNAH	030601100301	FIRST UNNAMED TRIBUTARY LEADING FROM GASCIOGNE BLUFF	19-19C	SHELLFISH	FC
SAVANNAH	030601100301	MAY RIVER AT FIRST DOCK IN HEADWATERS PAST BLUFF	19-19	SHELLFISH	FC
SAVANNAH	030601100301	UNNAMED TRIBUTARY NEAR SW CORNER OF CASCIOGNE BLUFF	19-19A	SHELLFISH	FC

2. Which of the 303(d) pollutant(s) of concern listed above have the potential to occur within the MS4? Fecal Coliform, Enterococcus Mercury.

II. Storm Water Management Program

A. Ordinance Information (4.1)

(Insert your website address if the ordinance is posted online. If your ordinance is not posted online, please submit a hard copy with this report.)

Website:http://www.co.beaufort.sc.us/departments/Engineering-and-Infrastructure/stormwater-management/documents/Manuals--Plans-page/Beaufort%20County%20BMP%20Manual%20Updated%2012.01.16.pdf **Hard copy attached:** ☐

B. Storm Water Management Plan (SWMP) (4.1, 4.5)

(Answer the questions below about the SWMP for the current reporting year.)

1. Have there been any changes to the area covered by the MS4? If yes, is this reflected by updates to the SWMP?
X No ☐ Yes *(explain)*: _____

2. Are there any proposed changes to the goals or BMP (best management practices) in the SWMP?
☐ No X Yes *(explain)*: The County entered an agreement with Clemson University to assist in our Public Education Program. We have changed the 7th grade class goal reaching elementary age children by working with the following programs. Adopt-A-Watershed, Storm Drain Marking, 4-H wetland project, $4H_2O$ Pontoon classroom and Enviroscapes.

3. Do you have adequate resources to implement your SWMP?
X Yes ☐ No *(explain)*:_____

4. Provide information below about staffing levels for each Minimum Control Measure (MCM). This information should be presented as the amount of individuals performing duties directly related to each MCM and the estimated percentage of their time spent doing so. If you share responsibility for the MCM with another entity, indicate that in the corresponding spaces. All of the municipalities located within the County share the responsibility of inspections, sampling and the Beaufort County Connect app which is used to track complaints.

- MCM 1: (2) 1 at 30% and 1 at 10% - Clemson University Carolina Clear
  (5) 1 at 25% and 4 at 10% - Beaufort County Staff

- MCM 2: (2) 1 at 30% and 1 at 10% - Clemson University Carolina Clear
  (5) 1 at 25% and 4 at 10% - Beaufort County Staff

- MCM 3: (4) 1 at 25% and 3 at 10% - Beaufort County Staff

- MCM 4: (4) 1 at 25% and 3 at 10% - Beaufort County Staff

- MCM 5: (10) 10 at 5% - Beaufort County Staff

- MCM 6: (6) 1 at 25% and 5 at 10% - Beaufort County Staff

5. Has training been provided to staff as required by the permit in the last reporting year?
X Yes *(fill in the table below)* ☐ No *(explain, and provide implementation dates)*:_____

_____

Date	Topics Covered
12/3/2015	Illicit Discharge, Construction site management, dry weather, sediment removal, site restoration (28).
5/4/2016	Pathogen in Urban Stormwater Systems: A Practical Guide for MS4's.
5/23/2016	Pathogen in Urban Storwater Systems: Understanding and Indentifying Sources.
6/09/2016	SCASM Data Collection for IDDE and litter control.
6/14/2016	Pathogen in Urban Stormwater Systems: Transport of Pathogens in the Environment.
7/21/2016	Pathogen in Urban Storwater Systems: Source Controls and Stormwater Control Measures.
9/8/2016	SCASM Construction and Post Construction Controls.
10/25/2016	LowCountry Stormwater Partners: Strategic Outreach and planning on all MCM's.
11/17/2016	SCASM Impact of BMP's downstream, stormwater ponds and monitoring bacteria.

III. Minimum Control Measures (MCM)

A. Sharing Responsibility (4.4)

1. Is responsibility shared for any minimum measures through an agreement with another entity?
☐ No X Yes (*name the entity in the chart below)*

MCM 1	Beaufort Soil and Water Conservation District and Clemson University Carolina Clear
MCM 2	Beaufort Soil and Water Conservation District and Clemson University Carolina Clear

If you have indicated that you are sharing responsibility above in any MCM, answer the questions below:

2. Have you submitted notice to the Department that you are relying on another entity? See Exhibit C attached.
☐ Yes X No *(submit a copy of any agreements that have not previously been sent to the Department)*

3. If applicable, provide the date of submission of the agreement(s) to the Department: December 1, 2016

4. Are all control measures as stringent as the permit requires?
X Yes ☐No *(if no, provide an explanation)*_____

5. Did the other entity agree in writing to implement the measure on your behalf?
X Yes ☐No *(if no, provide an explanation)*_____

6. Did the other entity implement the measure and agree to report on your behalf?
X Yes ☐No *(if no, provide an explanation)*_____

7. Is the agreement maintained as part of the SWMP?
X Yes ☐No *(if no, provide an explanation)*_____

8. Have you dissolved any agreements with entities this reporting year?
☐ No X Yes *(if yes, who?)* The County had two separate agreements to assist in the education program for this permit cycle. One was with Beaufort Soil and Water Conservation District (BCSCWD) from October 2014 to July 2015 with an extention for an additional year from July 2015 to July 2016. The BCSWCD was not renewed do to the ability to provide a need of technical training required in the Public Education program. The County then entered into an agreement with Carolina Clear/Clemson University from June 2016 to June 2017 to assist with the County Public Education program.

III. Minimum Control Measures (MCM)

B. Minimum Control Measure 1: Public Education and Outreach on Storm Water Impacts (4.2.1, 5.3)

1. Use the table below to summarize outreach strategies, goals, and progress for the current reporting year. In the "activities conducted and planned" section, focus on activities that were conducted in the last reporting year and those that are planned for the upcoming reporting year, providing implementation dates. Add rows where needed and attach additional sheets if necessary.

Pollutant of Concern	**Outreach Strategy** *(include target audiences)*	**Measurable Goal(s)**	**Progress on Goal(s)**	**Activities Conducted and Planned** *(specific implementation dates)*	**Number of People Reached**
Pet Waste, Household Hazardous Waste, Litter, Commercial Waste, Sediment	To Provide Public Education outreach to Elementary age students. *See Exhibit D BCSWCD Outreach Breakdown.	BCSWCD reached elementary age students by the use of Enviroscapes. The Enviroscape were used in the school classrooms and festivals. The Enviroscapes provided the students education on the importance of protecting their water ways by focusing on picking up pet waste and litter. See Exhibit D for images of the	X Completed	December 1 2015 to June 1 2016	1500

		events.			
Pet Waste, Household Hazardous Waste, Litter, Commercial Waste, Sediment	Survey completed to determine pollutants of concern to target Residential, Commercial, Industrial and Institutional audiences. *See Exhibit D BCSWCD Outreach Breakdown.	Survey Responses helped with creating 7 top POC's as a result of the survey are as follows: Post-Construction Maintenance and Inspection, especially related to Stormwater Ponds, Runoff Volume Mitigation and Minimization of Freshwater Loading to Estuarine Systems, Illegal Littering, Bacteria Impact Awareness, Septic System Management, Fertilizer Need, Selection, and Application.	X Completed	Survey was issued and distributed by mail, email, website and posted in Public Libraries from 5/1/2016 to 7/1/2016	600 See Exhibit D Worksheet
Pet Waste, Household Hazardous Waste, Litter Control	Attended 16 Schools to use the Stormwater Enviroscape as a source to target Elementary age students. *See Exhibit D BCSWCD Outreach Breakdown.	Our goal was reached to purchased enviroscape so the staff could attend separate schools and events on the same day. We also increased the volunteer staff that were putting on the event.	X Completed	Events were held in various parts of the County to ensure overall education within the County limits. Events were held from 1/1/2016 to 5/1/2016	1400 students
Pet Waste, Household Hazardous Waste, Litter Control	Attended 32 Event and Festivals. target Residential, Commercial, Industrial and Institutional. *See Exhibit D BCSWCD Outreach Breakdown.	Our goal succeeded the amount of events that we were proposing to have due to the increase in volunteer workers attending the events.	X Ongoing	Events were held in various parts of the County to ensure overall education within the County limits. Events were held from 12/1/2015 to 4/23/2016	6400 participants
Pet Waste, Hazardous Household Waste, Sewer, Septic Thanks, Parking lot runoff, Fertilizer	500 flyers were created and distributed to various parts of the County to target Residential, Commercial, Industrial and Institutional. *See Exhibit D BCSWCD Outreach Breakdown.	Flyers were handed out at Town Hall meetings, Recycle Centers, Public Office lobbies.	X Ongoing	Flyers were created and distributed at all events from 1/1/2016 to 10/1/2016.	500
Pet Waste, Hazardous Household	Website and Facebook was used to reach the	Website and Facebook was used to advertise upcoming events and post stormwater	X Ongoing	Post were made from 12/1/2015 to 12/1/2016.	100 estimated (unable to

Waste, Sewer, Septic Thanks, Parking lot runoff, Fertilizer	internet community. Facebook page had 100 likes over the course of one year. *See Exhibit D BCSWCD Outreach Breakdown.	POC.			determine how many hits were made).
Pet Waste and Litter	3 billboards were created to address POC. Target Residential, Commercial, Industrial and Institutional. *See Exhibit D BCSWCD Outreach Breakdown.	Billboards were created and displayed throughout the County. Billboards had not been used in the past and was a successful way to reach all types of audiences.	X Ongoing	Billboards were displayed from 4/20/2016 to 12/1/2016	1,238,256 possible Impressions based on traffic.
*See Exhibit D BCSWCD Outreach Breakdown for additional Miscellaneous Public Education Events and Involvement.					
CM, GSA	Strategic education planning meeting *(stakeholders)*	This meeting was held amongst LSP partners and stakeholders to determine the POCs for Beaufort County and to determine educational needs.	X Completed	The meeting was well attended and the POCs for Beaufort County were determined.	24
CM, GSA	LSP consortium meetings *(consortium members)*	These meetings are for partners to update each other and to address consortium business such as workshops, current events, etc.	X Completed	One meeting was held on 1/5/2017. The next is scheduled for April.	18
CM, GSA	LSP partner recruitment	N/A	☐ Ongoing	By engaging with local organizations and involving them in the consortium has helped to increase LSP's reach and ability to provide stormwater education and involvement opportunities.	9
CM, GSA	LSP logo development *(general public)*	N/A	X In Planning	LSP is working with Amy Manucy Designs, LLC. to develop the logo. LSP submitted the first reviews on 1/5/2017.	
CM, GSA, POC #1, POC #2, POC #3, POC #4, POC #5, POC #6	Develop the 2016-2018 Strategic Regional Stormwater Outreach Plan *(general public)*	This plan is a living document which details the framework and requirements of LSP public education and involvement activities. It was evaluated by local MS4 partners.	X Completed	The plan was written, submitted to DHEC, and made accessible to the public.	
CM, GSA, POC #1, POC #2,	LSP Changing Tides monthly newsletter *(general public)*	This monthly newsletter is meant to inform the general public about recent, current, and	X Completed	Three newsletters were created and sent out in October,	37

POC #3, POC #4, POC #5, POC #6		upcoming public education and participation opportunities. Their effectiveness will be tracked through views.		November, and December of 2017. The next is scheduled for end of January.	
GSA	LSP partners' Facebook page *(general public)*	These pages are managed by partner organizations but will assist the LSP in spreading information about public participation opportunities and other relevant information. Their effectiveness will be tracked through "Likes".	X Ongoing		55,554
GSA	LSP branded giveaways *(general public)*	LSP branded materials will be used to attract the general public to LSP activities and their effectiveness will be tracked through the amount of merchandise taken,	X In Planning	LSP is working with Carolina Promotions to develop branded rain gauges and other materials.	
GSA, POC #1, POC #2, POC #3, POC #4, POC #5, POC #6	SC Waterways factsheets *(general public)*	These publications' goal is to teach citizens how to have a positive impact on local water quality through their own gardening and daily practice. Their use will be tracked through views.	X Completed	There are 35 factsheets available.	N/A
GSA, POC # 3, POC #4, POC #5	Port Royal Sound Foundation Maritime Center Second Birthday Celebration *(general public)*	LSP tabled at this event.	X Completed	On November 12th, LSP provided enviroscape demonstrations that focused on how bacteria, nutrients, and litter can originate from human activities, be transported through stormwater, and affect local water quality.	104
GSA, POC #1, POC #2, POC #3, POC #4, POC #5, POC #6	Lowcountry Stormwater Partners (LSP) website *(general public)*	The website's goal is to provide a clearing house of stormwater information and public participation opportunities. Its use will be tracked through site visits.	X Ongoing	Website was developed and launched on 1/6/2017. It is in the process of being updated with relevant information.	N/A
GSA, POC #1, POC #2, POC #3, POC #4, POC #5, POC #6	Carolina Clear website *(general public)*	The website's goal is to provide a clearing house of stormwater information and public participation opportunities. Its use will be tracked through site visits.	X Ongoing	This number is an estimate and based off of 2015 data.	17,513
GSA, POC #1, POC #2, POC #3, POC #4, POC #5, POC #6	LSP Facebook page *(general public)*	The goal of this page is to provide a forum for public participation, to increase awareness of stormwater's effects on water quality, and increase awareness of public participation opportunities. Its effectiveness will be tracked through "Likes".	X Ongoing	The page was transferred over to the LSP on January 5th, 2017. It will be updated at least three times a week with relevant information.	180

GSA, POC #1, POC #2, POC #3, POC #4, POC #5, POC #6	Carolina Clear Facebook page *(general public)*	The goal of this page is to provide a forum for public participation, to increase awareness of stormwater's effects on water quality, and increase awareness of public participation opportunities. Its effectiveness will be tracked through "Likes".	X Ongoing		35,056
GSA, POC #1, POC #2, POC #3, POC #4, POC #5, POC #6	Neighbors for Clean Water Twitter account *(general public)*	The goal of this forum is to provide a forum for public participation, to increase awareness of stormwater's effects on water quality, and increase awareness of public participation opportunities. Its effectiveness will be tracked through "Followers".	X Ongoing	The feed was transferred over to the LSP on January 5th, 2017. It will be updated at least three times a week with relevant information and the handle will be changed to reflect the new consortium..	N/A
GSA, POC #1, POC #2, POC #3, POC #4, POC #5, POC #6	Carolina Clear YouTube channel *(general public)*	The channel's goal is to provide a clearing house of stormwater information. Its use will be tracked through site views.	XOngoing	This channel hosts 76 videos that include television commercials, local channel community segments, how-to videos, street interviews, and more.	3852
GSA, POC #1, POC #2, POC #3, POC #4, POC #5, POC #6	Educational stormwater materials displays in public buildings *(general public)*	These displays are a source of stormwater and better management practice information and consist of brochures, post cards, fact sheets, etc.	X Completed	Currently one display is in the Beaufort County Extension office and the addition of others is being discussed with town halls and libraries.	
GSA, POC #1, POC #2, POC #3, POC #4, POC #5, POC #6	Educational stormwater display at the Port Royal Farmer's Market *(general public)*	This display will be source of stormwater and better management practice information and consist of brochures, post cards, fact sheets, etc.	X In Planning	The table is reserved and the display will be set up in February.	
GSA, POC #1, POC #2, POC #3, POC #4, POC #5, POC #6	Picket fence subdivision presentation *(homeowners)*	This presentation will consist of an enviroscape demonstration and a discussion on how citizens can use their landscaping and other tools to reduce their stormwater footprint. It's effectiveness will be evaluated through a participant survey.	X In Planning	A site has been selected and a date is being scheduled.	
GSA, POC #1, POC #2, POC #3, POC #4, POC #5, POC #6	Water quality kiosks *(general public)*	These touch screen kiosks will provide targeted information regarding stormwater issues and their effectiveness will be evaluated by tracking their usage.	X In Planning	The kiosks are operational but need to be updated.	
GSA, POC #1, POC #4, POC #5,	Carolina Clear stormwater pond website *(pond managers)*	The website's goal is to provide a clearing house of stormwater pond information. Its use will be tracked through site visits.	XOngoing	This number is an estimate and based off of 2015 data.	20,121

GSA, POC #3, POC #4, POC #5, POC #6	Carolina Clear educational stormwater postcards *(general public)*	These publications' goal is to teach citizens how to have a positive impact on local water quality through their own gardening and daily practice. Their use will be tracked through numbers distributed.	XOngoing		N/A
POC #1, POC #2, GSA	Port Royal Sound Foundation rain barrel workshop *(homeowners)*	This workshop's goal is to engage area residents and businesses in a workshop where they will learn about rain barrel function, installation, and maintenance in a classroom segment and then receive practical experience installing a new rain barrel. It's effectiveness will be evaluated through a participant survey.	X In Planning	A date is being scheduled.	
POC #1, POC #2, GSA	Town of Bluffton rain garden workshop (*homeowners)*	This workshop's goal is to engage area residents and businesses in a workshop where they will learn about rain garden design, function, and maintenance in a classroom segment and then receive practical experience installing a new rain garden. It's effectiveness will be evaluated through a participant survey.	X In Planning	Permissions have been received and a site is in the process of being selected.	
POC #1, POC #2, GSA	Beaufort County rain garden workshop *(homeowners)*	This workshop's goal is to engage area residents and businesses in a workshop where they will learn about rain garden design, function, and maintenance in a classroom segment and then receive practical experience installing a new rain garden. It's effectiveness will be evaluated through a participant survey.	X In Planning	The site is finalized and a maintenance contract is being discussed.	
POC #1, POC #2, GSA	Oldfield Mews rain garden presentation *(homeowners)*	This workshop's goal is to engage area residents and businesses in a workshop where they will learn about rain garden design, function, and maintenance in a classroom segment. It's effectiveness will be evaluated through a participant survey.	X In Planning	Site selection is in progress.	
POC #1, POC #2, GSA	The Outside Foundation rain barrel workshop *(homeowners)*	This workshop's goal is to engage area residents and businesses in a workshop where they will learn about rain barrel function, installation, and maintenance in a classroom segment and then receive practical experience installing a new rain barrel. It's effectiveness will be evaluated through a participant survey.	X In Planning	Site selection is in progress.	

POC #1, POC #3, POC #6, GSA	Good Housekeeping and BMP Training *(partner employees)*	Educational videos will be lent to LSP partners who are interested in educating their employees on IDDE and BMPs.	X In Planning	The videos were given to Beaufort County for review and the trainings will take place within the next few months.	
POC #1, POC #4, POC #5	Sun City Shorescape Information Packet *(HOA board members)*		X Ongoing	On November 4th, 2016, the Sun City Bird Club requested the LSP to provide a shorescape informational packet for the HOA Board as they were planning to install one on the HOA's property. The board will use this information and make their decision regarding the shorescape in the spring.	10
POC #1, POC #4, POC #5	Host Master Pond Manager *(pond manangers)*		X In Planning	The Master Pond Management course is scheduled to be hosted in Beaufort County in the spring of 2017.	
POC #2, POC #1, POC #3, POC #4, POC #5, GSA	Master gardener presentation *(homeowners)*	This presentation will consist of an enviroscape demonstration and a discussion on how citizens can use their landscaping and other tools to reduce their stormwater footprint. It's effectiveness will be evaluated through a participant survey.	X Planning	The presentation will occur from 1pm-4pm of 1/31/17.	
POC #5, POC #6, POC #4, GSA	Carolina Yards website *(homewoners)*	The website's goal is to provide a clearing house of information on how to Use simple and effective principles and actions to help guide you towards a low maintenance and positive environmental impact yard. Its use will be tracked through site visits.	X Ongoing	This number is an estimate and based off of 2015 data.	15,846
POC1, POC4, POC5	Master Pond Manager 2015 *(pond managers)*	Attendance and certifications	X Completed		56 attended 14 certified
POC5, POC6, GSA	Making it Grow! 2016 *(homewoners)*	Its use will be tracked by views (number reported is the average number of persons per household applied to the projected number of households that viewed Making It Grow! during the 2016 calendar year. This number is conservative as it does not account for the SC Channel and only represents one episode's viewing).	X Completed		12,718

Abbreviation	Pollutant of Concern
POC #1	Post-construction maintenance

POC #2	Freshwater (runoff volume)
POC #3	Litter
POC #4	Bacteria
POC #5	Nutrients
POC #6	Sediment
GSA	General Stormwater Awareness
CM	Consortium Management

C. Control Measure Evaluation (5.3)

1. Evaluate the success of this MCM. Refer to goals implemented and achieved, and adherence to the implementation schedule: The target audiences were a success in reaching all of the projected goals by purchasing an enviroscape. See Exhibit D for additional pictures of the events that were held by the volunteer staff from BCSWD utilizing the enviroscape. In addition, a survey (Exhibit E) was performed using survey monkey. The survey was not scheduled until 2017 goals but was set as a higher priority to assist other municipalities reach their goals. See Exhibit E for Survey results and proposed strategic plan. The implementation of MCM#1 was successful in the Hilton Head Urbanized Area for several reasons. The most notable success was the formation of the Lowcountry Stormwater Partners (LSP) regional consortium. The LSP started when Beaufort County, the City of Beaufort, Town of Bluffton, Town of Hilton Head Island, and Town of Port Royal agreed to work together across municipal and watershed boundaries to address stormwater education and awareness needs. With this commitment, the communities selected to work with the Clemson Extension Carolina Clear program. Carolina Clear seeks to develop outreach and involvement opportunities that lead to sustained behavior changes that protect water resources. This is best accomplished through meaningful partnerships; thus, the region has selected to work locally as the Lowcountry Stormwater Partners and invite other educational institutions, utilities, non-profits, property management companies, and the supporting municipal and county partners to deliver consistent outreach programming to target audiences.

After its formation, the LSP continued to work towards fulfilling MCM#1 by developing the 2016-2018 Strategic Regional Stormwater Outreach Plan. The LSP developed this plan using surveys, regional communication, and other data in order to address major concerns of partners, relevant and involved audiences, and documented water quality concerns. This strategic outreach plan was designed to meet the public education and involvement requirements (MCM#1 and MCM#2) of the 2013 National Pollution Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Regulated Small Municipal Separate Storm Sewer Systems (SMS4s) and was implemented beginning in July 2016 and will continue to be implemented through 2018. This plan was developed, submitted, and implemented before the December 1, 2016 deadline.

During the plan's development, the LSP worked to identify the region's pollutants of concern (POCs). Multiple methods were used to identify the POCs including, but not limited to, resident stormwater awareness and knowledge surveys, ongoing area water quality monitoring results, and a strategic planning meeting with local MS4s and educational partners. The POCs for the area are: post-construction maintenance, freshwater (runoff volume), litter, bacteria, nutrients, and sediment. By identifying these POCs, the LSP began moving towards more consistent messaging amongst partners, which is a key component in the education and outreach strategy.

The POCs will form the core of these messages, but overall larger messages of water resource protection and personal responsibility are in development for use towards consistency in outreach materials and events. Overall, the regional consortium seeks to incorporate messages that include a sense of personal responsibility for stormwater pollution and regional water quality as well as the recognition that the quality of local waterways directly impacts the livelihoods, health, and quality of local communities. Recently, the consortium took the next step of developing these messages by agreeing upon a mission statement and several key educational concepts at the quarterly consortium meeting. The new mission statement of the LSP is, "To protect and restore healthy and productive Lowcountry waterways through a network of partnerships that provides education outreach and involvement opportunities to the region's citizens and businesses on stormwater impacts," and the key educational concepts are as follows:

1. Everyone lives in and is part of a watershed.
2. Environmental health directly impacts economic health in the Lowcountry.
3. Activities on land have a direct impact on water quality.
4. Freshwater, especially large volumes of stormwater runoff, is a stressor for the Lowcountry's tidal creeks, saltmarshes, and other marine environments.
5. You contribute to stormwater pollution, but you can also help to reduce it.
6. We all must do our part and work together to reduce stormwater pollution and to protect what makes the Lowcountry so special.
7. Freshwater resources such as stream headwaters, swamps, and recreational ponds are negatively affected by polluted stormwater runoff.
8. The primary pollutants of concern in the Lowcountry are post-construction maintenance, freshwater, litter, bacteria, nutrients, and sediment.
9. Protecting water quality and managing stormwater runoff are not free services and the stormwater utility fee helps pay for those services.

The LSP continued to make strides towards fulfilling MCM#1 by completing goals such as the development of a consortium website, the launching of streamlined LSP social media platforms, the creation of a monthly e-newsletter, and is currently developing a logo to use for effective branding and promotion. Once the logo is complete, the LSP will use mass-media such as billboards, radio ads, and TV spots as well as promotional giveaways to spread its message. This progress allowed for the LSP to attract nine new educational partners to the consortium, which will further the reach of all of these efforts. However, the LSP has not settled for that progress. There are also currently five educational workshops and three targeted lectures planned to take place in the beginning of 2017 in order to educate citizens through involvement. Finally, the LSP is also planning the creation and the updating of public education displays using informative post cards, brochures, fact sheets, and multi-media presentations.

2. Provide an evaluation of where the program needs improvement and explain any actions that will be taken to achieve objectives: The program had a change in the partner assisting with the public education half way through the permit year but was successful in exceeding our goals. There needs to be improvement in the website and facebook page which has been delayed due to the change in partnership. While the LSP made great strides in terms of organization and planning, the consortium can improve by expanding its outreach efforts as well as directly engaging with specific target audiences. The LSP has begun to address those issues through beginning the process of updating their interactive kiosks, expanding their stormwater displays in public buildings, and developing workshops for homeowners about BMPs. The LSP is also expanding outreach efforts for specific POCs, such as post-construction maintenance, by hosting programs such as the Master Pond Manager certification course.

III. Minimum Control Measures (MCM)

D. Minimum Control Measure 2: Public Involvement/Participation (4.2.2, 5.3)

1. How can the public find information about the SWMP? County website located at http://www.bcgov.net/departments/Engineering-and-Infrastructure/stormwater-management/documents/Whats%20New/Beaufort%20County%20BMP%20Manual%2009142016%20adopted.pdf.

2. Use the table below to summarize public involvement opportunities, goals, and progress for the current reporting year. In the "activities conducted and planned" section, focus on activities that were conducted in the last reporting year and those that are planned for the upcoming reporting year, providing implementation dates. Add rows where needed and attach additional sheets if necessary.

Public Involvement Opportunity	**Measurable Goal(s)**	**Progress on Goal(s)**	**Activities Conducted and Planned** *(specific implementation dates)*	**Number of Participants**
Storm Drain Markers	Had 244 volunteers and installed 200 new drain markers. *See Exhibit D BCSWCD Outreach Breakdown.	BCSWCD organized several events between 01/06/2016 to 05/01/2016 to install Drain Markers. For 2017 we plan to utilize the Boys and Girl Scouts and Service Clubs.	X Ongoing	412
Town Hall Meetings	83 Residents attended 7 separate Town Hall meetings and Participation Panels. The County received 60 comments. *See Exhibit D BCSWCD Outreach Breakdown.	Town Hall meetings were held to encourage input on the new BMP manual and allow the Public the submit complaints or concerns. Town Hall meetings were held at various locations in the County on June 20, 2016, June 21, 2016, June 22, 2016 and June 23, 2016.	X Ongoing	83
Community Clean up.	Cleaned up 43,230 pounds of litter and partnering with the Solid Waste Recycling Department. *See Exhibit D BCSWCD Outreach Breakdown.	Set up formal community clean up days for cleaning trash and debris from roadside ditches, etc. in the watersheds from.12/1/2015 to 10/1/2016	X Ongoing	1776
*See Exhibit D BCSWCD Outreach Breakdown for additional Miscellaneous Public Involvement.				
Strategic education planning meeting *(stakeholders)*	This meeting was held amongst LSP partners and stakeholders to determine the POCs for Beaufort County and to determine educational needs.	The meeting was well attended and the POCs for Beaufort County were determined.	X Completed	24
LSP consortium meetings *(consortium members)*	These meetings are for partners to update each other and to address consortium business such	One meeting was held on 1/5/2017. The next is scheduled for April.	X Evaluation	18

	as workshops, current events, etc.			
LSP partner recruitment		By engaging with local organizations and involving them in the consortium has helped to increase LSP's reach and ability to provide stormwater education and involvement opportunities.	X Ongoing	9
Develop the 2016-2018 Strategic Regional Stormwater Outreach Plan *(general public)*	This plan is a living document which details the framework and requirements of LSP public education and involvement activities. It was evaluated by local MS4 partners.	The plan was written, submitted to DHEC, and made accessible to the public.	X Completed	
LSP Changing Tides monthly newsletter *(general public)*	This monthly newsletter is meant to inform the general public about recent, current, and upcoming public education and participation opportunities. Their effectiveness will be tracked through views.	Three newsletters were created and sent out in October, November, and December of 2017. The next is scheduled for end of January.	X Ongoing	37
LSP partners' Facebook page *(general public)*	These pages are managed by partner organizations but will assist the LSP in spreading information about public participation opportunities and other relevant information. Their effectiveness will be tracked through "Likes"	.	X Ongoing	55,554
Port Royal Sound Foundation Maritime Center Second Birthday Celebration *(general public)*	LSP tabled at this event.	On November 12th, LSP provided enviroscape demonstrations that focused on how bacteria, nutrients, and litter can originate from human activities, be transported through stormwater, and affect local water quality.	X Completed	104
LSP Facebook page *(general public)*	The goal of this page is to provide a forum for public participation, to increase awareness of stormwater's effects on water quality, and increase awareness of public participation opportunities. Its effectiveness will be tracked through "Likes".	The page was transferred over to the LSP on January 5th, 2017. It will be updated at least three times a week with relevant information.	X Ongoing	180
Carolina Clear Facebook page *(general public)*	The goal of this page is to provide a forum for public participation, to increase awareness of stormwater's effects on water quality, and increase awareness of public participation		X Ongoing	35,056

	opportunities. Its effectiveness will be tracked through "Likes".			
Neighbors for Clean Water Twitter account *(general public)*	BCSWCD provide monthly updates on upcoming events. The goal of this forum is to provide a forum for public participation, to increase awareness of stormwater's effects on water quality, and increase awareness of public participation opportunities. Its effectiveness will be tracked through "Followers".	The feed was transferred over to the LSP on January 5th, 2017. It will be updated at least three times a week with relevant information and the handle will be changed to reflect the new consortium..	X Ongoing	N/A
Picket fence subdivision presentation *(homeowners)*	This presentation will consist of an enviroscape demonstration and a discussion on how citizens can use their landscaping and other tools to reduce their stormwater footprint. It's effectiveness will be evaluated through a participant survey.	A site has been selected and a date is being scheduled.	X In Planning	N/A
Port Royal Sound Foundation rain barrel workshop *(homeowners)*	This workshop's goal is to engage area residents and businesses in a workshop where they will learn about rain barrel function, installation, and maintenance in a classroom segment and then receive practical experience installing a new rain barrel. It's effectiveness will be evaluated through a participant survey.	A date is being scheduled.	X In Planning	N/A
Town of Bluffton rain garden workshop (*homeowners)*	This workshop's goal is to engage area residents and businesses in a workshop where they will learn about rain garden design, function, and maintenance in a classroom segment and then receive practical experience installing a new rain garden. It's effectiveness will be evaluated through a participant survey.	Permissions have been received and a site is in the process of being selected.	X In Planning	N/A
Beaufort County rain garden workshop *(homeowners)*	This workshop's goal is to engage area residents and businesses in a workshop where they will learn about rain garden design, function, and maintenance in a classroom segment and	The site is finalized and a maintenance contract is being discussed.	X In Planning	N/A

	then receive practical experience installing a new rain garden. It's effectiveness will be evaluated through a participant survey.			
Oldfield Mews rain garden presentation *(homeowners)*	This workshop's goal is to engage area residents and businesses in a workshop where they will learn about rain garden design, function, and maintenance in a classroom segment. It's effectiveness will be evaluated through a participant survey.	Site selection is in progress.	X In Planning	N/A
The Outside Foundation rain barrel workshop *(homeowners)*	This workshop's goal is to engage area residents and businesses in a workshop where they will learn about rain barrel function, installation, and maintenance in a classroom segment and then receive practical experience installing a new rain barrel. It's effectiveness will be evaluated through a participant survey.	Site selection is in progress.	X In Planning	N/A
Good Housekeeping and BMP Training *(partner employees)*	Educational videos will be lent to LSP partners who are interested in educating their employees on IDDE and BMPs.	The videos were given to Beaufort County for review and the trainings will take place within the next few months.	X In Planning	N/A
Sun City Shorescape Information Packet *(HOA board members)*		On November 4th, 2016, the Sun City Bird Club requested the LSP to provide a shorescape informational packet for the HOA Board as they were planning to install one on the HOA's property. The board will use this information and make their decision regarding the shorescape in the spring.	X Ongoing	N/A
Host Master Pond Manager *(pond manangers)*		The Master Pond Management course is scheduled to be hosted in Beaufort County in the spring of 2017.	X In Planning	N/A
Master gardener presentation *(homeowners)*	This presentation will consist of an enviroscape demonstration and a discussion on how citizens can use their landscaping and other tools to reduce their stormwater footprint. It's effectiveness will be evaluated through a participant survey.	The presentation will occur from 1pm-4pm of 1/31/17.	X In Planning	N/A

Master Pond Manager 2015 *(pond managers)*	Attendance and certifications		X Completed	56 attended 14 certified
Making it Grow! 2016 *(homewoners)*	Its use will be tracked by views (number reported is the average number of persons per household applied to the projected number of households that viewed Making It Grow! during the 2016 calendar year. This number is conservative as it does not account for the SC Channel and only represents one episode's viewing).	This segment has a feature where viewers can write, text, or email questions and have them answered on the show.	X Completed	12,718

E. Control Measure Evaluation (5.3)

1. Evaluate the success of this MCM. Refer to goals implemented and achieved, and adherence to the implementation schedule: The Community clean up surpassed our goal in volunteers. The Solid Waste Department has hired two new positions that have increased the number of participants we were able to reach. 1. Evaluate the success of this MCM. Refer to goals implemented and achieved, and adherence to the implementation schedule:

The implementation of MCM#2 was successful in the Hilton Head Urbanized Area for several reasons. The most notable success was the formation of the Lowcountry Stormwater Partners (LSP) regional consortium. The LSP started when Beaufort County, the City of Beaufort, Town of Bluffton, Town of Hilton Head Island, and Town of Port Royal agreed to work together across municipal and watershed boundaries to address stormwater education and awareness needs. With this commitment, the communities selected to work with the Clemson Extension Carolina Clear program. Carolina Clear seeks to develop outreach and involvement opportunities that lead to sustained behavior changes that protect water resources. This is best accomplished through meaningful partnerships; thus, the region has selected to work locally as the Lowcountry Stormwater Partners and invite other educational institutions, utilities, non-profits, property management companies, and the supporting municipal and county partners to deliver consistent involvement of target audiences.

After its formation, the LSP continued to work towards fulfilling MCM#2 by developing the 2016-2018 Strategic Regional Stormwater Outreach Plan. The LSP developed this plan using surveys, regional communication, and other data in order to address major concerns of partners, relevant and involved audiences, and documented water quality concerns. This strategic outreach plan was designed to meet the public education and involvement requirements (MCM#1 and MCM#2) of the 2013 National Pollution Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Regulated Small Municipal Separate Storm Sewer Systems (SMS4s) and was implemented beginning in July 2016 and will continue to be implemented through 2018. This plan was developed, submitted, and implemented before the December 1, 2016 deadline.

The LSP continued to make strides towards fulfilling MCM#2 by completing goals such as the development of a consortium website, the launching of streamlined LSP social media platforms, and the creation of a monthly e-newsletter. These platforms will allow the public to seek out and engage with the LSP from a computer or smart phone. Being present at events like the Port Royal Sound Foundation Maritime Center 2nd Birthday Celebration is also a great way to be present and available for the public. Events like these are especially useful as they allow for educational outreach at the same time, which can spark a conversation on how anyone can become involved in stormwater activities. Education through involvement is more effective than demonstrations

however, and that is why the LSP has five educational workshops planned to take place in the beginning of 2017. These events will not only educate the public on topics like POCs and BMPs, but it will also actively involve them in the installation of a stormwater treatment mechanism.

2. Provide an evaluation of where the program needs improvement and explain any actions that will be taken to achieve objectives: There needs to be improvement on finding volunteers to assist in reaching the 1500 goal for storm drain markers. We hope to increase this with the assistance of the Clemson University partnership. We have created partnerships with several local consortiums which will assist in promoting volunteers. While the program has made great strides in terms of organization and planning, the LSP can improve by expanding its efforts to directly engage with specific target audiences. The consortium has taken strides to correct this by preparing to host rain garden workshops, rain barrel workshops, and the Master Pond Certification course. All of these events not only combine an educative aspect, but also skill building. At all of these workshops and courses, participants will be able to gain hands-on experience installing BMPs that they can use later on at their homes or businesses. The LSP also plans to continue to update its social media platforms and website in order to keep it engaging and to attract more followers through a rain gauge giveaway. Finally, the LSP is working to become more of a presence at partner events in order to become more recognizable and approachable in the public's eye.

III. Minimum Control Measures (MCM)

F. Minimum Control Measure 3: Illicit Discharge Detection and Elimination (IDDE) (4.2.3, 5.3)

1. How can the public notify the MS4 of suspected illicit discharges? They can contact the Beaufort County Stormwater Utility to file a complaint or inquiry about a stormwater related issue. Complaints can also be filed through the existing links on the Beaufort County Website. Effective 12/1/2016 the General Public, municipalities and in house staff can submit a complaint through a new 311 app. (Beaufort County Connect) that was created to assist in reporting non-stormwater discharges. The app. will allow the complaints to be identified by type of discharge such as: automobile fluids, chemicals, construction site runoff, restaurant grease trap, SSO, yard clippings etc The County will disburse the complaint to the appointed staff members to investigate complaint.

2. Complete the list below for the last reporting year:

- Total number of suspected illicit discharges: 4
- Total number of illicit discharges found: 4
- Number of illicit discharges with enforcement escalation (action taken beyond written warning): 1
- Total number of illicit discharges eliminated: 4

3. Use the table below to summarize priority areas (and associated rationale for selection) for screening. If these areas have changed since the last reporting year, provide a brief explanation. Add rows where needed and attach additional sheets if necessary.

Priority Areas	**Rationale for Selection**	**Changed within last reporting year?** *(If so, provide an explanation.)*
Construction Sites	Due to the increase in Development.	The survey results determined that this construction site management could be the cause of sediment runoff.
TMDL and Impaired Water Body	The County has prioritized the illicit discharge screening schedule based on the last years	The County has developed a wet and dry weather screening

	monitoring results, septic tank locations, current land use and the most recent survey results.	program and standard operating procedures.

4. Use the table below to summarize IDDE action items, goals, and progress for the current reporting year. In the "activities conducted and planned" section, focus on activities that were conducted in the last reporting year and those that are planned for the upcoming reporting year, providing implementation dates. Add rows where needed and attach additional sheets if necessary.

IDDE Action Item	**Measurable Goal(s)**	**Progress on Goal(s)**	**Activities Conducted and Planned** *(specific implementation dates)*
Design and Implement and TMDL and IDDE Assessment Plan	Within one year of obtaining coverage under this permit, the County will develop an ordinance, or other regulatory mechanism, adequate legal authorities to meet the objectives of the Illicit Discharge Stormwater Management Program. Establish the authority to request information such as stormwater plans, inspection reports, monitoring results, and other information deemed necessary to evaluate compliance with the Illicit Discharge Stormwater Management Program. Establish the authority to enter private property for the purpose of inspecting at reasonable times any facilities, equipment, practices, or operations related to stormwater illicit discharges to determine whether there is compliance of the Illicit Discharge Stormwater Management Program. Establish the authority to issue violations to determined establishments and/or owners when illicit discharges and/or non-storm water discharges are determined.	X Completed	Completed 12/1/2016
Outfall Screening for Illicit Discharge	Within one yer of obtaining coverage under this permit, the County will begin development of a program to define procedures for field data collection activities and administration tasks for new development. Implement inventory collection of County owned stormwater structures and outfalls. Complete overall inventory map and continue to update map as construction plans are approved and developments are constructed. Inventory of County owned stormwater infrastructure will be an ongoing task and mapping	X Completed	Completed 12/1/2016

	will be updated as new stormwater infrastructure is built and as existing stormwater infrastructure is identified and located.		

G. Control Measure Evaluation (5.3)

1. Evaluate the success of this MCM. Refer to goals implemented and achieved, and adherence to the implementation schedule: All goals were obtained by implementing an IDDE violation data base and obtaining authority to enforcement all non-stormwater discharges.

2. Provide an evaluation of where the program needs improvement and explain any actions that will be taken to achieve objectives: Overall the IDDE program was a success. Additional training of in-house staff that will assist in locating possible IDDEs that occur and are not reported. We feel confident that the new 311 Beaufort County Connect App will be helpful in tracking IDDEs.

III. Minimum Control Measures (MCM)

H. Minimum Control Measure 4: Construction Site Storm Water Runoff Control (4.2.4, 5.3)

1. How can the public notify the MS4 of possible noncompliance at construction sites? The public can contact the Beaufort County Stormwater Utility to file a complaint or inquiry about a construction site runoff. Complaints can also be filed through the existing links on the Beaufort County Website. Effective 12/1/2016 the General Public, municipalities and in house staff can submit a complaint through a new 311 app. that was created to assist in reporting non-stormwater discharges.

2. How does the MS4 communicate with construction operators to ensure understanding of requirements and improvements that may be needed? A precon meeting is held for all new construction and BMP's are inspected every 30 days at a minimum.

3. Has an enforcement response plan (ERP) been developed and utilized?
X Yes ☐ No (*explain):*

4. Complete the list below for the last reporting year: Based on the County's permit we have developed a data base to track new Stormwater permits which will assist in inspection of construction sites effective 12/1/2016.

- Number of new construction sites: N/A
- Total number of active construction sites: N/A
- Total number of inspections performed: N/A
- Number of sites with unsatisfactory/noncompliant inspection results: N/A
- Number of sites with enforcement escalation (action taken beyond written warning): N/A
- Number of sites inspected past the deadline specified in the permit: N/A

5. Use the table below to summarize construction site action items, goals, and progress for the current reporting year. In the "activities conducted and planned" section, focus on activities that were conducted in the last

reporting year and those that are planned for the upcoming reporting year, providing implementation dates. Add rows where needed and attach additional sheets if necessary.

Construction Site Action Item	**Measurable Goal(s)**	**Progress on Goal(s)**	**Activities Conducted and Planned** *(specific implementation dates)*
Plan Review and Permitting	Revise the BC BMP Manual, to develop an ordinance which states all project require an SWPPP to be completed by a professional (engineer, land surveyor or landscape architect).	X Completed	The plan review process requires applicants to provide BMP's on all construction plans and provide drainage calculations to ensure sediment is controlled on site. This was in place from 12/1/2015 to 12/1/2016.
Stormwater Permit	Create and implement a SW permit which is required for all land disturbance great than 5000 square feet.	X Completed	SW Permit will allow all inspections to be tracked in a data base to ensure inspections and all IDDE or enforcement is recorded. Implemented 12/1/2016.
Enforcement	Revised stormwater management ordinance, or other regulatory mechanism, to adequate and clearly state the legal authorities to meet the objectives of the construction site runoff requirements for the Stormwater Management Program.	X Completed	Ordinance was approved on 10/24/2016.

I. Control Measure Evaluation (5.3)

1. Evaluate the success of this MCM. Refer to goals implemented and achieved, and adherence to the implementation schedule: All goals were achieved prior to projected year and are currently in use due to the implementation of the new BMP manual. We have hired five inspectors which will assist in the decrease of IDDE and non-conforming sites.

2. Provide an evaluation of where the program needs improvement and explain any actions that will be taken to achieve objectives: The Construction Inspection program has improved due to the ability to track projects via the Stormwater permit. Site Plan review has required a more detailed check list to ensure all aspects of the SWPPP are addressed. The program can improve when the 311 app is used by the citizens to inform the County when construction sites are not retaining all sediment on site or have and IDDE violation.

III. Minimum Control Measures (MCM)

J. Minimum Control Measure 5: Post-Construction Storm Water Management (4.2.5, 5.3)

Based on the County's permit requirements we have developed a data base to track new Stormwater permits which will assist in inspection of post construction sites effective 12/1/2016.

1. Complete the list below for the last reporting year:

- Number of newly completed construction sites: N/A
- Number of inspections performed within 30 days of construction completion: N/A
- Total number of inspections performed: N/A
- Number of sites with unsatisfactory/noncompliant inspection results: N/A
- Number of sites with enforcement escalation (action taken beyond written warning): N/A

2. Use the table below to summarize post-construction action items, goals, and progress for the current reporting year. In the "activities conducted and planned" section, focus on activities that were conducted in the last reporting year and those that are planned for the upcoming reporting year, providing implementation dates. Add rows where needed and attach additional sheets if necessary.

Post-Construction Action Item	**Measurable Goal(s)**	**Progress on Goal(s)**	**Activities Conducted and Planned** *(specific implementation dates)*
Ordinance	Develop an ordinance, or other regulatory mechanism, adequate legal authorities to meet the objectives of the Post-Construction Site Runoff Controls program.	X Completed	A new BMP Manual was adopted on 9/14/2016 which includes an ordinance which provides all legal authority for the County to ensure all site design review and approval, inspection, and monitoring are implemented and maintained.
Maintenance Agreement	To ensure that all stormwater control measures meet the County's performance standards and are being maintained pursuant to the maintenance agreement.	X Completed	A new maintenance agreement was created to ensure document is recorded as part of the deed. Effective 12/1/16 all Maintenance agreements are recorded.
Enforcement	The County shall have the authority to enter private property for the purpose of inspecting at reasonable times any facilities, equipment, practices, or operations related to stormwater discharges to determine whether there is compliance the Post-Construction Stormwater Management Program.	X Completed	A new BMP Manual was adopted on 9/14/2016 which includes an ordinance which provides legal authority to the County to enforce compliance for all Construction Management BMP's on private, public, industrial, residential property etc.
Reporting and Inspection	A Stormwater Permitting database and inspection program was developed to provide structural stormwater controls to be installed pursuant to the County's post-construction program.	X Completed	The Stormwater Permitting Data Base (Munis) was finalized on 12/1/2016 to help with documenting and maintain records of inspections, findings and enforcement actions and make them available for review by the permitting authority. The County will be able to track inspection reports, monitoring results, and other information deemed necessary to evaluate compliance with the Post-Construction Stormwater Management Program.

K. Control Measure Evaluation (5.3)

1. Evaluate the success of this MCM. Refer to goals implemented and achieved, and adherence to the implementation schedule: All goals were achieved and implemented ahead of projected time line.

2. Provide an evaluation of where the program needs improvement and explain any actions that will be taken to achieve objectives: The County will continue to improve the data base and continue educating the applicants during the annual inspection.

III. Minimum Control Measures (MCM)

L. Minimum Control Measure 6: Pollution Prevention/Good Housekeeping for Municipal Operations (4.2.6, 5.3)

1. Has a comprehensive assessment of the pollutant discharge potential for all municipally owned facilities been conducted? If not, indicate a status and planned completion date in the chart below.
X Yes ☐ No ☐ In Progress *(explain):*

2. Have yearly comprehensive inspections been conducted at high priority facilities? If not, indicate a status and planned completion date in the chart below.
☐Yes ☐ No X In Progress *(explain):* An evaluation of all facilities will be completed by 12/1/2017.

3. Has training been conducted for employees? If not, indicate a status and planned completion date in the chart below.
☐ Yes ☐ No X In Progress *(explain):* Current staff performing this task received training as part of previous employment. Training for facility operators and new inspection staff will be done in Permit Year 2 and as needed. 4 employees have received CEPCSI certification.

4. Use the table below to summarize municipal facility pollution prevention action items, goals, and progress for the current reporting year. In the "activities conducted and planned" section, focus on activities that were conducted in the last reporting year and those that are planned for the upcoming reporting year, providing implementation dates. Ensure that the maintenance and inspection of MS4 catch basins and structural storm water controls are addressed in the chart. Add rows where needed and attach additional sheets if necessary.

Pollution Prevention Action Item	**Measurable Goal(s)**	**Progress on Goal(s)**	**Activities Conducted and Planned** *(specific implementation dates)*
Asset Management	Developed procedures for asset management of facilities and high priority areas.	X Completed	On 8/9/16 a list of High Priority facilities has were prioritized based on chemicals stored and potential hazardous materials. Inspections will be completed by 12/1/2017.
Parking Lot and Street Cleaning	Inventory and prioritize roads for cleaning.	X Ongoing	Due to the increase in development in certain areas of the County the road inventory prioritization has not changed and the County will continue to maintain on an as needed basis.
Training	Provide training program for grounds maintenance, landscaping crews, and roadway and drainage staff.	X In Planning	Develop procedures for training program for grounds maintenance, landscaping crews, and roadway and drainage staff by 12/1/2017.

M. Control Measure Evaluation (5.3)

1. Evaluate the success of this MCM. Refer to goals implemented and achieved, and adherence to the implementation schedule: We have developed a written plan to follow. Staff hired to implement the MS4 program are knowledge and able to accomplish this task in a timely manner. Numerous County facilities are already covered by industrial NPDES permits so staff are knowledge and the facilities appear to be in compliance.

2. Provide an evaluation of where the program needs improvement and explain any actions that will be taken to achieve objectives: Facility operators may or may not be familiar with NPDES BMPs. Training of those staff members is a priority. Several County facilities will require extensive upgrades to reach compliance.

EXHIBIT A
Monitoring and Assessment Plan for TMDL and Impaired Waters

Prepared in accordance with SCDHEC Permit (SCR030000)

January 27, 2017

Beaufort County
120 Shanklin Road
Beaufort, South Carolina
843-255-2805

Introduction

This document outlines Beaufort County South Carolina current plan for monitoring the water quality of impaired waters and waters for which the South Carolina Department of Health and Environmental Control (SCDHEC) has issued Total Maximum Daily Load (TMDL) requirements. This plan has been set out with a goal of establishing baseline pollutant loads for the impaired water bodies to which the County's Municipal Separate Storm Sewer System (MS4) discharges. This document describes the motivation, procedures, and timeframe for the monitoring program, and includes a description of the County's currently established water quality monitoring stations (WQMS).

Under the Clean Water Act, Section 303(d), state environmental agencies are required to maintain WQMS within their jurisdiction and use the collected data, following SCDHEC protocols, to issue a list of impaired waters. The County's MS4 discharges to several receiving watersheds which drain to impaired WQMS maintained by SCDHEC.

Monitoring Location Selection

The general goal of the monitoring location selection was to provide representation of the different watersheds across Beaufort County while ensuring that priority areas of existing and future development were monitored. Figure 1 presents the major Beaufort County watersheds. The selection of monitoring priorities was based on a number of criteria. Those criteria include pollutant loading potential, existing water quality based on previous and on-going water quality monitoring activities and establishment of baseline water quality conditions where the data record is limited or non-existent.

The assessment of pollutant loading potential is based on land use, particularly those land-uses reflecting urbanization and increased impervious area such as residential commercial, institutional and industrial. Land use is summarized in Figure 2. Land use changes occurring over the last ten years were evaluated using existing land-use, land-cover maps and 2016 high-resolution photography. The results of this analysis are summarized in Table 2. Areas with high imperviousness and areas reflecting large increases in imperviousness were deemed to have high pollutant loading potential.

Mean fecal coliform concentrations were used to identify existing water quality problem areas in the county where monitoring should be carried out. Figure 2 presents the mean fecal coliform concentrations for currently active water quality monitoring station. Some station locations were added in relatively undeveloped regions to expand the extent of sampled waterbodies and to gain a better understanding of natural versus human induced sources of pollutants. Finally, station locations were also focused in upstream locations of tributaries to minimize tidal influences and better reflect water quality due to stormwater discharges.

The proposed monitoring locations were selected based on consideration of the criteria discussed above and are presented in Figure 3. Table 1 lists the proposed monitoring locations.

Table 1: Proposed Sampling Points

Station ID	Watershed
BATT1	Beaufort River
BATT2	Beaufort River
BATT3	Beaufort River
MRG3	Morgan River
MRG4	Morgan River
BECY3	Colleton River
OKW3	Colleton River
MRW1	May River
MRW2	May River
NRW1	New River
CBS1	Calibogue Sound
CSW1	Coosaw River
CSW2	Coosaw River
Coastal1	Coastal
Coastal2	Coastal
Broad1	Broad River
Broad2	Broad River
WBW1	Whale Branch West
WBW2	Whale Branch West

Field parameters monitored during each sampling event include air temperature, water temperature, dissolved oxygen (DO), conductivity/salinity, pH, turbidity and flow. Samples will be collected and analyzed for the following standard NPDES MS4 parameter list:

- E.Coli/Total Coliform (TC)
- Fecal Coliform (FCB)
- Biochemical Oxygen Demand (BOD5)
- Total Nitrogen (TN)
- Total Phosphorus (TP)
- Copper (Cu)
- Lead
- Zinc (ZN)
- Total Suspended Solids (TSS)
- Chlorophyll-a (Chla)
- Mercury (Hg) *New River only*
- Enterococcus *New River only*

Results from the laboratory analysis and field-collected parameters will be compared to the applicable water quality standards and criteria contained in SCDHEC Rule R.61-68, Water Classifications and Standards.

TMDL and Impaired Water Bodies

In 2014 SCDHEC provided a 303(d) and the County had 42 areas on the list. In 2016 SCDHEC updated their 303(d) list for 2016 and has added additional impaired water bodies within the County which are in table 3 below. Beaufort County has 12 sub-basin watersheds

located within the County (See Figure 1). The County has broken down the wastersheds into the top seven basins which will be monitored. Beaufort County has two existing TMDLs which are in the Colleton River (Okatie) and Beaufort River (Battery Creek) which are included in the quarterly sampling.

Figure 1: Sub-basin watersheds

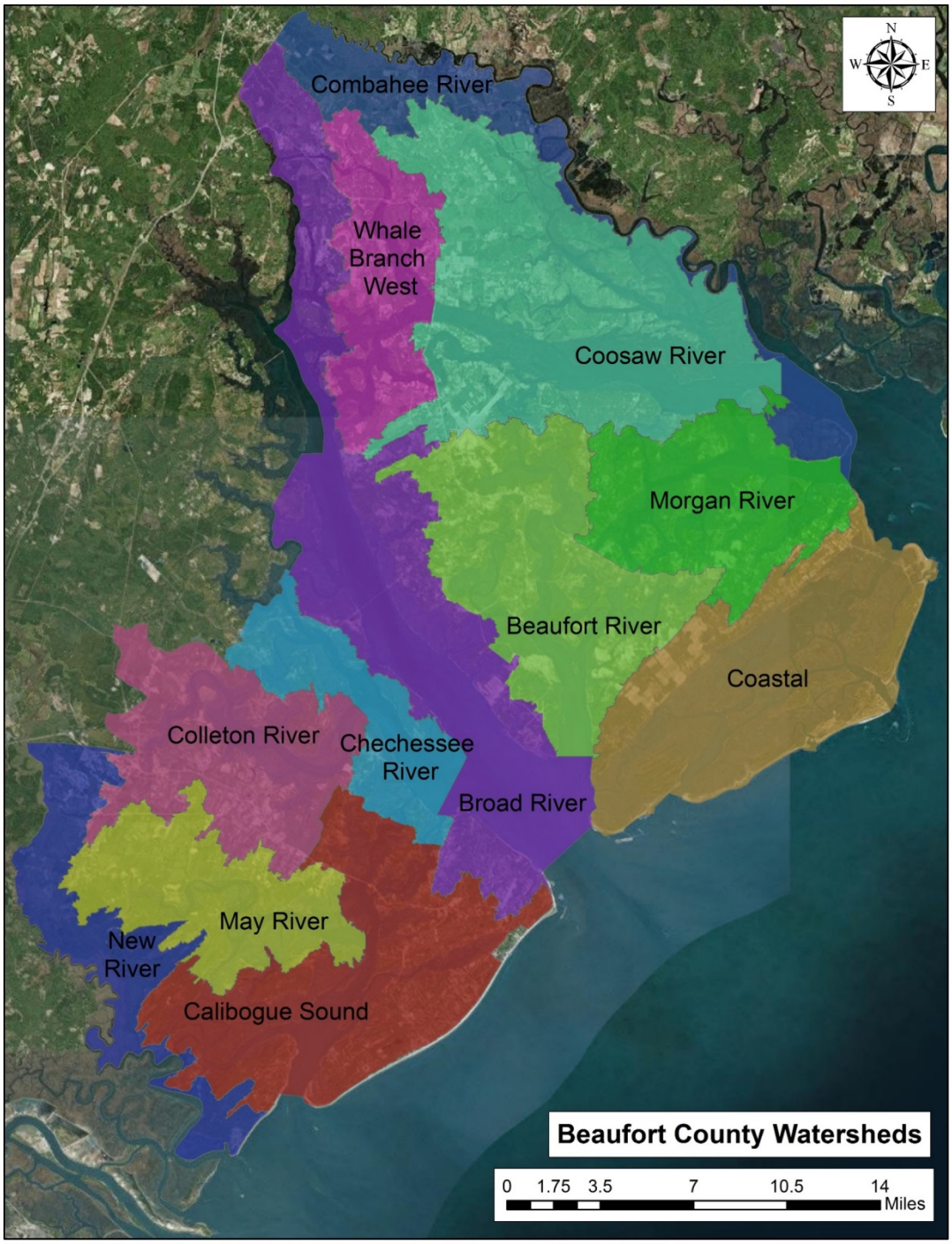


Table 2: Land Use Comparison

Difference

Land Use Type	Beaufort (acres)	Broad (acres)	Calibogue (acres)	Chechessee (acres)	Coastal (acres)	Colleton (acres)	Combahee (acres)	Coosaw (acres)	May River (acres)	Morgan River (acres)	New River (acres)	Whale Branch West (acres)
Agricultural/Pasture	232	827	0	-7	100	471	102	1948	8	87	27	237
Commercial	410	328	273	12	17	552	2	-140	292	-12	66	-51
Forest/Rural Open	2025	2478	-8	311	252	76	1486	1721	-3067	56	-2598	2545
Golf Course	4	-1	533	-263	7	-769	0	-5	-684	169	150	0
High Density Residential	-1390	-587	1064	-92	10	1225	0	37	1762	71	1264	189
Industrial	-550	-159	190	-9	-5	108	-7	-528	182	-8	26	-4
Institutional	-119	-81	67	0	0	-45	0	-5	39	23	4	-9
Low Density Residential	577	-1069	39	46	152	-380	-2284	-4139	99	868	121	-1928
Medium Density Residential	1126	750	268	103	-23	-420	0	92	1379	151	-234	-656
Open Water/Tidal	-104	-442	546	-129	4	-232	-170	-1009	770	-472	87	-292
Silviculture	90	1365	0	0	0	-1067	342	3298	864	0	921	233
Urban Open	-2262	-1269	-277	9	-193	-1784	-201	-1848	-128	-914	482	-694
Wetland/Water	-100	-1462	-220	-89	-318	-481	729	595	-1278	-19	-336	427
TOTAL	-58	679	2474	-108	3	-2748	-1	16	238	0	-19	-3
Urban Imperviousness	-448	-45	1000	-11	26	968	-214	-822	1599	147	652	-288

% Change

Land Use Type	Beaufort (acres)	Broad (acres)	Calibogue (acres)	Chechessee (acres)	Coastal (acres)	Colleton (acres)	Combahee (acres)	Coosaw (acres)	May River (acres)	Morgan River (acres)	New River (acres)	Whale Branch West (acres)
Agricultural/Pasture	17	140	0	- - -	5	1681	75	102	- - -	28	- - -	46
Commercial	45	82	28	306	49	101	15	-52	195	-8	1318	-28
Forest/Rural Open	81	58	0	35	6	1	114	26	-37	2	-35	71
Golf Course	1	0	21	-35	4	-32	0	-8	-56	49	47	0
High Density Residential	-38	-18	24	-86	1	112	0	264	263	295	95	1455
Industrial	-11	-5	8	-3	-1	7	-2	-17	28	-1	6	0
Institutional	-20	-43	44	2	0	-45	0	-5	28	21	5	-38
Low Density Residential	20	-32	51	5	8	-12	-71	-49	4	29	27	-38
Medium Density Residential	109	147	15	28	-25	-16	0	7	177	9	-91	-69
Open Water/Tidal	0	-1	2	-1	0	-2	-1	-3	8	-2	2	-3
Silviculture	55	- - -	0	0	0	- - -	- - -	- - -	- - -	0	23027	- - -
Urban Open	-76	-50	-9	3	-10	-74	-20	-40	-14	-29	53	-46
Wetland/Water	-6	-26	-5	-17	-18	-20	16	10	-46	-2	-6	13
TOTAL	0	1	5	-1	0	-8	0	0	1	0	0	0
Urban Imperviousness	-6	-1	19	-2	2	30	-38	-22	103	9	54	-19

Table 3: 303(d) 2016 List

BASIN	HUC_12	DESCRIPTION	STATION	USE	CAUSE(S)
SALKEHATCHIE	030502070704	COMBAHEE RVR AT US 17 10 MI ESE YEMASSEE	CSTL-098	AL	DO
SALKEHATCHIE	030502070704	COMBAHEE RVR AT US 17 10 MI ESE YEMASSEE	CSTL-098	FISH	HG
SALKEHATCHIE	030502071101	COOSAW RVR NEAR MOUTH OF BULL RVR	RO-02005	AL	CU, TURBIDITY
SALKEHATCHIE	030502071101	BULL RIVER WHERE WILLIMAN CREEK AND WIMBEE CREEK MEET WITH THE BULL RIVER BETWEEN CHISOLM AND BUZZARD ISLANDS CLOSE TO THE CHISOLM ISLAND SIDE OF BULL RIVER.	RO-09367	AL	TURBIDITY
SALKEHATCHIE	030502071101	TRIBUTARY TO BULL RIVER, 7.5 M NE OF BEAUFORT	RT-01643	AL	TURBIDITY
SALKEHATCHIE	030502071101	WIMBEE CK 0.7 MI SE OF MOUTH OF S WIMBEE CK	RO-036037	AL	TURBIDITY
SALKEHATCHIE	030502071102	TIDAL CK NEAR CONFL OF COOSAW AND BULL RVRS CHISOLM ISL	RT-02015	AL	CU, TURBIDITY
SALKEHATCHIE	030502071102	CAMPBELL CREEK AT WHALE BRANCH	14-02	SHELLFISH	FC
SALKEHATCHIE	030502071102	FIRST SPLIT ON HALFMOON CREEK ON SOUTHERN SIDE OF BROWNS ISLAND	14-13A	SHELLFISH	FC
SALKEHATCHIE	030502071102	MCCALLEYS CREEK 2.4 MILES UPSTREAM OF SHELLFISH SITE 15-33	RT-11015	AL	TURBIDITY
SALKEHATCHIE	030502071103	TRIB TO SPARROW NEST CK NEAR DATHA ISLAND	RT-02027	AL	CU
SALKEHATCHIE	030502071103	COFFIN CREEK MOUTH AT MORGAN RIVER	16A-27	SHELLFISH	FC
SALKEHATCHIE	030502071103	COFFIN CREEK, HEADWATERS AT SHRIMP DOCKS	16A-28	SHELLFISH	FC
SALKEHATCHIE	030502071103	EDDING CR AT SMALL TRIBUTARY BETWEEN STATIONS 9 AND 18	16A-23	SHELLFISH	FC
SALKEHATCHIE	030502071103	EDDING CREEK AT SHRIMP DOCK	16A-18	SHELLFISH	FC
SALKEHATCHIE	030502071103	JENKINS CREEK, 500FT. NORTH OF STORMWATER AT DAWTAW ISLAND GOLF COURSE,	16A-30	SHELLFISH	FC
SALKEHATCHIE	030502071103	PINE ISLAND CREEK NEAR CONFL VILLAGE CREEK	16A-38	SHELLFISH	FC
SALKEHATCHIE	030502071103	ROCK SPRINGS CREEK,UPPER REACHES	16A-19	SHELLFISH	FC
SALKEHATCHIE	030502071103	COFFIN CK 0.7 MI SE OF CONFL W/ MORGAN RVR	RT-032033	AL	TURBIDITY
SALKEHATCHIE	030502071104	COOSAW RIVER, MIDCHANNEL BETWEEN BULL RIVER AND COMBAHEE RIVER, 1 MILE EAST OF SHELLFISH SITE 14-04	RO-11314	AL	TURBIDITY
SALKEHATCHIE	030502071104	COOSAW RVR NEAR MOUTH OF COMBAHEE RVR	RO-02001	AL	TURBIDITY
SALKEHATCHIE	030502071104	PARROT CREEK AND COOSAW RIVER MARKER #1 SHELLFISH 14-10	MD-281	AL	TURBIDITY
SALKEHATCHIE	030502071104	SAINT HELENA SOUND, 7 M SW OF EDISTO BEACH	RO-01163	AL	TURBIDITY
SALKEHATCHIE	030502071104	ST. HELENA SOUND BELOW THE CONFLUENCE OF THE MORGAN RIVER AND THE COOSAW RIVER BETWEEN THE TIPS OF ST. HELENA ISLAND AND OTTER ISLAND.	RO-09371	AL	TURBIDITY
SALKEHATCHIE	030502080501	BATTERY CREEK - DOWLINGWOOD TRIBUTARY (C6-97)	15-25	SHELLFISH	FC
SALKEHATCHIE	030502080601	POCOTALIGO RVR AT US 17 AT POCOTALIGO	MD-007	REC	ENTERO
SALKEHATCHIE	030502080601	POCOTALIGO RVR AT US 17 AT POCOTALIGO	MD-007	AL	TURBIDITY
SALKEHATCHIE	030502080602	HUSPAH CREEK AT BULL POINT - WHALE BRANCH POG	14-18	SHELLFISH	FC
SALKEHATCHIE	030502080602	HUSPAH CREEK AT RAILROAD TRESTLE	14-14	SHELLFISH	FC
SALKEHATCHIE	030502080605	HABERSHAM CREEK ABOVE STATION #16, FIRST SPLIT	17-16A	SHELLFISH	FC
SALKEHATCHIE	030502080606	COLLETON RIVER AT MOUTH OF CALLAWASSIE CREEK, 4.5 M N OF BLUFFTON	RO-01125	AL	DO
SALKEHATCHIE	030502080607	CHECHESSEE RVR 1.4 MI SE CONFL W/ COLLETON RVR	RO-036032	AL	CU, DO
SALKEHATCHIE	030502080607	CHECHESEE RIVER, 6.5 M WEST OF PORT ROYAL	RO-01146	AL	DO
SALKEHATCHIE	030502100101	JOHNSON CK WEST OF HARBOR ISLAND 1.75MI SW OF WEST END OF US 21 BRIDGE OVER JOHNSON CK	RT-10115	AL	TURBIDITY
SAVANNAH	030601100202	NEW RIVER 3.4 MI SSE OF SC 170 BRIDGE OVER NEW RIVER	RT-06021	REC	ENTERO
SAVANNAH	030601100301	BEND IN MAY RIVER NEAREST HIGH BLUFF OF PALMETTO BLUFF	19-19B	SHELLFISH	FC
SAVANNAH	030601100301	FIRST UNNAMED TRIBUTARY LEADING FROM GASCIOGNE BLUFF	19-19C	SHELLFISH	FC
SAVANNAH	030601100301	MAY RIVER AT FIRST DOCK IN HEADWATERS PAST BLUFF	19-19	SHELLFISH	FC
SAVANNAH	030601100301	UNNAMED TRIBUTARY NEAR SW CORNER OF CASCIOGNE BLUFF	19-19A	SHELLFISH	FC
SAVANNAH	030601100304	HILTON HEAD ISLAND LANDSEND DRIVE	LC-111	REC	ENTERO
SALKEHATCHIE	030601100201	NEW RVR AT SC 170 9 MI W OF BLUFFTON	MD-118	REC	ENTERO
SALKEHATCHIE	030601100201	NEW RVR AT SC 170 9 MI W OF BLUFFTON	MD-118	FISH	HG

Figure 2: Land Use and Fecal Coliform Mean Values

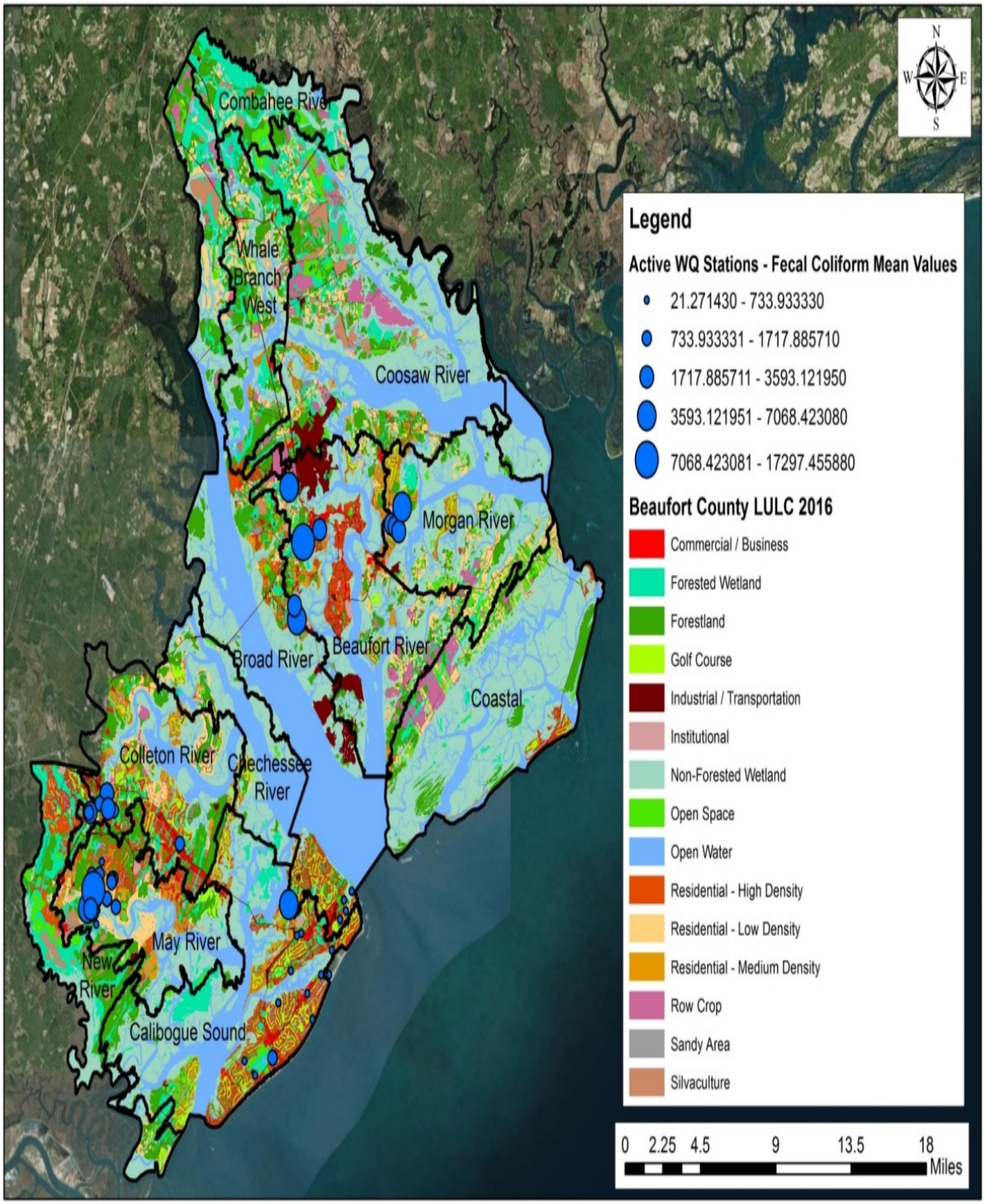
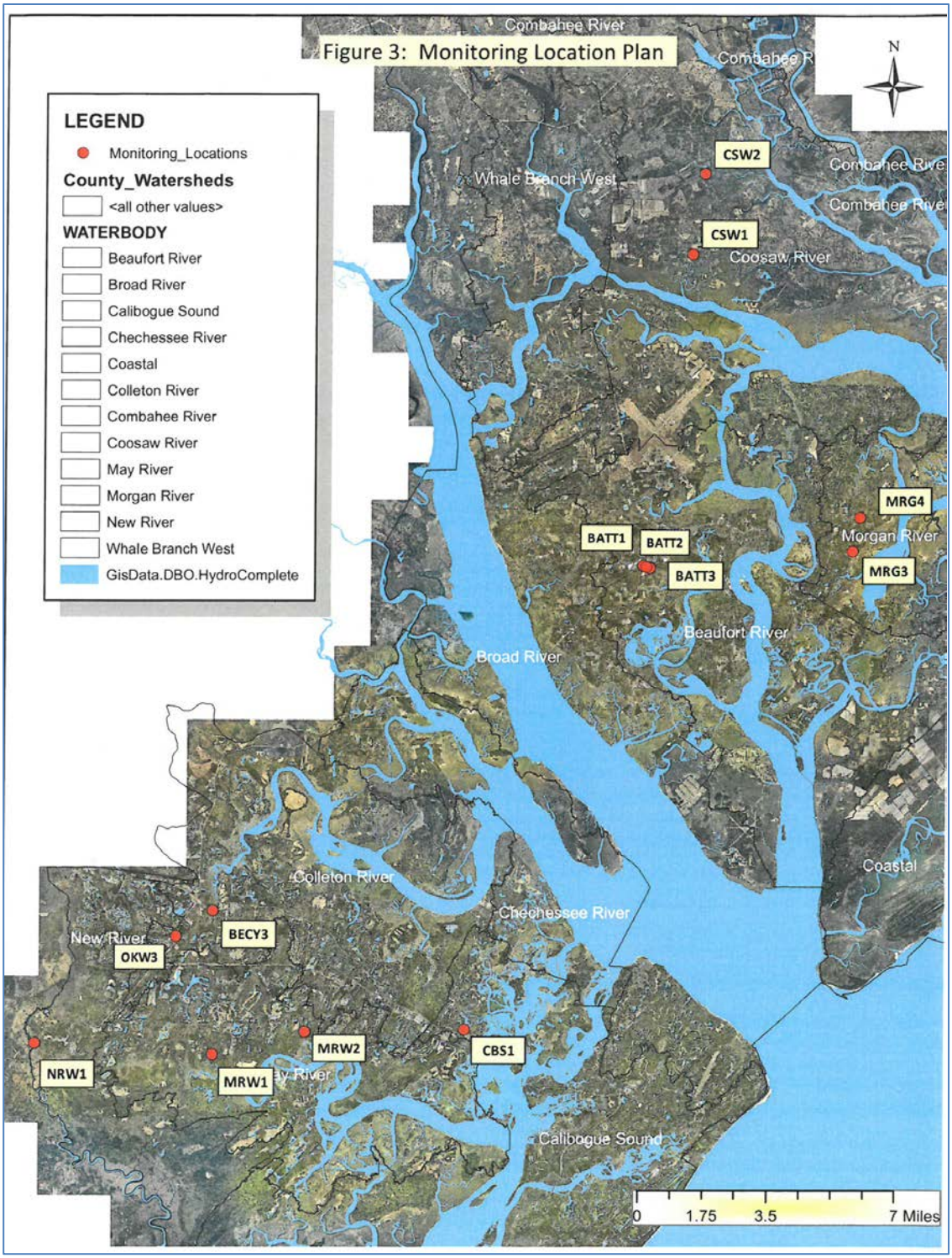


Figure 3: Monitoring Location Plan



Section 1: Sampling Prioritization and Schedule

In order to be truly representative of the system, both a "dry weather" and "wet weather" sample will be collected at each monitoring location at least once in each of the four seasons. The four seasons are defined as indicated in Table 5. Samples will be collected at a frequency and distribution high enough to allow for a statistically significant analysis of seasonal pollutant loadings. It should be noted that the feasibility of sampling will depend upon weather conditions; extended dry periods or inclement weather may force an alteration in the sampling schedule.

The schedule for monitoring for each phase of the County's monitoring program is included in Table 6. For each watershed, monitoring will be carried out for a minimum of two years. This two year time span is reflected in the implementation timeframe listed in Table 6.

There are no statewide Event Mean Concentrations (EMC) that are listed for SCDHEC so therefore the County used the estimated pollutant loadings discharged by each outfall, the EMC in Table 4 was used. There are many ways to calculate stormwater loadings. The key data inputs include rainfall, and watershed characteristic data such soil types, land use, percent imperviousness, percent of directly connected imperviousness, etc., which are then used to estimate the annual volume of runoff. Loadings were calculated by using the Simple Method to estimate pollutant loads for chemical constituents as a product of annual runoff volume and pollutant concentration, as: **L = 0.226 * R * C * A**

Where: L = Annual load (lbs)
R = Annual runoff (inches)
C = Pollutant concentration (mg/l)
A = Area (acres)
0.226 = Unit conversion factor

Table 4. Event Mean Concentrations (EMC)

Land Use Category	Total N mg/L	Total P mg/L	BOD mg/L	TSS mg/L	Total Copper mg/L	Total Zinc mg/L
Low Density Residential	1.50	200				
Single Family	1.87	.301	6.6	9.3	0.014	0.052
Multi-Family	2.10	.497	10.8	9.5	0.009	0.079
Low Intensity Commercial	1.07	.179	7.0	7.5	0.015	0.067
High Intensity Commercial	2.20	.248	9.6	5.1	0.015	0.158
Light Industrial	1.19	.213	7.4	2.8	0.003	0.057
Highway	1.37	.167	4.6	8.1	0.017	0.087
General Agricultural						
Pasture	3.30	.621	5.1	2.7	NA	NA

Table 5: Sampling Season

Season	Date Range
Fall	September 22nd – December 21st
Winter	December 22nd – March 21st
Spring	March 22nd – June 21st
Summer	June 22nd – September 21st

Table 6: Monitoring Schedule

Priority	Watershed	Planning Timeframe	Implementation Timeframe (Start date to earliest end date)
I	May River	2015 – 2016	2016 – 2018
II	Beaufort River	2015 – 2016	2016 – 2018
III	Colleton River	2015 – 2016	2016 – 2018
IV	Morgan River	2015 – 2016	2016 – 2018
V	Calibogue	2015 – 2016	2016 – 2018
VI	New River	2015 – 2016	2016 – 2018
VII	Coosaw River	2015 – 2016	2016 – 2018
VIII	Broad River	2018 – 2019	2019 – 2021
IX	Coastal	2018 – 2019	2019 – 2021
X	WBW	2018 – 2019	2019 – 2021
XI	Chechessee	2018 – 2019	2019 – 2021
XII	Combahaee	2018 – 2019	2019 – 2021

Section 2: Sampling Method:

Samples collected will be characterized as either “dry” or “wet” samples, based on the amount of precipitation received over the 72 hours preceding sample collection. If less than 0.1 inches of rain fell in the 72 hours before the time of sampling, the sample will be classified as dry weather samples. If 0.1 inches of rain or more fell during the 72 hour period, the sample was categorized as a wet weather sample. Sampling shall be conducted over the first 3 hours of the discharge or for the entire discharge period, if the discharge lasts less than 3 hours. Sampling efforts should include the “first flush” (first 30 minutes of stormwater discharge) whenever possible. A representative storm event is defined in the County NPDES Permit as a storm event of greater than 0.1 inch of rainfall and that occurs at least 72 hours after the previously measurable (greater than 0.1 inch of rainfall) storm event.

By identifying the weather conditions preceding each sampling event, it is hoped that contaminant concentrations can be linked to base- or low-flow conditions, or high-flow associated with stormwater run-off, thus providing valuable diagnostic information regarding potential source(s) of pollution. However, because this component of the county's sampling program involves set quarterly sampling, it is often observed that even so-called wet weather sampling occurs at times when the stream has nearly returned to base-flow conditions.

Section 3: Monitoring Equipment/Sampling:

All monitoring will be done in accordance with USCB SOP's which can be found on the following pages. All sample analyses will be done by a lab that is certified through the SCDHEC.

Section 4: Record Keeping:

All sampling records are provided on a weekly basis from the USCB laboratory. The County will retain all monitoring information, including, all a calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of discharge monitoring reports (DMR's).

STANDARD OPERATING PROCEDURE FOR THE COLLECTION OF AMBIENT WATER SAMPLES

The University of South Carolina
Water Quality Laboratory
1 University Boulevard
Bluffton, S.C. 29909

The intent of this document and its contents are solely for the applicable use in and by the University of South Carolina Water Quality Laboratory (USCB WQL) and its personnel. By authority from the South Carolina Department of Health and Environmental Control (SCDHEC) Environmental Laboratory Certification Program, the USCB WQL is granted a state certification (07568001). Public use of this document, whole or in part, is considered unrestricted. USCB Water Quality Laboratory WQSP Ambient Water Collection Revision 3 Revision Date 08-2016.

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1.0 SCOPE AND APPLICATION

1.1 This Standard Operating Procedure (SOP) is applicable to the collection of representative samples from marine estuary rivers and streams, and fresh water lakes, ponds and streams.

2.0 SUMMARY OF METHOD

2.1 This SOP describes the procedures for the collection of representative water samples from: a boat, along the shore, in beach surf, from a bridge using an extension pole, sterile bucket or a depth-integrated device. This method assumes that the sampling parameters are uniformly distributed in the water column.

3.0 INTERFERENCES

3.1 Interference may result from using contaminated equipment, solvents, reagents, sample container, or sampling in a disturbed area.

3.2 Cross contamination problems can be eliminated or minimized through the use of dedicated sampling equipment. Clean and decontaminate all sampling equipment prior to use. Follow the appropriate cleaning procedure for the parameters being sampled.

4.0 SAFETY

4.1 All proper personal protection clothing and equipment must be worn.

4.2 All sampling involving hazardous material or hazardous conditions (i.e. sampling material, sample preservatives) must be performed with at least two people.

4.3 When working with potentially hazardous materials or situations, follow EPA, OSHA, and site specific health or safety procedures. If a site has a known hazardous chemical present on site, review all chemical data including exposure guidelines and Material Data Safety Sheets (MSDS) before visiting the site.

4.4 When sampling lagoons or surface impoundments, the sampling team member(s) collecting the sample should not get too close to the edge of the impoundment, where bank failure may cause them to lose their balance.

4.5 Follow all boating safety rules designated for South Carolina when conducting sampling from a boat.

4.6 When preserving samples, all proper personal protection clothing and equipment is to be worn. At a minimal this will includes closed- toed shoes, safety glasses and impervious gloves. Clean water and baking soda should be available for rinsing and neutralizing acids.

4.7 When working with potential hazardous chemicals or biological agents, avoid inhalation, skin contact, eye contact or ingestion. If skin contact occurs remove contaminated clothing immediately. Wash the affected areas thoroughly with large amounts of soap and water. If inhalation, eye contact or ingestion occurs, consult the Material Data Safety Sheets (MSDS) for prompt action, and in all cases seek medical attention immediately.

4.8 When sample handling is complete, wash your hands thoroughly.

5.0 EQUIPMENT AND SUPPLIES

5.1 Sampling collection equipment (Watermark Horizontal sampler, dip sampler, sampling pole, sampling bucket or bailer)

5.2 Hip waders, boots

5.3 Motor vehicle, water vessel, or other appropriate transportation.

5.4 Appropriate clean impervious gloves

5.5 Pre-cleaned and preserved sampling bottles (Refer to 40 CFR Part 136.3 (e) Table II, the laboratory's request form, the analytical method for the proper preservative, bottle type and size or the Sample Container, Preservation, Hold Time Table (WQL Table Form 005)-See attachment 2.

5.6 Whirl-Pak or Zip lock plastic bags

5.7 Coolers with ice

6.0 REAGENTS AND STANDARDS

6.1 Reference SOP WPGP Sample Containers, Preservation, Holding Times.

7.0 SAMPLE COLLECTION, PRESERVATION, AND STORAGE

7.1 Reference attachment 2- Sample Container, Preservation, Hold Time Table (WQL Table Form 005) and the SOP WPGP Sample Containers, Preservation, Holding Times.

7.2 All sampling sites shall document the location with latitude and longitude using Global Positioning System (GPS). Other methods of locating and documenting sampling sites may use topo maps, nautical charts, buoys and any specific landmarks that identify and mark sampling locations. If required, the proposed locations may be adjusted based on site access, property boundaries, and surface obstructions.

7.3 While in the performance of preparing and collecting any water quality samples, all personnel participating in these processes will adhere to all safety precautions and follow all established SOP pertaining to proper sample handling.

7.4 All sampling containers will prescribe to standard methods and established SOP for proper preservation of collected samples. Refer to 40 CFR Part 136.3 (e) Table II, Sample Container, Preservation, Hold Time Table (WQL Table Form 005)-See attachment 2 or the analytical method for the proper preservative and amount.

7.5 Safety glasses, appropriate impervious gloves and other necessary safety equipment shall be utilized. Sufficient amount of neutralizing agent and rinse water shall be readily available.

7.6 Once the sample has been preserved properly, cap the container. For microbiological samples, place the container in a Whirl-Pak or zip-lock plastic bag.

7.7 All samples collected in the field must be immediately placed under temperature control inside the transport container (Cooler) filled with an adequate amount of ice to maintain a temperature according to method and Sample Container, Preservation, Hold Time Table (WQL Table Form 005). A QC temperature blank will kept inside each cooler.

7.8 Load all the sample containers into cooler(s) ensuring that the bottles are in the ice in an upright position.

7.9 All collected water samples will be transported back to the laboratory in designated coolers and processed for analysis. Hold time(s) for specific sample analysis is found on the Sample Container, Preservation, Hold Time Table (WQL Table Form 005)

7.10 All samples collected in the field will maintain a Chain of Custody/Field Data Sheet that has all the proper information clearly recorded including the date, time, station number, sampling number and sample conditions for induction into the laboratory and sample record logbook. Follow SOP WQGP Chain of Custody.

8.0 PERFORMANCE CRITERIA AND QUALITY ASSURANCE

8.1 Performance Criteria

8.1.1 Follow SOP WQGP Chain of Custody.

8.1.2 At a minimum enter the following information on the Chain of Custody form: sampling date, sampling time, station number, sample numbers, project name, number of containers per station/sample number, type of analyses, type of sample (composite or grab), and samplers signatures.

8.1.3 Chain of custody forms should stay with the samples at all times. When samples are not in custody of the sampler or designated person (who signs the form) they should be maintained under lock and key.

8.1.4 For investigations or custody sensitive samples attach a custody seals to the cooler prior to shipment to another laboratory.

8.2 Quality Control/Quality Assurance

8.2.1 Representative samples are required. The sampler will evaluate the site-specific conditions to assure the sample will be representative.

8.2.2 All sampling equipment must be completely decontaminated prior to and after use.

8.2.3 Between each station sampling equipment (i.e. buckets, depth sampler and depth integrated sampler) shall be washed with a phosphate free soap and rinsed three times with distilled water. If sampling vertical profiles at the same station, sampling equipment will not be washed unless deemed necessary by the project data quality objectives.

9.0 CALIBRATION

9.1 Any thermometers used to measure temperature blanks are checked for accuracy yearly using a NIST traceable reference thermometer.

9.2 All NIST traceable reference thermometers must be recalibrated and re-certified every five years by an ISO 17025 accredited outside vendor (INNOCAL).

10.0 PROCEDURE

10.1 Pre-sample Collection

10.1.1 Determine the number of samples, site locations, the sampling methods to be employed, and which equipment and supplies are needed.

10.1.2 Decontaminate or pre-clean equipment, and ensure that it is in working condition.

10.1.3 Prepare a schedule and coordinate with the staff, clients, and laboratory.

10.1.4 Use GPS, topography maps, nautical charts, buoys and any specific landmarks to identify and mark all sampling locations. If required, the proposed locations may be adjusted based on site access, property boundaries, and surface obstructions.

10.2 Sample Collection

10.2.1 When collecting samples, the field location should be recorded using Global Positioning System (GPS). The date and time of sample collection, field measurements and ambient conditions must be recorded.

10.3 Sample Collection From a Boat

10.3.1 Approach the sampling point from a downstream or down-wind position and then motor slowly toward the sampling point. The motor should be turned off prior to reaching the sampling location and the boat allowed coasting a short distance to the sampling point to prevent disturbance of bottom sediment.

10.3.2 Allow the boat to come to a complete stop, drift into anchored position before beginning sampling. If necessary, lower the anchor slowly to prevent bottom sediments from being disturbed. Adjust the position of the boat back to the sampling location if drift or heavy tidal flow occurs.

10.3.3 Prepare the sample bottles. If not already done, label the sample bottles with at least, the site ID, with a permanent marker or waterproof sticker.

10.3.4 The member of the team who will be doing sampling will don new “powder free” polyethylene, PVC, or nitrile gloves.

10.3.5 Remove sample container cap. Plunge container quickly though water surface to avoid surface scum. If there is significant surface scum, record this in the field notes and use a swirling motion to clear it before plunging the bottle. The sampler will submerge the container 0.3 meters (approximately 12-18 inches) and allow the container to fill. Bacteriological samples must have air space in the top of the sample container.

10.3.6 Bring bottle up and immediately cap container.

10.3.7 An alternative to this method is to submerge capped container to 0.3 meters and then remove cap, allowing container to fill, and then recapping at the same depth.

10.4 Sample Collection from Shore

10.4.1 Prepare the sample bottles. If not already done, label the sample bottles with at least, the site ID using a permanent marker or waterproof sticker.

10.4.2 Identify the proper sampling location that will be sampled without entering the water.

10.4.3 Where there is flow or current always approach the sampling location slowly from downstream or down wind.

10.4.4 The member of the team who will be doing sampling will don new “powder free” polyethylene, PVC, or nitrile gloves.

10.4.5 Remove sample container cap. Reaching up stream or up-current plunge the container quickly though water surface to avoid surface scum. If there is significant surface scum, record this in the field notes and use a swirling motion to clear it before plunging the bottle. The sampler will submerge the container 0.3 meters (12 to 18 inches) and allow the container to fill. Avoid contacting the sample bottle with the bottom, stream bank, adjacent rocks and stream debris. If the water depth is less than 0.3 meters, sample the water at mid depth. Bacteriological samples must have a small amount of air space in the top of the sample container for mixing in the laboratory.
10.4.6 Bring bottle up and immediately cap container.

10.4.7 An alternative to this method is to submerge capped container to 0.3 meters and then remove cap, allowing container to fill, then recapping at the same depth.

10.5 Sample Collection into Beach Surf

10.5.1 Prepare the sample bottles. If not already done, label the sample bottles with at least, the site ID using a permanent marker or waterproof sticker.

10.5.2 Identify the proper sampling location that will be sampled without entering the water.

10.5.3 Wade into the surf to approximately 18 inches of water.

10.5.4 The member of the team who will be doing sampling will don new “powder free” polyethylene, PVC, or nitrile gloves.

10.5.5 Remove sample container cap. Reaching into on-coming wave by hand or with an extension pole and collect the sample in between the crest of the waves (within the trough of the wave) and plunge the container quickly though water surface. The sampler will submerge the container 0.3 meters (12-18 inches) and allow the container to fill. Avoid contacting the sample bottle with the bottom, stream bank, adjacent rocks and stream debris. If the water depth is less than 0.3 meters, sample the water at mid depth. Bacteriological samples must have a small amount of air space in the top of the sample container for mixing in the laboratory.

10.5.6 Bring bottle up and immediately cap container.

10.5.7 An alternative to this method is to submerge capped container to 0.3 meters and then remove cap, allowing container to fill, and then recapping at the same depth.

10.6 Sample Collection Using a Bucket

10.6.1 This method may only be used for bacteria analysis if the bucket has been adequately sterilized and maintained sterile. The analytic standard method will dictate the type of bucket that may be used and therefore the proper decontamination procedure will be applied. At a minimum this would be with a phosphate free soap and rinsed three times with distilled water. The bucket should then be placed in a sterile bag or covered with aluminum foil to protect it from contamination.

10.6.2 Prepare the sample bottles. If not already done, label the sample bottles with at least the site ID using a permanent marker or waterproof sticker.

10.6.3 Identify the proper sampling location that will be sampled without entering the water.

10.6.4 Where there is flow or current always sample on the upstream side of the bridge or structure.

10.6.5 The member of the team who will be doing sampling will don new “powder free” polyethylene, PVC, or nitrile gloves.

10.6.6 Locate the pre-cleaned bucket and rope.

10.6.7 Lower the bucket slowly to the water. To prevent particles or bridge material from entering the bucket, do not allow the rope or the bucket to touch the bridge structure.

10.6.8 Allow the bucket to fill at least 1/3 of the way full and raise the bucket slowly so that it does not contact anything on the way up. Coil the rope in your hand or on a cleaned surface (i.e. a clean plastic bag). This is performed to prevent particles from gathering on the rope and eventually dropping in the bucket.

10.6.9 Once the bucket has been raised, swirl the water in the bucket so it has contacted all inside surfaces. Empty the bucket so that it doesn’t disturb the water to be sampled.

10.6.10 Lower the bucket slowly to the water. To prevent particles or bridge material from entering the bucket, do not allow the rope or the bucket to touch the bridge structure.

10.6.11 Allow the bucket to fill to provide enough volume to fill all sample containers then raise the bucket slowly so that it does not contact anything on the way up. Coil the rope in your hand or on a cleaned surface (i.e. a clean plastic bag). This is performed to prevent particles from gathering on the rope and eventually dropping in the bucket.

10.6.12 Once the bucket is raised, uncap all sampling containers.

10.6.13 Swirl the water in the bucket so it is well mixed.

10.6.14 Fill up all sampling containers.

10.6.15 Between each station wash the bucket with a phosphate free soap and rinse three times with distilled water. To prevent contamination, do not store the rope in the bucket.

10.7 Sample Collection at Depth (Use of horizontal bottle)

10.7.1 This method may not be used for bacteria analysis unless the depth-sampler has been adequately sterilized and maintained sterile. For bacteria a new sterile depth-sampler is required at each site. The depth-sampler should be cleaned properly for the particular analysis required. At a minimum this would be with a phosphate free soap and rinsed three times with distilled water.

10.7.2 Prepare the sample bottles. If not already done, label the sample bottles with at a minimum, the site ID using a permanent marker or waterproof sticker.

10.7.3 Identify the proper sampling location that may be sampled without entering the water.

10.7.4 Where there is flow or current always sample on the upstream side of the bridge, structure.

10.7.5 The member of the team who will be doing sampling will don new “powder free” polyethylene, PVC, or nitrile gloves.

10.7.6 Locate the pre-cleaned depth-sampler.

10.7.7 Lower the depth-sampler slowly to the desired depth.

10.7.8 Move the sampling rope several times side to side, to allow the water at depth to enter the sampler.

10.7.9 Drop the messenger to trigger the depth-sampler.

10.7.10 Raised the depth-sampler.

10.7.11 Remove the caps from all sample bottles

10.7.12 Shake or swirl the water in the depth-sampler

10.7.13 Fill up all sampling containers.

10.7.14 Between each station wash the depth-sampler with a phosphate free soap and rinse three times with distilled water.

10.8 Sample Collection Depth-integrated (Use of a Teflon bailer)

10.8.1 This method refers to collecting depth-integrated samples by use of a Teflon bailer. This method may not be used for bacteria analysis unless the bailer has been adequately sterilized and maintained sterile. For bacteria, a new sterile bailer is required at each site where pre-rinsing can be performed. The bailer should be cleaned properly for the particular analysis required. At a minimum this would be with a phosphate free soap and rinsed three times with distilled water.

10.8.2 Prepare the sample bottles. If not already done, label the sample bottles with at a minimum, the site ID using a permanent marker or waterproof sticker.

10.8.3 Identify the proper sampling location that may be sampled without entering the water.

10.8.4 Where there is flow or current always sample on the upstream side of the bridge, structure or boat.

10.8.5 The member of the team who will be doing sampling will don new “powder free” polyethylene, PVC, or nitrile gloves.

10.8.6 Locate the pre-cleaned Teflon bailer.

10.8.7 Lower the bailer slowly until the top of bailer is at the water’s surface.

10.8.8 Raise the bailer.

10.8.9 Empty the bailer so that it doesn’t disturb the water to be sampled (At least 5 feet away from the sample collection location).

10.8.10 Lower the bailer slowly until the top of bailer is at the water’s surface.

10.8.11 Raise the bailer.

10.8.12 Remove the caps from all sample bottles.

10.8.13 Mix the water in the bailer by putting you gloved finger of the top of the bailer and turning it upside down and then right-side up 3 times.

10.8.14 Fill up all sampling containers.

11.0 CALCULATIONS AND DATA REPORTING

11.1 No calculations are required for the collection of field data or water quality sampling in the field.

11.2 All field data will be recorded and reported utilizing the field data sheet and Chain-of-Custody logbook. Reference SOP WQGP Chain of Custody.

11.3 The chain of custody form is signed over to the laboratory.

11.4 The sampling data is stored at USCB Water Quality Laboratory located at 1 University Blvd, Bluffton, SC for at least 3 years.

11.5 Containers used for sampling must including the proper preservatives, maintain holding times, and shall be collected in the specific container types outlined in attachment 2.

11.6 Samples must be kept cool during shipment/transport to the laboratories with ice.

11.7 The USCB's Water Quality Laboratory personnel are responsible for providing containers, dispensing preservation materials, and providing proper handling instructions to sample collectors.

11.8 Maximum holding times have been set by the United States Environmental Protection Agency (USEPA) for each parameter. Be sure not to exceed the maximum holding time for valid results.

11.9 If sample exceeds the maximum holding time for a parameter, the analyst shall record in the workbook and report on the data sheet with the notation "sample analysis exceeded maximum holding time". A comment should also be recorded in the sample comments form for all sampling logbooks that are maintained in the laboratory.

11.10 If determined that any pre-dispensed preservation was lost or known equipment failure/problem issues have occurred, the comment "lab error", or "instrument failure/problem", or "analytical problem" shall be included in workbooks and logbooks.

11.11 The sampling data is stored in the USCB Water Quality Laboratory located at 1 University Blvd, Bluffton, SC for at least 3 years.

12.0 WASTE MANAGEMENT

12.1 During field sampling and analysis events there may be hazardous waste produced from the sample collection. The waste must be handled and disposed of in accordance with federal, state, and municipal regulations. Dispose of the site specific hazardous waste produced where the work was performed, if the operating site has proper disposal available. If there is no disposal that meets regulatory requirements, the waste must be

transported back to the USCB Water Quality Laboratory and transferred to the hazardous waste manager for proper disposal. The sample volume should be minimized to reduce unnecessary waste.

13.0 REFRENCES

13.1 40 CFR, Part 136. Guidelines Establishing Test Procedures for the Analysis of Pollutants. Federal Water Pollution Control Act Amendments, amended CWA of 1977.

13.2 South Carolina Department of Health and Environmental Control (2014). Laboratory Certification Program, Guidance Documents. Bureau of Environmental Services, Environmental Quality Control Laboratory.

13.3 USCB Water Quality Lab Quality Assurance Manual (QAM).

13.4 USEPA (2014). Manual for the Certification of Laboratories Analyzing Drinking Water, Fifth Edition. Publication, EPA 815-R-05-004, January 2005. Supplement 2, EPA 815-F-12-006, November 2012.

14.0 TABLES, DIAGRAMS, FLOWCHARTS Attachment 1

Chain of Custody/Field Data Sheet (WQL Form 1000)

Attachment 1: WQL Form 1000 – Field Data Logsheet

Client Contact:
Company:
Project Name:
Address:
Phone:
Email:
Date Samples Collected:
Samples Collected By:

Temp Controls:
Cooler #__/_____C
Cooler #__/_____C
Cooler #__/_____C

USCB WATER QUALITY LABORATORY
CHAIN OF CUSTODY AND FIELD DATA LOGSHEET
ONE UNIVERSITY BLVD BLUFFTON, SC 29909
PH: 843-208-8193

Sample Analysis Requested (Fill in the preservation type and # of containers below; i.e. "ST/02"

1) Sample Code: G=Grab, C=Composite, FD=Field Duplicate, S/FW=Stream Fresh, S/M=Stream Marine, P=Pond, SWD=Stormwater Drainage, O=Other (Describe in Comments).

2) Preservation Type: HA=Hydrochloric Acid, PA=Phosphoric Acid, NI=Nitric Acid, SH=Sodium Hydroxide, SA= Sulfric Acid, ST=Sodium Thiosulfate. If no preservative is added, leave blank.

3) Flow: Low (L), Medium (M), High (H), In-coming tide (IC); No sample collected (NS)

4) All temperatures are recorded in Celsius (C). Depth is recorded in meters (m) rounded to the nearest 0.5m

5) "In-Situ" measurements must have a seperate time entry from other collected samples.

6) Depth profile data measurements must use [illegible] rows per site (i.e.; SFC, Middle, Bottom).

Wx Code:	Tidal Stage:
00 (Clear)	2000 (EBB)
01 (Fair)	2100 (¼ Flood)
02 (Cloudy)	2200 (½ Flood)
22 (Rain)	2300 (¾ Flood)
	4000 (FLOOD)
	4300 (¾ Ebb)
	4200 (½ Ebb)
	4100 (¼ Ebb)

Station/Sample ID *Start/Stop Time required for composite	Time Collected* (Military)	Sample Code (Type and Waterbody)		Flow	Enterococcus	E. Coli	Fecal Coliform	Nutrients	TOC	BOD	TSS	Chlorophyll-a	Mercury	Metals	Sediments	Other	In-Situ Parameters: Time IN / OUT	Depth SFC / Middle / Bottom	Air Temp	Wtr Temp	SpC	DO	pH	Salinity	Turb	Weather	Tide Stage

Bottle Lot#:
Bottle Exp. Date:
Compliance Y/N:

Comments:

Released by:_____ Date:_____ Time:_____ Received by:_____ Date:_____ Time:_____
Released by:_____ Date:_____ Time:_____ Received by:_____ Date:_____ Time:_____
Received into Lab by: _____ Date:_____ Time:_____

WQL Form 1000 Rev. 07/2016

The Property Of USCB WQ Lab

Attachment 2: WQL Table Form 005 - Sample Container Preservation Hold Time Table

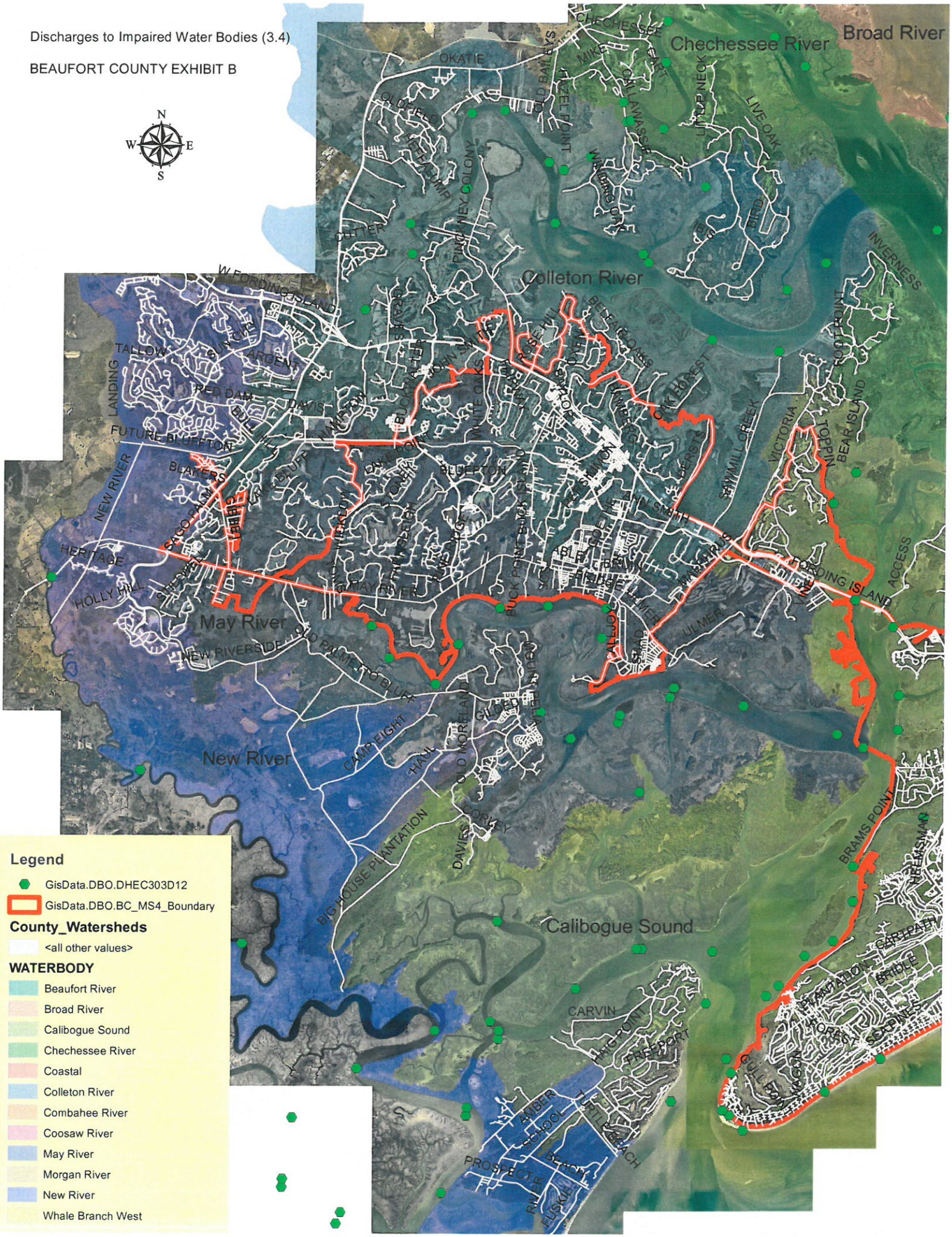
Parameter(s)	Container [1]	Preservation	Minimum Sample Size	Maximum Holding Time
Bacterial				
Fecal Coliform	PA, G	Cool, < 8°C, 0.0008% $Na_2S_2O_3$	100 mL	8 hours (Surface Waters)
Total Coliform and *E. Coli*	PA,G	Cool, < 8°C, 0.0008% $Na_2S_2O_3$	100 mL	8 hours 8 hours
Enterococci	PA, G	Cool, < 8°C, 0.0008% $Na_2S_2O_3$	100 mL	8 hours
Nutrients/Wet Chemistry				
Ammonia	P,G,FP	Cool, ≤ 6°C, H_2SO_4 < pH 2	500 mL	28 days
Nitrate-Nitrite	P,G,FP	Cool, ≤ 6°C, H_2SO_4 < pH 2	200 mL	28 days
Total Kjeldahl Nitrogen	P,G,FP	Cool, ≤ 6°C, H_2SO_4 < pH 2	500 mL	28 days
Phosphorus, total	P,G,FP	Cool, ≤ 6°C, H_2SO_4 < pH 2	100 mL	28 days
Organic Carbon	P,G(B), FP	Cool, ≤ 6°C, H_3PO_4 < pH 2	100 mL	28 days
Biochemical Oxygen Demand	P,G,FP	Cool, ≤ 6°C	1000 mL	48 hours
Residue, Nonfilterable (TSS)	P,G,FP	Cool, ≤ 6°C	200 mL	7 days
Chlorophyll-a	P,G dark colored.	Unfiltered, dark, 4°C. Filtered/ dark - 20° C	1000 mL	36 hours for filtration/ 28 days for filter extraction.
Metals				
Metals, Total (Cd, Cr, Cu, Fe, Pb, Mn, Ni, Zn)	P	Cool, ≤ 6°C, H_2SO_4 < pH 2	250 mL	6 months
Mercury	P	Cool, ≤ 6°C, H_2SO_4 < pH 2	250 mL	6 months
In Field				
SpC, DO, pH, Salinity, Temperature, Turbidity	Use probe	None Required	in-situ	Analyze immediately
WQL Table Form 005				

1. P=Polyethylene. G=Glass. FP=Fluoropolymer (polytetrafluoroethylene (PTFE;Teflon). PA=Any plastic made of sterilizable material. G(B)=Borosilicate glass.

The Property Of USCB WQ Lab

Discharges to Impaired Water Bodies (3.4)

BEAUFORT COUNTY EXHIBIT B



Legend

- GisData.DBO.DHEC303D12
- GisData.DBO.BC_MS4_Boundary

County_Watersheds

- <all other values>

WATERBODY

- Beaufort River
- Broad River
- Calibogue Sound
- Chechessee River
- Coastal
- Colleton River
- Combahee River
- Coosaw River
- May River
- Morgan River
- New River
- Whale Branch West

Exhibit C

CONTRACTUAL AGREEMENT BETWEEN CLEMSON UNIVERSITY AND BEAUFORT COUNTY

THIS AGREEMENT (the "Agreement") is made this 1st day of June, 2016, by and between Beaufort County, a political subdivision of the State of South Carolina (hereinafter referred to as the "County") and the Clemson Extension Service (hereinafter referred to as "Clemson"). This Agreement shall consist of all the terms, conditions, specifications and provisions required to deliver the scope of services defined heretofore.

WITNESSETH:

WHEREAS, the County is seeking to implement stormwater public education and outreach and public involvement/participation programming; and

WHEREAS, Clemson University holds in its Extension faculty and staff various levels of expertise concerning stormwater compliance requirements as promulgated by SC DHEC and USEPA; and

WHEREAS, Clemson University has developed an environmental outreach program (Carolina Clear), portions of which apply to the impact of stormwater on natural resources; and

WHEREAS, Clemson and the County desire to enter into an agreement relating to Beaufort County's requirement to implement strategic stormwater outreach and involvement programming subject to the terms, specifications, conditions and provisions of the contract as heretofore mentioned.

WHEREAS, Carolina Clear intends to educate citizens about the impacts of stormwater and means to improve stormwater management and provide outreach opportunities to address a broad range of water quality issues including the impact of stormwater on natural resources; and

WHEREAS, in furtherance of the mutual goals, Clemson and the County will collaborate to address stormwater public education and outreach and public involvement/participation; and

WHEREAS, Carolina Clear is a comprehensive approach developed by Clemson University Cooperative Extension Service (CUCES) to inform and educate communities about, among other issues, water quality, water quantity, and the cumulative effects of stormwater; and

WHEREAS, Carolina Clear addresses the special significance of South Carolina's water resources and the role these resources play in enhancing the state's economy, environmental health, and overall quality of life.

NOW, THEREFORE, in consideration of mutual covenants contained herein, the parties agree as follows:

ARTICLE 1
SCOPE OF SERVICES

Because each agreement is unique to the requirements of the circumstances, Clemson and the County agree that the specific metrics of each task shall be individually negotiated and delineated in the scope of services. Neither party has any responsibility for any performance obligations except as indicated within the scope of services.

Clemson does hereby offer to the County services for the purpose of providing stormwater-related public education and involvement programs and documentation of activities for Beaufort County, as contained and described in the scope of services.

Public awareness and education about natural resources is crucial to the process of protecting and restoring water quality. Clemson and the County will partner to deliver public education and outreach and public involvement/participation programming to general and targeted audiences towards achieving compliance with the public education and outreach and public involvement/participation requirements of the NPDES Phase II Stormwater Program.

In general, Clemson will lead a regional effort that includes strategic identification of behaviors and pollutants that can be addressed through stormwater education programming; implementation of an outreach campaign that seeks to address target behaviors, pollutants, and audiences; website presence and information made available to the public about pollution prevention; annual data report regarding program activities.

In order to assist the County in satisfying the Public Education and Outreach Minimum Control Measure, as required by the NPDES Phase II Stormwater Program, CUCES proposes to utilize selected components of the Carolina Clear program in order to:

- Coordinate and lead a regional body of partners including community representatives joined together by a shared interest in watershed restoration, protection, and improved stormwater management.
- Determine the appropriate public awareness campaign with the County and the community's guidance on target behaviors, audiences, pollutants and established venues and modes for outreach. Some program implementation approaches, BMPs (i.e., the program actions/activities), and measurable goals are contained in the individual agreement and seek to:
    - Form partnerships,
    - Use and develop education materials and strategies, and
    - Reach diverse audiences.
- Implement a strategic public education program with the County, or conduct equivalent outreach activities addressing the awareness of stormwater pollution and its effects on natural resources and the specific activities and safe alternatives to improve stormwater management.

In order to satisfy the Public Involvement/Participation Minimum Control Measure, as required by the NPDES Phase II Stormwater Program, CUCES proposes to:

- Provide opportunities for citizens and various audiences to become active in stormwater management.
- Provide program accountability measures including estimated number of people contacted, publications produced and distributed, and measures of outreach impacts and possible behavior change, and other specifics as appropriate considering SCDHEC and USEPA guidance.
- Other programs and measures as specified in the Contractual Agreement.

The parties specifically agree as follows:

Within thirty (30) days of the effective date of this Contract, Clemson will initiate a regional decision-making process with the County to define the goals and schedule for the scope of services described herein, establish activity reporting database, and produce website-ready information for the public, as follows:

1. Clemson will deliver public education and outreach and public involvement/participation with a goal to influence a more aware and involved public in regards to stormwater management decisions. The educational programs will include components designed for various residential and commercial audiences and others targeted for their impact to stormwater and nonpoint source pollution. This effort will be delivered through various means, as detailed below in Paragraphs 4 and 5. Events will be held at available facilities in such a way to reach diverse and regionally distributed audiences. Such instruction may include the furnishing of informational handouts, instructional manuals, promotional materials, webpages, logos, slogan, symbols, and similar such materials, as deemed appropriate by Clemson and the County.

2. The County will participate in a regional decision-making process to define regional priorities in regards to behaviors, pollutants, and audiences to be targeted for outreach. Additionally, the County will represent henceforth in this Contract, the communities of the City of Beaufort, Town of Bluffton, Town of Hilton Head Island and Town of Port Royal. The County shall provide input as available on audience demographics, behaviors based on staff observations, residential and commercial impacts related to stormwater management that may lead to compliance and enforcement actions, and other input based on stormwater operations.

3. The County shall provide information regarding readily available delivery modes for education and involvement programming (i.e., newsletters, community calendars, government access channels, community meetings, Council meetings, tax or water bills, etc.).

4. Clemson will raise public awareness using a mass media approach. Billboard and television public service announcements, radio broadcasts and interviews, newspaper articles,

stories and advertisements, and publications are among the outlets considered for use in this effort.

5. Each of the public-related activities described below will be part of the core program on an annual basis and will target a specific audience, all subject to modification with the approval of the County and Clemson, as well as acknowledging regulatory direction and interpretation by South Carolina DHEC.

Clemson will:

LEAD

5.1. Work with one regional association of **stormwater managers and local decision-makers** to update, plan, and determine regional public education and outreach and public involvement/participation priorities as part of a multi-year strategic plan with benchmarks of activities and measures of success annually (regional consortium identity to be decided).

5.2. Explore, pilot (as needed), and initiate strategic approaches to educating target audiences towards the goal of adopting improved behaviors and practices towards better stormwater management.

COMMUNICATE

5.3. Maintain webpage(s) with content specific to the regional outreach programs. Utilize tools to monitor website visits and other related statistics.

5.4. Maintain communication among regional partners through meetings, newsletters/e-news, one-on-one meetings, or other means established as best practice for the partnership.

IMPLEMENT

5.5. Plan, develop, present, and be a participant in at least three (3) **community** and **public** programs per year with emphasis on stormwater education. Provide resources to encourage continued learning and practice adoption.

5.6. Create at least three (3) news articles per year for the **area's residents and/or target audiences**.

5.7. Plan and present homeowner and yard owner program(s) for **individuals** and **families**. Distribute or provide materials for distribution as part of workshops and/or provide resources to encourage continued learning and practice adoption.

5.8. Provide at least one (1) **youth** program per year within the region such as

i. Adopt-A-Watershed which uses a local watershed,
ii. Storm Drain Marking,
iii. 4-H Wetlands Project explores estuaries, marshes, and swamps,
iv. $4H_2O$ Pontoon Classroom,
v. Engaging teachers in new watershed and stormwater curriculum meeting SC Standards, and
vi. EnviroScape®.

5.9. Present at least one (1) program per year that addresses pollution prevention and alternatives for a **target audience, as per the region's priorities**.

5.10. Develop and provide for the **general public**, within means, items such as banners and promotional giveaways to serve as a way to attract audiences and increase regional consortium visibility.

5.11. Utilize mass media outlets to provide statewide education at an increased cost-effectiveness; as needed, locally utilize mass media such as newspapers, radio, interviews and advertisements to address specific needs.

INVOLVE

5.12. Provide at least one (1) opportunity to involve an audience (**general public** or **commercial**) in improved watershed management and stormwater awareness.

5.13. Promote and expand web-based tools to encourage learning about and adoption of low impact development techniques (SC LID Atlas) and furthering involvement from citizens in watershed-focused volunteer opportunities (Watershed Stewardship Map) and through the use of demonstration sites as warranted appropriate.

REPORT

5.14. Provide and manage a user-friendly database to track each year's activities.

5.15. Annually, produce a document summarizing the year's efforts, successes, decision-making processes, partnerships and regional priorities.

5.16. On request and based on current regulatory guidance, provide data for public education and outreach and public involvement/participation measures of the Annual Report Checklist (or alternative document) required by DHEC of all Small Multiple Separate Storm Sewer Systems (MS4s).

6. Clemson will provide accountability statistics for each of the activities as best can be estimated. The statistics will include the following accomplishment indicators:

6.1. Number of educational programs and activities conducted.

6.2. Number of people reached through educational programs or involved by outreach programs according to method, audience or targeted behavior.

6.3. Number of people receiving information through "non-program" contacts such as telephone, office, visits, website contacts, visual and print media.

6.4. Evaluation of activities and the pollutant or behavior targeted.

6.5. As available, feedback on programs and anecdotal evidence of successful program implementation.

7. At a minimum of *once per permit cycle* (anticipated as no less than 3 years and no more than 5 years), and on the Carolina Clear statewide schedule so as to gain regional comparison information, implement statistically relevant survey instruments to gain insight on the awareness, knowledge and behaviors of the general public related to stormwater and watershed management, as well as regional effort awareness.

A mutually agreeable estimated delivery schedule shall provide activities distributed through each year in an Annual Activity Plan (as default) or on an otherwise agreed upon multi-year activity plan, which will be noted as a regional decision documented in writing for the regional entity.

ARTICLE 2
LIABILITY

The County and Clemson shall not be responsible to each other for any incidental, indirect or consequential damages incurred by either Clemson or County or for which either party may be liable to any third party which damages have been or are occasioned by services performed or reports prepared or other work performed hereunder. Further, Clemson's liability to the County and any other party for any losses, injury or damages to persons or properties or work performed arising out of/in connection with this Agreement and for any other claim, whether the claim arises in contract, tort, statute or otherwise, shall be limited to the amount of the total fees due to Clemson from the County hereunder.

ARTICLE 3
ASSIGNMENT

Clemson shall not assign or subcontract any rights or duties of this Agreement, except to an affiliated company, without the expressed written consent of the County, which consent shall not be unreasonably withheld, conditioned or delayed. Any assignment or subcontract without the written consent of County shall be void and this Agreement shall terminate at the option of the County.

ARTICLE 4
TERM

The initial term of this Agreement shall be for one (1) year beginning on the date of the last signature of this contract agreement. The contract may be extended an additional one (1) year twice, for a total of three (3) years, at the written mutual agreement of both parties, provided such agreement is executed no later than 30 days prior to the expiration of this contract. No amendments, changes or modifications will be effective until and unless reduced to writing and signed by the parties.

ARTICLE 5
COMPENSATION

The County shall provide payment in the amount of $90,000 annually for the core program, subject to the terms and conditions of this Agreement, unless additional services are amended to this Agreement. (To be invoiced as follows: FY16 - $20,000; FY17 - $70,000; FY18 – FY19 - $90,000 per year). Fees for additional services will be negotiated based on cost. These costs are based on the urbanized area population of each MS4, county and/or defined area(s), and represent the summation of fees for Beaufort County, City of Beaufort, Town of Bluffton, Town of Hilton Head Island, and Town of Port Royal, per Urbanized Area Populations determined in the most recent census.

ARTICLE 6
LIABILITY COVERAGE

Clemson is insured by the State Insurance Reserve Fund pursuant to the State Tort Claims Act. Beaufort County is also insured by the State Insurance Reserve Fund. The parties agree that each shall be responsible for the negligent acts or omissions of its own officers, employees, and agents operating within the scope of their employment and that neither is responsible for the negligent acts or omissions of the other's officers, employees, and agents in the performance of the requirements of this agreement.

Clemson does hereby covenant, agree and hereby represent to the County that Clemson has worker's compensation insurance, general liability and automobile liability insurance, as well as providing coverage against potential liability arising from Clemson's use or occupation of the premises during the course of performing the contracted services.

ARTICLE 7
DEFAULT

The remedies herein given to County shall be cumulative, and the exercise of any one remedy by the County shall not be to the exclusion of any other remedy.

ARTICLE 8
TERMINATION

In the event that Clemson fails to perform (or fails to commence the cure of any breach, which shall be diligently prosecuted in good faith) the services described herein within fifteen (15) business days of its receipt of a written demand from the County, County may terminate the Contract immediately upon notice provided such notice is at least thirty (30) business days following the County's notice of non-performance. In the event that the County breaches any of the terms of this Agreement including, but not limited to, non-payment, and fails to cure such breach within fifteen (15) business days of its receipt of a written demand from Clemson, Clemson may terminate the Contract immediately upon notice, provided such notice is at least thirty (30) business days following Clemson's notice of breach. Upon such termination, the County has the right to award the Contract to an alternate contractor.

ARTICLE 9
COUNTY RESPONSIBILITIES

The County will be responsible to provide Clemson reasonable access to County locations when necessary, ensure cooperation of County employees in activities reasonable and appropriate under the project, and obtain authorization for access to third party sites, if required.

ARTICLE 10
FORCE MAJEURE

Should performance of Clemson services be materially affected by causes beyond its reasonable control, a force majeure results. Force majeure includes, but is not restricted to, acts of God, acts of a legislative, administrative or judicial entity, acts of contractors other than subcontractors of Clemson, fires, floods, labor disturbances, and unusually severe weather. Clemson will be granted a time extension and the parties will negotiate an adjustment to the fee, where appropriate, based upon the effect of the force majeure upon Clemson's performance.

ARTICLE 11
SEVERABILITY

Every term or provision of this Agreement is severable from others. Notwithstanding any possible future finding by a duly constituted authority that a particular term or provision is invalid, void, or unenforceable, this Agreement has been made with the clear intention that the validity and enforceability of the remaining parts, terms and provisions shall not be affected thereby.

ARTICLE 12
INDEPENDENT CONTRACTOR

Clemson shall be fully independent in performing the services and shall not act as an agent or employee of the County. As such, Clemson shall be solely responsible for its

employees, subcontractors, and agents and for their compensation, benefits, contributions and taxes, if any.

ARTICLE 13
NOTICE

Clemson and the County shall notify each other of service of any notice of violation of any law, regulation, permit or license relating to the services; initiation of any proceedings to revoke any permits or licenses which relate to such services; revocation of any permits, licenses or other governmental authorizations relating to such services; or commencement of any litigation that could affect such services. Such notice shall be delivered by U. S. mail with proper postage affixed thereto and addressed as follows:

County: Beaufort County Administrator
P. O. Drawer 1228
Beaufort, SC 29901-1228

Beaufort County
Attn: Beaufort County Purchasing Director
P. O. Drawer 1228
Beaufort, SC 29901-1228

Beaufort County Stormwater Utility
ATTN: Stormwater Manager
120 Shanklin Road
Beaufort, SC 29906

Clemson: Clemson Extension Service
Attn: Director, CU Center for Watershed Excellence
230 Kappa Street
Clemson, SC 29634-0135

ARTICLE 14
MISCELLANEOUS

This Agreement is deemed to be under and shall be governed by and construed according to the laws of the State of South Carolina.

Any litigation arising out of the Agreement shall be held only in a Circuit Court of Beaufort County, Beaufort, South Carolina, in the Fourteenth Judicial Circuit.

This Agreement, including the terms, conditions, specifications and provisions listed herein makes up the entire agreement between Clemson and the County. No other Agreement, oral or otherwise, regarding the subject matter of this Agreement shall be deemed to exist or bind either party hereto. It is understood that this Agreement shall be considered exclusive between the parties.

ARTICLE 15
TOTAL AGREEMENT

This Agreement constitutes the entire agreement between the parties hereto. No representations, warranties or promises pertaining to this Agreement have been made or shall be binding upon any of the parties, except as expressly stated herein.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and year first above written.

WITNESSES:

_____

_____

BEAUFORT COUNTY, a political Subdivision of the State of South Carolina

Signature: _____
Name: Gary Kubic, County Administrator
P. O. Drawer 1228
Beaufort, SC 29901-1228

WITNESSES:

_____

_____

Clemson University Cooperative Extension Service

Signature: _____
Name: George Askew, Vice President for Public Service & Agriculture
Address: Clemson University

belegaldept-J:/acdocuments/stormwater/bftctycontractclemsonextcarolinaclear

COUNTY COUNCIL OF BEAUFORT COUNTY

PURCHASING DEPARTMENT

102 Industrial Village Road, Building 3
Post Office Drawer 1228
Beaufort, South Carolina 29901-1228

TO: Councilman Brian Flewelling, Chairman, Natural Resources Committee

FROM: Dave Thomas, CPPO, Purchasing Director DT

SUBJ: **RFP # 08192014 Request for Proposal to provide Education and Outreach Consulting Services for Stormwater Management**

DATE: October 13, 2014

BACKGROUND: Beaufort County Purchasing Department issued a Request for Proposal (RFP) for Education and Outreach Consulting Services for Stormwater Management to assist with the department's programs and projects. The proposal requested that the consultant staff and facilitate stormwater education and outreach within the County and to perform duties and responsibilities necessary to bring and keep Beaufort County compliant with all Federal, State, and local laws/regulation regarding stormwater management for fiscal year 2015, with the option to renew every year for up to four (4) consecutive years. The Evaluation Committee consisted of five (5) representatives of the Beaufort County Stormwater Implementation Committee (SWIC) including Bryan McIlwee with the Town of Hilton Head Island, Kim Jones with the Town of Bluffton, Lamar Taylor with the City of Beaufort, Anthony Maglione representing the Town of Port Royal as a consultant, and Eric Larson with Beaufort County Stormwater Management.

The scope of services to provide stormwater education and outreach is unique and not widely marketed by for-profit businesses. The SWIC wrote the RFP scope of services to solicit non-profit organizations and educational institutions. Many groups such as these exist in Beaufort County and it was a goal to find a consultant that could organize these groups and efficiently utilize our existing resources. Beaufort County received one (1) response to the RFP from Beaufort Soil and Water Conservation District. The Committee reviewed and evaluated the RFP and decided to interview the vendor. Beaufort Soil and Water Conservation District's proposal meets the goals set forth by the SWIC and was unanimously approved by the Evaluation Committee.

The initial contract term is effective October 14, 2014 to June 30, 2015. Contract fee for the term will be a negotiated amount not to exceed $50,000.00.

FUNDING: Primary Funding - 50250011-51160, Stormwater Fees, as part of the cost share MOU with the Towns of Hilton Head Island, Bluffton, and Port Royal and the City of Beaufort. The County's portion is $25,218.

PROPOSED YEARLY COST: $50,000

FOR ACTION: Natural Resources Committee meeting October 13, 2014. APPROVED

RECOMMENDATION: The Purchasing Department recommends that the Natural Resources Committee approve the contract award to Beaufort Soil and Water Conservation District for Education and Outreach Consulting Services for Stormwater Management.

CC: Gary Kubic, County Administrator GKubic
Josh Gruber, Deputy Administrator
Alicia Holland, Chief Financial Officer AH
Robert McFee, Director of Engineering and Infrastructure JRMcFee
Eric W Larson, Stormwater Manager

CONTRACT

THIS CONTRACT is made this 17th day of October, 2014, by and between Beaufort County, a political subdivision of the State of South Carolina (hereinafter referred to as "County") and Beaufort Soil and Water Conservation District. (hereinafter referred to as "Contractor"). This Contract shall consist, by reference of all the terms, conditions, scope of work, specifications and provisions contained in RFP Number 08192014 dated July 19 ,2014 (advertised in The Island Packet/Beaufort Gazette on July 18, 2014, all Addendums and Contractor's Proposals or Bid dated August 19, 2014 and September 30, 2014.)

WITNESSETH:

WHEREAS, the Contractor and the County desire to enter into this contract relating to **Stormwater Education and Outreach Consulting Services** subject to the terms, specifications, conditions and provisions of the request for proposal as heretofore mentioned.

NOW, THEREFORE, the Contractor and the County agree to all of these terms, conditions, specifications, provisions and the special provisions as listed below:

A. This Contract is deemed to be under and shall be governed by and construed according to the laws of the State of South Carolina.

B. Any litigation arising out of this Contract shall be held only in a circuit court of Beaufort County, Beaufort, South Carolina in the Fourteenth Judicial Circuit.

C. The Contractor shall not sublet, assign, nor by means of a stock transfer sale of its business, assign or transfer this Contract without the written consent of the County.

D. This Contract, including the terms, conditions, specifications and provisions listed herein makes up the entire contract between the Contractor and County. No other Contract, oral or otherwise, regarding the subject matter of this Contract shall be deemed to exist or bind either party hereto.

E. It is understood that this Contract shall be considered exclusive between the parties.

F. Any provisions of this Contract found to be prohibited by law shall be ineffective, to the extent of such prohibition, without invalidating the remainder of this Contract.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the parties agree as follows:

ARTICLE 1
BACKGROUND/SCOPE OF WORK

Background

The Contractor does hereby offer to the County services for the purpose of providing Stormwater Education and Outreach as contained and described in the Scope of Work.

Scope of Work

Consultant services to staff and facilitate stormwater education and outreach within the County and to perform duties and responsibilities necessary to bring and keep Beaufort County compliant with all Federal, State, and local laws/regulation regarding stormwater management. These services include, but are not limited to:

- Program Coordination
- Partners
- Identifying Pollutants of Concern
- Messages / Community Issues
- Audiences
- Methods of delivery
- MS4 reporting
- Website maintenance
- Program budget

It is the responsibility of the consultant to define specific and measurable deliverables to meet the requirements of MCMs 1 and 2 of the SC-DHEC MS4 general permit.

The Scope of Work is further defined in the RFP Number 08192014 and Contractor's Proposals.

ARTICLE 2
LIABILITY

The County and Contractor shall not be responsible to each other for any incidental, indirect or consequential damages incurred by either Contractor or County or for which either party may be liable to any third party which damages have been or are occasioned by services performed or reports prepared or other work performed hereunder.

ARTICLE 3
INDEMNIFICATION AND HOLD HARMLESS

The Contractor does hereby agree to indemnify and save harmless the County, its officers, agents and employees from and against any and all liability, claims, demands, damages, fines, fees, expenses, penalties, suits, proceedings, actions and cost of actions, including attorney's fees for trial and on appeal of any kind and nature to the extent arising or growing out of or in any way connected with the negligent performance of the Contract, by Contractor, its agents, servants or employees.

ARTICLE 4
ASSIGNMENT

Contractor shall not assign any rights or duties of the professional services contract without the expressed written consent of the County. Any assignment or subletting without the written consent of County shall be void and this Contract shall terminate at the option of the County.

ARTICLE 5
PERFORMANCE PERIOD/TERM

The term of this Contract shall be for a period of the remainder of the County's Fiscal Year ending on June 30, 2015. At the County's option, this contract may be renewed for four (4) additional one-year terms.

ARTICLE 6
COMPENSATION

Total annual compensation is not to exceed fifty thousand dollars ($50,000.00) per annual term of the contract, invoiced monthly for services rendered during that term.

ARTICLE 7
INSURANCE/PERFORMANCE BOND

Insurance

Contractor does hereby covenant, agree and hereby represent to the County that it has obtained workmen's compensation insurance, general liability and automobile liability insurance, as well as providing coverage against potential liability arising from and in any manner relating to the Contractor's use or occupation of the premises during the course of performing the contracted services. **Additionally, the Contractor agrees to list the County as 'additional insured' on Certificates of Insurance related to the execution of this Contract.**

Performance Bond

No performance bond is required for this contract.

ARTICLE 8
DEFAULT/TERMINATION

Default

In the event of default or breach of any condition of this Contract resulting in litigation, the prevailing party would be entitled to reasonable attorneys' fees fixed by the Court. The remedies herein given to County under Default shall be cumulative, and the exercise of any one remedy by the County shall not be to the exclusion of any other remedy.

Termination

This contract may be terminated by the County,' 'for convenience' 'for cause,' or by 'by mutual consent' as described in RFP Section V – General Terms and Conditions, Paragraph 6.0.

1. **Termination for Convenience**

The County may, without cause, terminate this contract in whole or in part at any time for its convenience. In such instance, an adjustment shall be made to the Contractor, for the reasonable costs of the work performed through the date of termination. Termination costs do not include lost profits, consequential damages, delay damages, unabsorbed or under absorbed overhead of the Contractor or its subcontractors, and/or failure of Contractor to include termination for convenience clause into its subcontracts and material purchase orders shall not expose the County to liability for lost profits in conjunction with a termination for convenience settlement or equitable adjustment. Contractor expressly waives any damages, delay damages, or indirect costs which may arise from County's election to terminate this contract in whole or in part for its convenience.

2. **Termination For Cause**

Termination by the County for cause, default, or negligence on the part of the Contractor shall be excluded from the foregoing provisions. Termination costs, if any, shall not apply. The thirty (30) days advance notice requirement is waived, and the default provision in this bid shall apply. Further, if the Contractor is terminated under this clause, Contractor will forfeit their performance bond (if applicable).

Reasons for Termination for Cause shall include but not limited to:

a) Default as defined above,
b) failing to make satisfactory progress in the prosecution of the contract
c) endangering the performance of this contract
d) criminal activity or misconduct,
e) work that is deemed sub-standard by the County Representative.

3. **Termination by Mutual Consent**

Either party may terminate this Contract by mutual consent with written notice attesting and agreeing to a termination by mutual consent by either party. Upon such termination, the County shall pay the Contractor for all services performed hereunder up through the date of such termination. Termination by mutual consent may entitle the Contractor to reasonable costs allocable to the contract for work or costs incurred by the Contractor up to the date of termination. The Contractor must not be paid compensation as a result of a termination by mutual consent that exceeds the amount encumbered to pay for work to be performed under the contract.

ARTICLE 9
RESPONSIBILITY

The County will be responsible to provide the Contractor reasonable access to County locations when necessary, ensure cooperation of County employees in activities reasonable and appropriate under the project, and obtain authorization for access to third party sites, if required.

ARTICLE 10
FORCE MAJEURE

Should performance of Contractor services be materially affected by causes beyond its reasonable control, a *Force Majeure* results. *Force Majeure* includes, but is not restricted to:

a) acts of God,

b) acts of a legislative,
c) administrative or judicial entity,
d) acts of Contractors (other than subcontractors of Contractor),
e) fires,
f) floods,
g) labor disturbances,
h) civil unrest
i) incorrect/inferior parts or materials
j) terrorism
k) unusually severe weather.

Contractor will be granted a time extension and the parties will negotiate an adjustment to the fee, where appropriate, based upon the effect of the Force Majeure upon Contractor's performance.

ARTICLE 11
SEVERABILITY

Every term or provision of this Contract is severable from others. Notwithstanding any possible future finding by a duly constituted authority that a particular term or provision is invalid, void, or unenforceable, this Contract has been made with the clear intention that the validity and enforceability of the remaining parts, terms and provisions shall not be affected thereby.

ARTICLE 12
INDEPENDENT CONTRACTOR

The Contractor shall be fully independent in performing the services and shall not act as an agent or employee of the County. As such, the Contractor shall be solely responsible for its employees, subcontractors, and agents and for their compensation, benefits, contributions and taxes, if any.

ARTICLE 13
NOTICE

The Contractor and the County shall notify each other of service of any notice of violation of any law, regulation, permit or license relating to the services; initiation of any proceedings to revoke any permits or licenses which relate to such services; revocation of any permits, licenses or other governmental authorizations relating to such services; or commencement of any litigation that could affect such services. Such notice shall be delivered by U.S. mail with proper postage affixed thereto and addressed as follows:

County:	Beaufort County Administrator P. O. Drawer 1228 Beaufort, SC 29901-1228
Contractor:	Beaufort Soil and Water Conservation District PO Box 70 Port Royal, SC 29935

ARTICLE 14
CHANGE ORDERS

No change orders are applicable under this contract.

ARTICLE 15
AUDITING

The Contractor shall make available to the County if requested, true and complete records, which support billing statements, reports, performance indices, and all other related documentation. The County's authorized representatives shall have access during reasonable hours to all records, which are deemed appropriate to auditing billing statements, reports, performance indices, and all other related documentation. The Contractor agrees that it will keep and preserve for at least seven years all documents related to the Contract, which are routinely prepared, collected or compiled by the Contractor during the performance of this contract.

The County's Auditor and the Auditor's authorized representatives shall have the right at any time to audit all of the related documentation. The Contractor shall make all documentation available for examination at the Auditor's request at either the Auditor or Contractor's office and without expense to the County.

ARTICLE 16
GRATUITIES

The right of the Contractor to proceed or otherwise perform this Contract, and this Contract may be terminated if the County Administrator and/or the County Purchasing Director determine, in their sole discretion, that the Contractor or any officer, employee, agent, or other representative whatsoever, of the Contractor offered or gave a gift or hospitality to a County officer, employee, agent or Contractor for the purpose of influencing any decision to grant a County Contract or to obtain favorable treatment under any County Contract.

The terms "hospitality" and "gift" include, but are not limited to, any payment, subscription, advance, forbearance, acceptance, rendering or deposit of money, services, or items of value given or offered, including but not limited to food, lodging, transportation, recreation or entertainment, token or award.

ARTICLE 17
INVOICES

All invoices for work done under this contract should be directed to the County Representative, Eric W Larson, Stormwater Manager

Located at:

Beaufort County
Department of Public Works
120 Shanklin Road
Beaufort, SC 29906

Invoices should include:

a) Period of time covered by the invoice
b) Detail of work performed
c) Purchase order and Contract Number
d) Tax Identification Number

Unless otherwise indicated, all invoices must be timely and accurate, and received within 15 days of completion. The County may assess late penalties for late invoicing and/or inaccurate invoices.

ARTICLE 18
PURCHASE ORDERS

The County will issue Purchase Orders from properly executed requisitions. The County shall not be responsible for invoices of $1,000 or more that do not have a purchase order covering them.

ARTICLE 19
ORDER OF DOCUMENTS

The following are incorporated into and made a part of this contract by reference:

a) Request for Proposal Number 08192014
b) General Terms and Conditions between County and Contractor.
c) Insurance Requirements
d) Beaufort Soil and Water Conservation District Proposal Submission to RFP Number 08192014
e) Recommendation Letter dated October 13, 2014

SIGNATURE PAGE

This Contract with the above Articles constitutes the entire contract between the parties hereto. No representations, warranties or promises pertaining to this Contract have been made or shall be binding upon any of the parties, except as expressly stated herein.

This Contract shall be construed in accordance and governed by the laws of the State of South Carolina.

IN WITNESS WHEREOF, the parties hereto have executed this Contract on the day and year first above written.

WITNESSES:

Cheryl Harris

Gary Benoit

BEAUFORT COUNTY, a political sub-division of the State of South Carolina

By: Gary Kubic

Name: Gary Kubic
Title: County Administrator
Address: P.O. Drawer 1228
Beaufort, SC 29901-1228
Phone: (843) 255-2026
Fax: (843) 255-9403

Date: 10/27/14

WITNESSES:

Eric W. Larson

Carolyn G. Wallace

BEAUFORT SOIL AND WATER CONSERVATION DISTRICT

By: Denise M Parsick

Name: Denise M. Parsick
Title: Commissioner
Address: P.O. Box 70
Port Royal, SC 29935
Phone: 843-522-8100
Fax: 843-522-0585
Tax ID Number: 57-0658585

Date: October 17, 2014

BEAUFORT COUNTY STORMWATER UTILITY
120 Shanklin Road
Beaufort, South Carolina 29906
Voice (843) 255-2805 Facsimile (843) 255-9436

June 2, 2015

Denise M. Parsick, Commissioner
Beaufort Soil and Water Conservation District
P.O. Box 70
Port Royal, SC 29935

RE: Contract for Stormwater Education and Outreach Consulting

Dear Mrs. Parsick,

I am happy to include a renewal contract for Beaufort Soil and Water Conservation District for Fiscal Year 2016. Please read the attached letter and follow the provided directions. Beaufort County Stormwater Management looks forward to working with your company another year.

If you have any questions, please contact me at (843) 255-2805 or elarson@bcgov.net.

Sincerely,

Eric W. Larson

Eric W. Larson, PE, CPSWQ, AICP, CFM
Director of Environmental Engineering

EWL/plw

Attachments:
Contract Renewal Letter
BSWCD FY2016 Estimated Budget

cc: Dave Thomas
Linda Maietta
Shelby Berry

COUNTY COUNCIL OF BEAUFORT
Beaufort County Purchasing Department
Post Office Drawer 1228
Beaufort, South Carolina 29901-1228
Telephone (843) 255-2353 ♦ FAX (843) 255-9437

Dave Thomas, CPPO, CPPB
Purchasing Director
E-Mail: dthomas@bcgov.net

May 27, 2015

To: Denise M. Parsick, Commissioner
Beaufort Soil and Water Conservation District
Address: P.O. Box 70
Port Royal, SC 29935

Re: Contract for Stormwater Education and Outreach Consulting
Contract Number: RFP 08192014

Dear Denise Parsick,

It is a great pleasure to inform you that Beaufort County wishes to renew the above mentioned contract with you in accordance with the original contract dated October 17, 2014 and Invitation for Bid (IFB)/Request for Proposal (RFP). The contract renewal period will commence on July 1, 2015 and extend through June 30, 2016 and will include approved amendments and compensation based on your last contract term. Included in this contract renewal is the Projected Budget for Stormwater Education and Outreach for Fiscal Year 2016 which incorporates the scope of service and cost increase not to exceed $60,000.

Also, kindly forward an updated Certificate of Insurance at your earliest convenience.

We look forward to your continued success during the contract period. Please contact Linda Maietta at 843-255-2297 or lmaietta@bcgov.net if you have any questions.

Sincerely,
Dave Thomas
Dave Thomas, CPPO, CPPB

Your signature below authorizes the renewal of the aforementioned Contract for an additional one (1) year term pursuant to amendments, original contract, and Terms and Conditions found in the original solicitation.

Denise M Parsick
Title: Commissioner
Printed Name: Denise M. Parsick

June 16, 2015
Date

cc: Linda Maietta

Projected Budget for Stormwater Education and Outreach FY16 - July 1, 2015 to June 30, 2016
Submitted by Beaufort Soil and Water Conservation District

	Category	Ref	Cost	Basis
1	Basic Survey through Constant Contact Data Collection & dispersal For up to 25,000 emails & Prize 2 Kindle drawings Paper surveys		$2000 $500 $200	• Basic Stormwater Education Survey primarily thru email list serves & social media; Survey data collection & dispersal: prepay for up to 25,000 emails (increase to1 year) Quarterly Prize: 2 kindles @$250 *** "giveaway subject to County approval Printing paper surveys
2	MS4 Meetings 3 Advertising		$1500 $3700	• 3 Public comment meetings with 15 min stormwater 101 • Radio Ads & Newspaper
3	Community Education Programs - Enviroscape & Stormwater 101	IIIC1	$2500	• $100 p/program x 25 presentations • Includes pay, benefits, & travel for educators
4	Community/School nonpoint source pollution fact sheet or brochures	IIIC5, IIIC6	$5,000	• Take home community flyer to share with friends & family • $1.00 each set x 5000, est. printing • Note: All printing will be branded as directed
5	Stormwater 300-600 Classes		$1000	• 10 classes to Municipalities & County staff ($100 per class)
6	2500 Storm Drain Markers, glue, & accessories		$5750	• 2500 markers glue, accessories, shipping, SC use tax $5,750)
7	Pond Conference	III A	$1000	• Travel for up to 4 presenters for in kind presentation • Attendees pay $25 to cover meal & snacks • Event management provided by BCD Staff
8	Neighbors For Clean Water Guide, printing	IVAB	$2000	• 24 page color booklet printing estimate • $2.00 per copy x 1000 initial printing
9	Neighbors For Clean Water Guide, artwork	IVAB	In Kind & BCD Staff	• Content for brochure will be accomplished thru BCD staff hours & partners info
10	Neighbors for Clean Water updates	IVAB	In Kind & BCD	• Town of Bluffton will upload information for WEB & Facebook provided by BSWCD
11	School Education Programs Enviroscape – 85 7th grade classes	IIIC1	$4250	• $50 p/program x 85 classes • Est: 2500 students • Includes pay, benefits, & travel for educators
12	2nd Enviroscape	IIIC	$1000	• 2nd Enviroscape for additional programs
13	Educational Festivals, banner & booth, giveaways, flyers, & staffing events	IVD	$5500	• Banner & displays ($600) • pet waste bags, & flyers (1400) • Other BMP giveaway($1000) • 6 BCD Staff 2 NOB & 4 SOB for 4 events ($1000) • Advertisement for new HHI Event ($1500)
14	Neighbors for Clean Water T-shirt	IVD	$300	• To identify and promote message at events • Initial supply of logo shirts & magnetic l name tags
15	Magnetic Car signs for educators & staff	IIIC, IVD	$400	• To identify and promote message at events, school programs etc.
16	Bluffton HS Rain Barrels	IVE	$2000	• 25 rain barrels x $80 each for County & Municipal sites

			$1200	• Rain barrel information Flyer
17	Rain Garden Workshop		$1800	• Workshops, materials & outreach
18	Est. Additional BCD Staff hours for contract implementation	All	$18,000 $400	• $15.00 p/hr. x 20 hrs. p/wk. x 50 weeks - $15,000 • District Benefits (20%) - $3,000 • Miscellaneous Mileage
	Total Estimated Budget		60, 000	

FY 2016 Beaufort County Stormwater

MCM 1 & 2 Education Outreach & Public Participation

Dataw Health Fair

Drain Marking in Port Royal with The Village People

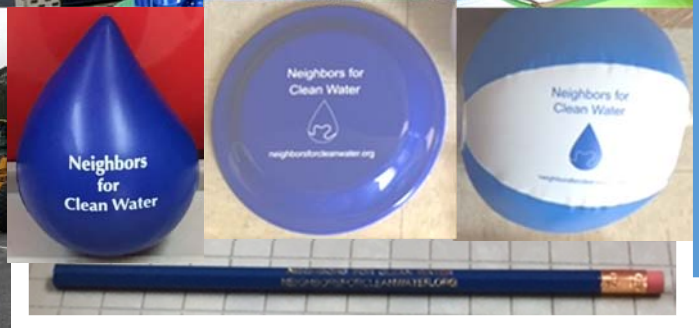
Broad Creek Clean Up

Pet Waste Bag Dispenser

Port Royal Crab Fest Spinning Wheel Survey

Touch a Truck Tanger Outlets

Birthday for the Birds



Neighbors for Clean Water Logo Give-Away items: Water Drop Stress Ball, Frisbee, Beach Ball, Pencils; See Umbrella, water bottle, & Stress Ball Construction Cone on fol-lowing pages.

Port Royal Earth Day

Hunting Island Beach Sweep

Neighbors for Clean Water at World Oceans Day June 25, 2016

Joanne Jewell, of Neighbors for Clean Water, shows Oliver Putnam, 5, of Appling, Ga., an "Enviroscape" interactive model used to illustrate how non-point source pollution can make its way into a watershed. Neighbors for Clean Water is part of the Beaufort Soil and Water Conservation District. Its goal is to educate and motivate county residents to be responsible and do their part to clean up area waterways. It was one of the exhibitors at the Port Royal Sound Foundation's Saturday on the Sound event on Saturday at its Maritime Center on the Chechessee River. Jay Karr jkarr@islandpacket.com

World Oceans Day at PRS Maritime Museum (from newspaper article)

May River Sweep

TOHHI Drain Marking

Touch a Truck LC Montessori

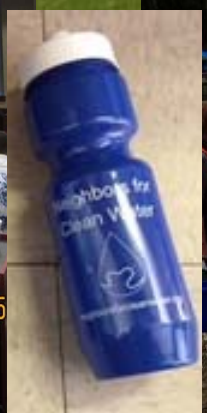
Drain Marking

Bluffton Art & Seafood Festival

Digital billboard advertising

Bluffton Drain Marking Volunteers

Professional Pond Conference



Facebook Advertisements

Neighbors for Clean Water
Sponsored ·

Like Page

Pet waste left on the ground washes towards our tidal rivers each time it rains. The germs move from yards, parks, and street sides through stormwater runoff & street drains, eventually reaching our waterways. Scoop the Poop and find out more at www.neighborsforcleanwater.org.

✓ Mobile News Feed — Remo

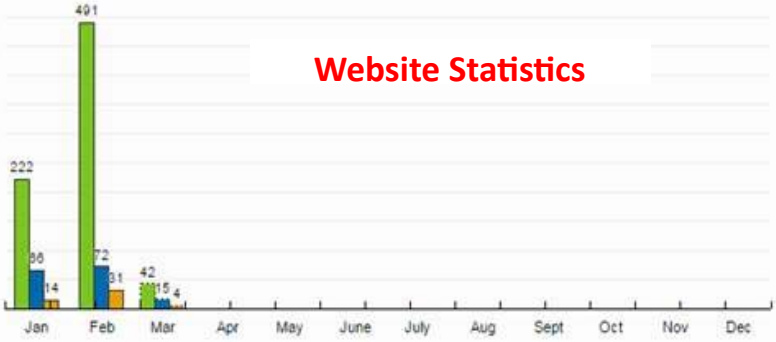
✓ Desktop Right Column — Remo

✓ Instagram New — Remo

Three Billboards

Website Statistics

Daily | Weekly | Monthly | Quarterly | Yearly — 17:03:22 3 March 2016 — Summary Log: No Limit



Page Views
Unique Visits
Returning Visits
Labels on Graph

Date Range: This Year or 1 Jan 2016 - 31 Dec 2016

Graph Type: Bar Graph Area Graph Line Graph Save As Default

	Page Views	Unique Visits	First Time Visits	Returning Visits
Total	755	153	104	49
Monthly Average	252	51	35	17

	Page Views	Unique Visits	First Time Visits	Returning Visits
Mar 2016	42	15	11	4
Feb 2016	491	72	41	31
Jan 2016	222	66	52	14

Returning Visits - Based purely on a cookie, if this person is returning to your website for another visit an hour or more later

First Time Visits - Based purely on a cookie, if this person has no cookie then this is considered their first time at your website.

Unique Visits - Based purely on a cookie, this is the total of the returning visits and first time visits - a total count of visits.

Start Date:	End Date	Lead service Provider(s):	Additional Service Provider(s):	Geographic Target	Activity Location	Activity Type	Activity Description:	Actual Contact	Impressions	Volunteers	Asessment Type	Minimum Control Measure	Target Audience	Target Pollutant	HazWaste	Pet Waste	Litter	Fertilizer	Septic/Sewer	Parking Lot Housekeeping	Ind. Waste	Bus. Waste	Oils/Grease	Construction Sites.
SURVEYS																								
3/13/2016	3/13/2016	BSWCD	HH Outside Foundation	BC	HHI	Broad Creek Cleanup event	Kayak Cleanup NPS Outreach, Surveys	105	105	?	Complete	MCM 1 & 2: Public Involvement/Participation Litter collection	Kayak group	Stormwater in general	x	x	x							
4/16/2016	4/16/2016	BSWCD	NCW	BC	TOPR	Soft Shell Crab Fest	Festival Survey Wheel/prizes	165	6,000	?	Complete	MCM 1 & 2 Public Involvement survey	General Public	Stormwater in general	x	x	x							
4/23/2016	4/23/2016	BSWCD	NCW	BC	TOB	Bluffton/Hilton Head Island Earth Day	Festival Survey Wheel/prizes	99	350	?	Complete	MCM 1 & 2 Public Involvement survey	General Public	Stormwater in general	x	x	x							
Survey Monkey	6/30/2016	NCW	BC	BC	BC	Stormwater Awareness Survey	Online Survey			?	In Process	MCM 1 & 2 Public Involvement survey	General Public	Stormwater in general	x	x	x	x	x				x	
5/14/2016	5/14/2016	BSWCD	NCW	BC	TOPR	Festival-Birthday for Birds	Stormwater Awareness Survey	50	350	?	Complete	MCM 1 & 2 Public Involvement survey	General Public	Stormwater in general	x	x	x	x	x				x	
5/9/2016	6/30/2016	NCW	BC/ BSWCD	BC	BC	Stormwater Awareness Survey	Filled out in BC Libraries	16	16	?	In Process	MCM 1 & 2 Public Involvement survey	General Public	Stormwater in general	x	x	x	x	x				x	
6/16/2016	6/30/2016	NCW	BC/ BSWCD	BC	BC	Stormwater Awareness Survey	MS4 Meeting -complete Survey			?	In Process	MCM 1 & 2 Public Involvement survey	General Public	Stormwater in general	x	x	x	x	x				x	
										?														
ADVERTISING																								
4/20/2016 - Billboards installed	ongoing	BSWCD	NCW	BC	BC, JC	Billboard Advertising	Highways in Beaufort & Jasper County		402,000		In Process	MCM1: Public Ed Outreach	General Public	Stormwater in general		x	x							
5/20/2016 - Billboards installed	ongoing	BSWCD	NCW	BC	BC, JC	Billboard Advertising	Highways in Beaufort & Jasper County		402,000		In Process	MCM1: Public Ed Outreach	General Public	Stormwater in general		x	x							
6/20/2016 - Billboards installed	ongoing	BSWCD	NCW	BC	BC, JC	Billboard Advertising	Highways in Beaufort & Jasper County		402,000		In Process	MCM1: Public Ed Outreach	General Public	Stormwater in general		x	x							
12/1/2015	6/17/2016	TOB/NCW	BSWCD	BC	TOB	Neighbors for Clean Water Website	Website	394	1,426		In Process	MCM1: Public Ed Outreach	General Public	Stormwater in general										
12/1/2015	6/17/2016	TOB/NCW	BSWCD	BC	TOB	Neighbors for Clean Water Face Book	Face Book Page	17447	30,830		In Process	MCM1: Public Ed Outreach	General Public	Stormwater in general										
OUTREACH PRESENTATIONS																								
1/25/2016	3/4/2016	BSWCD	NCW	COB	COB	Stormwater 101 outreach/reasearch	Presentation Rotary & HOA	35	100		Complete	MCM 1: Public Education/Outreach(ex. a presentation to an HOA)	General Public	Stormwater in general	x	x	x	x	x	x			x	
2/17/2016	2/26/2016	BSWCD	NCW	LI	LI	PresentationWaterford Cove Apt/Marsh Harbor HOA	Stormwater ed/pet waste	5	250		Complete	MCM 1: Public Education/Outreach(ex. a presentation to an HOA)	HOA & Apts	Stormwater in general & pet		x	x							
3/1/2016	3/1/2016	BSWCD	NCW	LI	LI	Presentation Nickles Place HOA	Stormwater ed/pet, bird wasteNewsletter	20	100		Complete	MCM 1: Public Education/Outreach(ex. a presentation to an HOA)	HOA Members	Stormwater in general, pet,		x	x							
FLYERS/BROCHURES																								
1/6/2016	1/28/2016	BSWCD	NCW	BC	BC	1000 Stormwater Info Brochures Events/Festivals	Prepare/print brochures		1000		Complete	MCM 1: Public Education/Outreach(ex. a presentation to an HOA, event handouts)	General Public	Stormwater in general	x	x	x	x	x				x	x
4/1/2016	complete	BSWCD	NCW	BC	BC	500 Stormwater Info Brochures Construction	Prepare for Printing, OrderAfter the Storm		500		Complete	MCM1: Public Ed Outreach	General Public	Stormwater in general	x	x	x	x	x				x	x
5/2/2016	6/30/2016	BSWCD	NCW	BC	BC	Hazardous Waste	Revise, design, print flyers		1000		In Process at	MCM1: Public Ed Outreach	General Public	Stormwater in General	x								x	
5/3/2016	6/30/2016	BSWCD	NCW	BC	BC	Water Saving Tips	Revise, design, print flyers		1000		Complete	MCM1: Public Ed Outreach	General Public	Stormwater in General										
5/4/2016	6/30/2016	BSWCD	NCW	BC	BC	Landscaping tips	Design, print flyers		500		Complete	MCM1: Public Ed Outreach	General Public	Stormwater in General				x						
12/1/2015	12/16/2016	BSWCD	NCW	BC	BC	Dog Bone Bag dispensers	Give Away		500		Complete	MCM 1 & 2 Public Ed outreach and Public Participation	General Public	Pet Waste		x								
3/16/2016	3/30/2016	BSWCD	NCW	BC	BC	Constuction Cone	Give Away		200		Complete	MCM1: Public Ed Outreach	General Public	Stormwater in General										
3/16/2016	3/30/2016	BSWCD	NCW	BC	BC	Constuction Hats	Give Away		120		Complete	MCM1: Public Ed Outreach	General Public	Stormwater in General										
3/29/2016	4/10/2016	BSWCD	NCW	BC	BC	Stress Ball Water Drop	Give Away		200		Complete	MCM1: Public Ed Outreach	General Public	Stormwater in General										
3/29/2016	4/10/2016	BSWCD	NCW	BC	BC	Umbrellas	Give Away		50		Complete	MCM1: Public Ed Outreach	General Public	Stormwater in General										
3/29/2016	4/10/2016	BSWCD	NCW	BC	BC	Pencils	Give Away		200		Complete	MCM1: Public Ed Outreach	General Public	Stormwater in General										
3/29/2016	4/10/2016	BSWCD	NCW	BC	BC	Beach Balls	Give Away		100		Complete	MCM1: Public Ed Outreach	General Public	Stormwater in General										
3/29/2016	4/10/2016	BSWCD	NCW	BC	BC	Frisbees	Give Away		100		Complete	MCM1: Public Ed Outreach	General Public	Stormwater in General										
3/29/2016	4/10/2016	BSWCD	NCW	BC	BC	Reusable Water Bottles	Give Away		240		Complete	MCM1: Public Ed Outreach	General Public	Stormwater in General										
5/1/2016	5/30/2016	BSWCD	NCW	BC	BC	Constuction Cone	Give Away		200		Complete	MCM1: Public Ed Outreach	General Public	Stormwater in General										
5/1/2016	5/30/2016	BSWCD	NCW	BC	BC	Constuction Hats	Give Away		180		Complete	MCM1: Public Ed Outreach	General Public	Stormwater in General										
DRAIN MARKING																								
2/29/2016	2/29/2016	BSWCD	BC	BC/COB	Admin	Drain Marking	Drain Marking	47	10		Installed 42	MCM 2: Public Involvement/Participation Drain Marking	General Public	Stormwater in General										
3/5/2016	3/5/2016	BSWCD	TOPR/Village People	TOPR	TOPR	Drain Marking	Drain Marking	57	8	5	Installed 50	MCM 2: Public Involvement/Participation Drain Marking	General Public	Stormwater in general										
3/11/2016	3/11/2016	BSWCD	COB	COB	COB	Drain Marking	Drain Marking	54	25		Installed 50	MCM 2: Public Involvement/Participation Drain Marking	General Public	Stormwater in general										
3/21/2016	3/21/2016	BSWCD	TOHHI	HHI	HHI	Drain Marking	Drain Marking	49	4		Installed 45	MCM 2: Public Involvement/Participation Drain Marking	General Public	Stormwater in General										
4/5/2016	4/5/2016	BSWCD	TOB/Levis Employees	TOB	Bluff Pkwy	Drain Marking	Drain Marking	4	5	2	Installed 65	MCM 2: Public Involvement/Participation Drain Marking	General Public	Stormwater in general										
4/23/2016	4/23/2016	TOB/BSWCD	TOB/ Church	TOB	Historic	Drain Marking/May River Cleanup	Drain Marking	30	350	30	Installed 60	MCM 2: Public Involvement/Participation Drain Marking	General Public	Stormwater in General										
5/1/2016	5/1/2016	TOB	TOB/Levis Employees	TOB	Bluff Pkwy	Drain Marking	Drain Marking	3	10	2	Installed 51	MCM 2: Public Involvement/Participation Drain Marking	General Public	Stormwater in General										
							Total volunteers			39														
ENVIROSCAPE ED PROGRAMS																								
3/1/2016											% Increase													
3/7/2016	3/1/2016	BSWCD	Beaufort Middle	COB/PR	COB	Enviroscape Presentation(8classes)	Education Outreach	108	108		29	MCM1: Public Ed Outreach (classroom program)	K-	Stormwater in General	x	x	x	x	x	x			x	x
3/14/2016	3/7/2016	BSWCD	Shanklin Ele	BC	BC	Enviroscape Presentation(3classes)	Education Outreach	49	49		13	MCM1: Public Ed Outreach (classroom program)	K-	Stormwater in General	x	x	x	x	x	x			x	x
3/15/2016	3/14/2016	BSWCD	Broad River Ele	BC	BC	Enviroscape Presentation(3classes)	Education Outreach	50	50		39	MCM1: Public Ed Outreach (classroom program)	K-	Stormwater in General	x	x	x	x	x	x			x	x
3/15/2016	3/15/2016	BSWCD	Whale Branch Middle	BC	BC	Enviroscape Presentation(5classes)	Education Outreach	87	87		33	MCM1: Public Ed Outreach (classroom program)	K-	Stormwater in General	x	x	x	x	x	x			x	x
3/18/2016	3/16/2016	BSWCD	Ladies Island Middle	COB,BC	COB	Enviroscape Presentation(8classes)	Education Outreach	145	145		33	MCM1: Public Ed Outreach (classroom program)	K-	Stormwater in General	x	x	x	x	x	x			x	x
3/23/2016	3/18/2016	BSWCD	HH Middle	HH	HH	Enviroscape Presentation(12classes)	Education Outreach	295	295		29	MCM1: Public Ed Outreach (classroom program)	K-	Stormwater in General	x	x	x	x	x	x			x	x
4/4/2016	3/24/2016	BSWCD	Bluffton Middle	BL, BC	BL	Enviroscape Presentation(20classes)	Education Outreach	434	434		33	MCM1: Public Ed Outreach (classroom program)	K-	Stormwater in General	x	x	x	x	x	x			x	x
5/3/2016	4/6/2016	BSWCD	HH Prep	HH	HH	Enviroscape Presentation(3classes)	Education Outreach	61	61		50	MCM1: Public Ed Outreach (classroom program)	K-	Stormwater in General	x	x	x	x	x	x			x	x
5/9/2016	5/9/2016	BSWCD	HH Christian	HH	HH	Enviroscape Presentation(2classes)	Education Outreach	34	34		52	MCM1: Public Ed Outreach (classroom program)	K-	Stormwater in General	x	x	x	x	x	x			x	x
5/9/2016	5/9/2016	BSWCD	Lowcountry Montessori	BC	BC	Enviroscape Presentation(2classes)	Education Outreach	36	36		50	MCM1: Public Ed Outreach (classroom program)	K-	Stormwater in General	x	x	x	x	x	x			x	x
	5/9/2016	BSWCD	John Paul II	BC	BC	Enviroscape Presentation(2classes)	Education Outreach	39	39		39	MCM1: Public Ed Outreach (classroom program)	K-	Stormwater in General	x	x	x	x	x	x			x	x
							Total Students & Teachers	1338	1338		Average 36%													
FESTIVALS/EVENTS																								
1/6/2016	1/26/2016	BSWCD	Dataw Island HOA	BC	Dataw Island	Enviroscape, brouchures, event	Stormwater Education Festival Outreach	300	2000			MCM 1: Public Education/Outreach HOA Event	HOA	Stormwater in General	x	x	x	x	x	x			x	x
3/13/2016	3/13/2016	BSWCD	HH Outside Foundation	BC	HHI	Broad Creek Cleanup event	Enviroscape, NPS Outreach, Surveys	105	400			MCM 1 & 2 Public Ed outreach and Public Participation	General Public	Stormwater in General	x	x	x	x	x	x			x	x
3/30/2016	3/30/2016	BSWCD	St. Helena Elem	BC	St Helena Isl	Career Day	Enviroscape & outreach	22	75			MCM1: Public Ed Outreach	General Public	Stormwater in General	x	x	x	x	x	x			x	x
4/2/2016	4/2/2016	BSWCD	Tanger 1/BCSWD	BC	TOB	Touch-A-Truck Event Booth	Enviroscape,related prizes,display	350	350			MCM 1 & 2 Public Ed outreach(public events) and Public Participation	General Public	Stormwater in General	x	x	x	x	x	x			x	x
4/2/2016	4/2/2016	BC	BSWCD Tanger Outlets	BC	Tanger 1,	Touch-A-Truck Event	Trucks, Obstacle course,etc	350	350			MCM 1 & 2 Public Ed outreach(public events) and Public Participation	General Public	Stormwater in General										x
4/8/2016	4/8/2016	BSWCD	Fripp Audubon/BES	TOPR/COB	TOPR	Cypress Wetlands School Program	Walking tour Cypress Wetlands,birds	120	120	20		MCM1: Public Ed Outreach	K-12 Students	Stormwater in General										
4/16/2016	4/16/2016	BSWCD	FOHI/HIState Park	BC	Hunting	Beach Sweep	NPS outreach, displays, giveaways	150	1000	150		MCM 1 & 2 Public Ed outreach(public events) and Public Participation	General Public	Stormwater in General	x	x	x	x	x	x			x	x
4/16/2016	4/16/2016	BSWCD	TOPR/OVA/KBCB	TOPR	TOPR	Crab Festival Event Booth	Enviroscape,Survey,Fish Printing,prizes	525	6000			MCM 1 & 2 Public Ed outreach(public events) and Public Participation	General Public	Stormwater in General	x	x	x	x	x	x			x	x
4/23/2016	4/23/2016	BSWCD	TOB	TOB	Bluffton Park	May River Cleanup Ed Booth	Enviroscape,NPS outreach	55	350			MCM 1 & 2 Public Ed outreach(public events) and Public Participation	General Public	Stormwater in General	x	x	x	x	x	x			x	x
4/23/2016	4/23/2016	ExpGreen	BSWCD, TOB, HHI	TOB	Bluffton Park	Bluffton/HHI Earthday	Enviroscape, NPS outreach, survey w/wheel	125	350			MCM 1 & 2 Public Ed outreach(public events) and Public Participation	General Public	Stormwater in General	x	x	x	x	x	x			x	x
4/23/2016	4/23/2016	BSWCD	TOPR/Farmers Market	TOPR	TOPR	Earth Day at Farmers Market Booths	Enviroscape,NPS outreach	150	400			MCM 1 & 2 Public Ed outreach(public events) and Public Participation	General Public	Stormwater in General	x	x	x	x	x	x			x	x
4/23/2016	4/23/2016	BSWCD	TOPR/Farmers Market	TOPR	TOPR	Earth Day at Farmers Market Booths	Composting demo and ed	150	400	1		MCM 1 & 2 Public Ed outreach(public events) and Public Participation	General Public	Stormwater in General				x						
5/12/2016	5/14/2016	BSWCD	TOPR	BC/TOPR	Water Center	Festival-Birthday for Birds	NPS outreach & surveys	150	500			MCM 1 & 2 Public Ed outreach(public events) and Public Participation	General Public	Stormwater in General	x	x	x	x	x	x			x	x
5/12/2016	5/16/2016	BSWCD	BC Stormwater	BC	LC Mont	Fest. Touch a Truck LC Montessori	Enviroscape & NPS outreach	215	215			MCM 1 Public Ed outreach	K-12 Students	Stormwater in General	x	x	x	x	x	x			x	x
5/12/2016	5/16/2016	BSWCD	BC Stormwater	BC	LC Mont	Fest. Touch a Truck LC Montessori	Explore trucks and equipment	215	215			MCM 2 Public Participation	K-12 Students	Stormwater in General										x
6/25/2016	6/26/2016	BSWCD	PRSF	BC	PRSF Center	World Oceans Day Event	Enviroscape,Survey,Fish Printing,prizes	100	200			MCM 1 & 2 Public Ed outreach and Public Participation	General Public	Stormwater in General	x	x	x	x	x	x			x	x
							Total volunteers			171														
LITTER CLEANUPS																								
3/13/2016	3/13/2016	BSWCD	HH Outside Foundation	BC	HHI	Broad Creek Cleanup event	Kayak Cleanup NPS Outreach, Surveys	66	400	66	300+ lbs	MCM 1 & 2 Public Ed outreach(public events) and Public Participation	Kayak group	Stormwater in general			x							
4/23/2016	4/23/2016	TOB	TOB/BSWCD	TOB	Oyster	May River Cleanup	Cleanup streets, Rivers, parks	300	5000	300	1720 lbs,	MCM 1 & 2 Public Ed outreach(public events) and Public Participation	General Public	Stormwater in General			x							
4/16/2016	4/16/2016	BSWCD	FOHI/HIState Park	BC	Hunting	Beach Sweep	Beach cleanup & NPS outreach	150	1000	150	25 lbs trash	MCM 1 & 2 Public Ed outreach(public events) and Public Participation	General Public	Stormwater in General, debris			x							
							Total volunteers			516														
Meetings																								
2/16/2016	2/16/2016	BSWCD	T4B Coalition	BC	BC	T4B Water Quality Coalition	Collaboration of Water Quality Professionals	9	50			MCM 1 Public Ed outreach	Professionals	Stormwater in General										
5/17/2016	5/17/2016	BSWCD	T4B Coalition	BC	BC	T4B Water Quality Coalition	Collaboration of Water Quality Professionals	12	50			MCM 1 Public Ed outreach	Professionals	Stormwater in General										
1/14/2016	1/14/2016	BSWCD	USDA-NRCS, DNR	BC	BC	BSWCD Board	Monthly Board of Commissioners	8	15			MCM 1 Public Ed outreach	Professionals &	Stormwater in General										
2/11/2016	2/11/2016	BSWCD	USDA-NRCS, DNR	BC	BC	BSWCD Board	Monthly Board of Commissioners	9	15			MCM 1 Public Ed outreach	Professionals &	Stormwater in General										
3/10/2016	3/10/2016	BSWCD	USDA-NRCS, DNR	BC	BC	BSWCD Board	Monthly Board of Commissioners	8	15			MCM 1 Public Ed outreach	Professionals &	Stormwater in General										
4/14/2016	4/14/2016	BSWCD	USDA-NRCS, DNR	BC	BC	BSWCD Board	Monthly Board of Commissioners	8	15			MCM 1 Public Ed outreach	Professionals &	Stormwater in General										
5/12/2016	5/12/2016	BSWCD	USDA-NRCS, DNR	BC	BC	BSWCD Board	Monthly Board of Commissioners	10	15			MCM 1 Public Ed outreach	Professionals &	Stormwater in General										
6/9/2016	6/9/2016	BSWCD	USDA-NRCS, DNR	BC	BC	BSWCD Board	Monthly Board of Commissioners	8	15			MCM 1 Public Ed outreach	Professionals &	Stormwater in General										

Start Date:	End Date	Lead service Provider(s):	Additional Service Provider(s):	Geographic Target

Abbreviation Guide	
BC	Beaufort County
BSWCD	Beaufort Soil & Water Conservation District
COB	City of Beaufort
HHI	Hilton Head Island
JC	Jasper County
LI	Ladies Island
NCW	Neighbors for Clean Water
TPR	Town of Port Royal
TOB	Town of Bluffton
TOHH	Town of Hilton Head
SWIC	Stormwater Implemenation Committee

Neighbors for Clean Water Stormwater Awareness Survey

Stormwater Survey Educational Program

Please respond to this survey if you live within Beaufort County, South Carolina limits. This survey ends July 1, 2016.

Thank you for taking the time to fill out this brief survey. There are 15 questions and your opinion will greatly assist your local area within Beaufort County, Bluffton, City of Beaufort, Hilton Head Island and Port Royal to create and implement the Stormwater Management outreach program. Listed below is background information before you begin the survey:

1. When it rains, stormwater naturally drains into the soil unless there is an impervious surface such as: rooftops, driveways, patios, parking lots, etc. These impervious surfaces can increase the likelihood of stormwater carrying pollutants to your waterways.

2. These pollutants could possibly affect water quality, limit recreational uses of water bodies and affect human health.

3. Wetlands, marshes, swamps and forests are examples of natural systems that help filter pollutants from stormwater.

4. This survey will assist in determining the future stormwater needs and concerns of our community.

1. Which area of Beaufort County do you live in?

- ◯ Port Royal
- ◯ City of Beaufort
- ◯ Unincorporated Beaufort County
- ◯ Hilton Head Island
- ◯ Bluffton
- ◯ None of the Above

2. What type of community do you live in?

- ◯ Apartment/Condo Complex
- ◯ Home / Mobile Home
- ◯ Gated Community
- ◯ Subdivision
- ◯ Rural Area
- ◯ Other (please specify)

3. Which are you most concerned about in your community?

- ◯ Water Quantity (flooding)
- ◯ Water Quality (pollutants)
- ◯ Both
- ◯ Neither
- ◯ Other (please specify)

4. Where do you think stormwater runoff goes after it enters the storm drain? (Select all that apply).

- ◯ Sewage treatment plant
- ◯ Nearby rivers, streams and waterways
- ◯ Nearby yards and fields
- ◯ Other (please specify)

5. Do you feel any of the following causes or contributes to stormwater pollution? (Select all that apply).

- ◯ Agriculture operations
- ◯ Septic Tanks
- ◯ Residential development
- ◯ Commercial development
- ◯ Industrial activities
- ◯ Construction runoff
- ◯ Feeding the wildlife
- ◯ Boating
- ◯ Golf Courses
- ◯ Landscape Fertilizers
- ◯ Stormwater Ponds
- ◯ Lack of Forested areas
- ◯ Lack of vegetated buffers around waterways
- ◯ All of the above.
- ◯ None of the above
- ◯ Other (please specify)

6. Please select the top three items that you believe can affect your waterways?

- ◯ Pet Waste
- ◯ Septic Tanks
- ◯ Fertilizers
- ◯ Trash/Liter/Illegal Dumping
- ◯ Car Washing (soap and wax)
- ◯ Oil, Solvents
- ◯ Water Temperature
- ◯ Freshwater runoff
- ◯ Restaurant waste (oil, trash, grease)
- ◯ Leaves, grass clippings
- ◯ Other (please specify)

7. How do you dispose of unwanted paint, oil?

- ◯ Pour down the sink?
- ◯ Dispose of in the toliet?
- ◯ Pour down the storm drain?
- ◯ Place in the household trash pick up?
- ◯ Deliver to the County Convenience drop off center?
- ◯ County Wide Great American Clean up?
- ◯ All of the above?
- ◯ None of the above?
- ◯ Other (please specify)

8. Do you think pet waste left on the ground causes pollution in any of these areas? (Select all that apply).

- ◯ Waterways
- ◯ Potable water supply
- ◯ Groundwater
- ◯ Oyster beds
- ◯ All of the above
- ◯ None of the above
- ◯ Other (please specify)

9. What time of year do you fertilize your lawn? (Select all that apply).

- ◯ Winter
- ◯ Spring
- ◯ Summer
- ◯ Fall
- ◯ All of the above

Other (please specify)

10. Do you practice any of the following water conservation methods? (Select all that apply).

- ◯ Have a rain barrel attached to downspout?
- ◯ Have a low flow showerhead?
- ◯ Have installed a rain garden?
- ◯ Have installed pervious pavement?
- ◯ Irrigate with reclaimed water?
- ◯ All of the above?
- ◯ None of the above?
- ◯ Other (please specify)

11. In the past 12 months have you seen advertising about protecting your waterways from pollutants?

- ◯ Yes
- ◯ No

12. If so, where have you seen advertising information? (Select all that apply)

- ◯ TV
- ◯ Internet
- ◯ Newspaper
- ◯ Radio
- ◯ Church/Social Club
- ◯ Festival
- ◯ Schools
- ◯ Work
- ◯ POA Newsletter
- ◯ Library
- ◯ Business Organization
- ◯ Neighbors For Clean Water
- ◯ Social Media (Facebook)
- ◯ All of the above
- ◯ None of the above
- ◯ Other (please specify)

13. How did you hear about this survey? (Select all that apply).

- ◯ TV
- ◯ Internet
- ◯ Radio
- ◯ Newspaper
- ◯ Church/Social Club
- ◯ Festival
- ◯ Business Organization
- ◯ School
- ◯ POA Newsletter
- ◯ Library
- ◯ Work
- ◯ Neighbors for Clean Water
- ◯ Social Media (Facebook)
- ◯ All of the above
- ◯ None of the above
- ◯ Other (please specify)

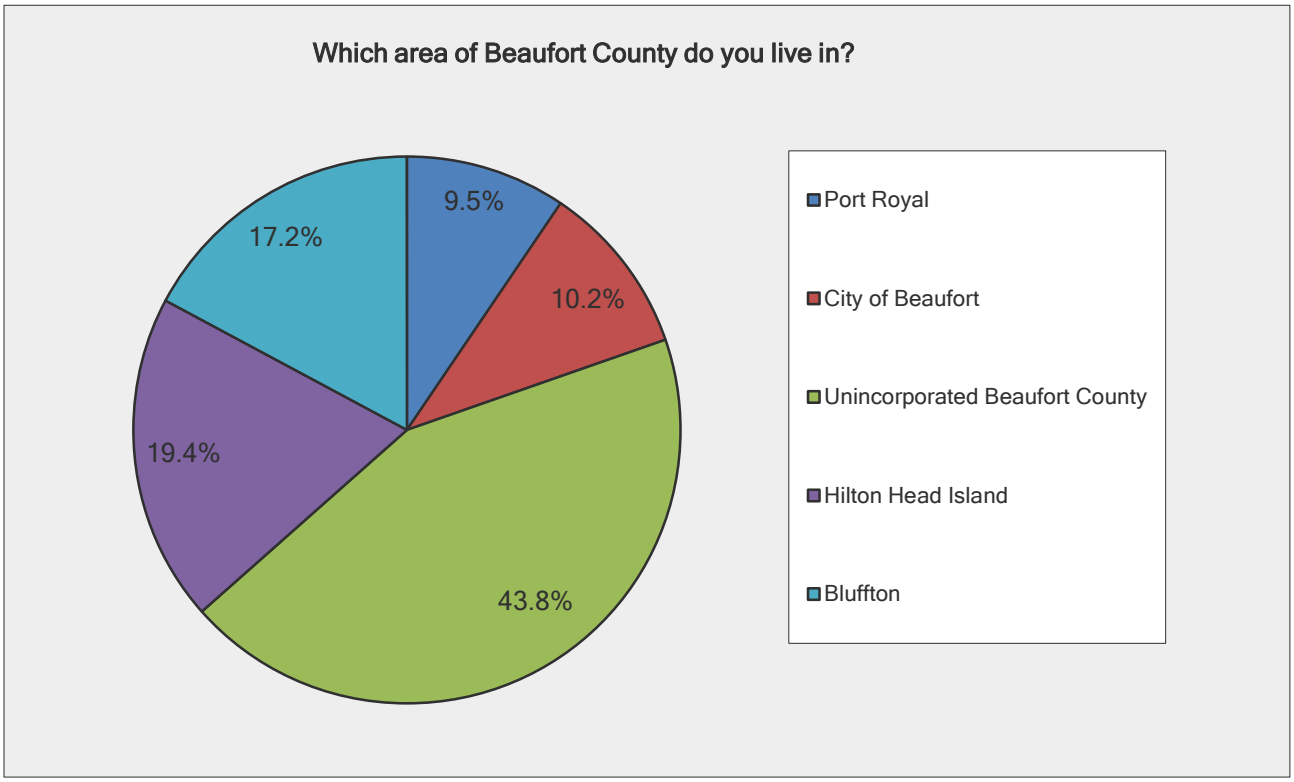
14. Where are you and your family most likely to learn about water quality and stormwater runoff? (Select all that apply).

- ◯ School
- ◯ Work
- ◯ Church/Social Club
- ◯ Radio
- ◯ Newspaper
- ◯ TV
- ◯ Internet
- ◯ Radio
- ◯ POA newsletter
- ◯ Festivals
- ◯ Business organization
- ◯ Social Media (Facebook)
- ◯ All of the above
- ◯ Non of the above
- ◯ Other (please specify)

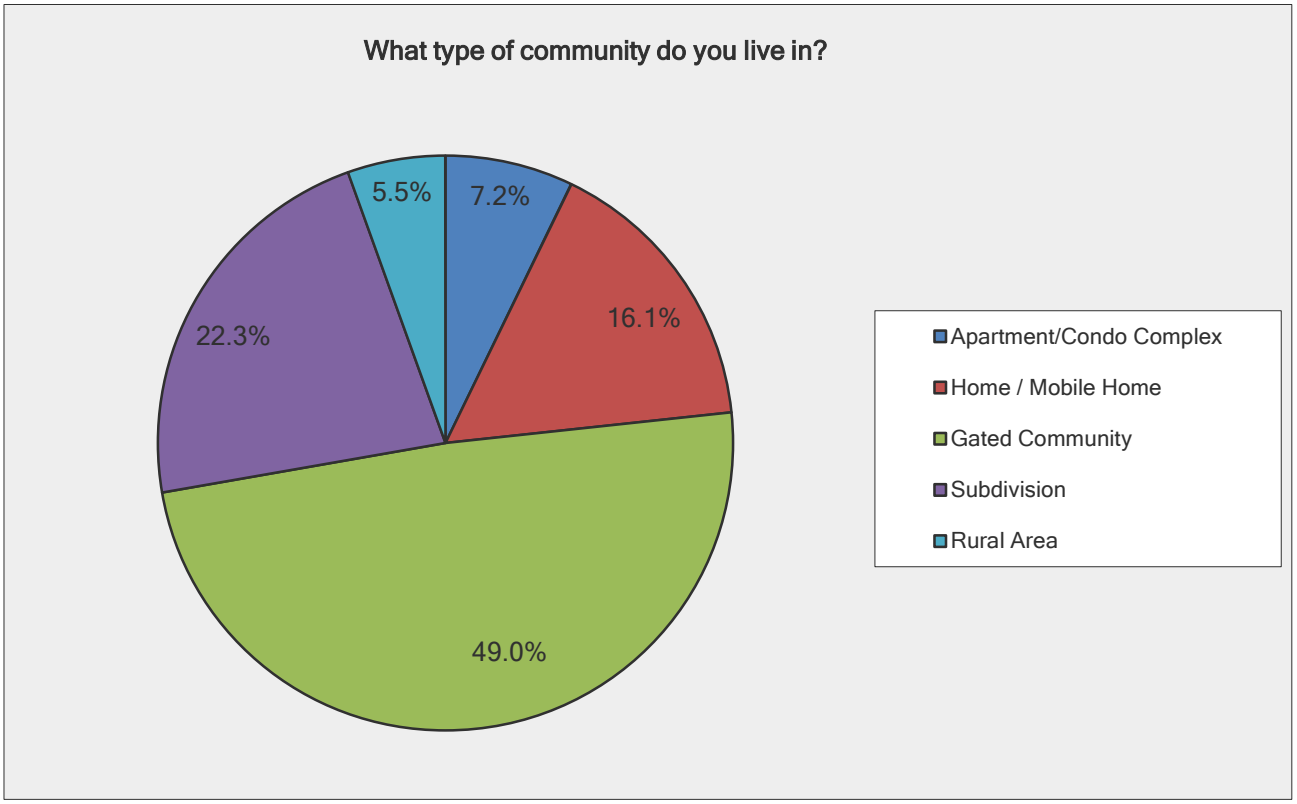
15. Who do you feel needs stormwater education in your area? (Select all that apply).

- ◯ Schools
- ◯ Golf Courses
- ◯ HOA's / POA's
- ◯ Landscape Companies
- ◯ Construction Companies
- ◯ Septic Tank Owners
- ◯ Pet Owners
- ◯ Other (please specify)

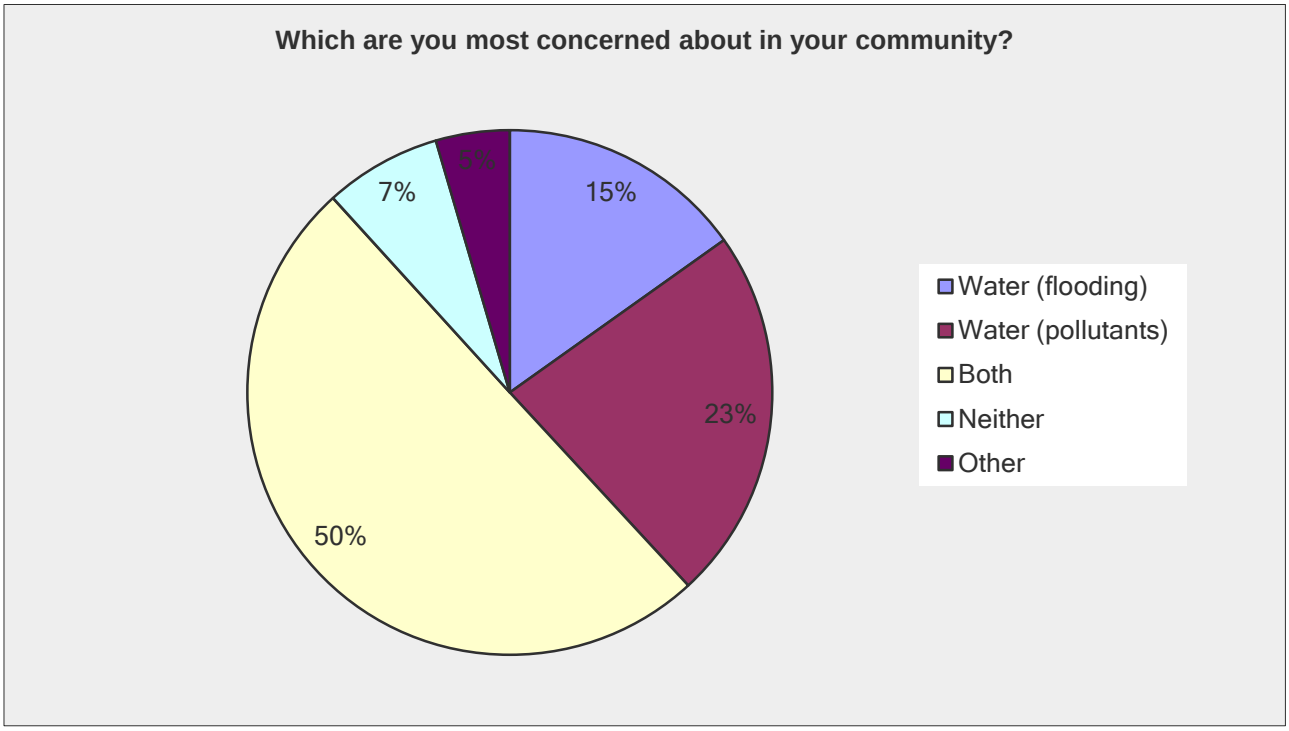
Which area of Beaufort County do you live in?				
Answer Options	**Response Percent**	**Internet Count**	**Paper Count**	**Total Count**
Port Royal	9.5%	51	17	68
City of Beaufort	10.2%	64	9	73
Unincorporated Beaufort County	43.8%	288	26	314
Hilton Head Island	19.4%	139	0	139
Bluffton	17.2%	115	8	123
TOTAL	**100.0%**	**657**	**60**	**717**



What type of community do you live in?				
Answer Options	**Response Percent**	**Internet Count**	**Paper Count**	**Total Count**
Apartment/Condo Complex	7.2%	48	7	55
Home / Mobile Home	16.1%	90	33	123
Gated Community	49.0%	362	12	374
Subdivision	22.3%	161	9	170
Rural Area	5.5%	37	5	42
TOTAL	**100.0%**	**698**	**66**	**764**



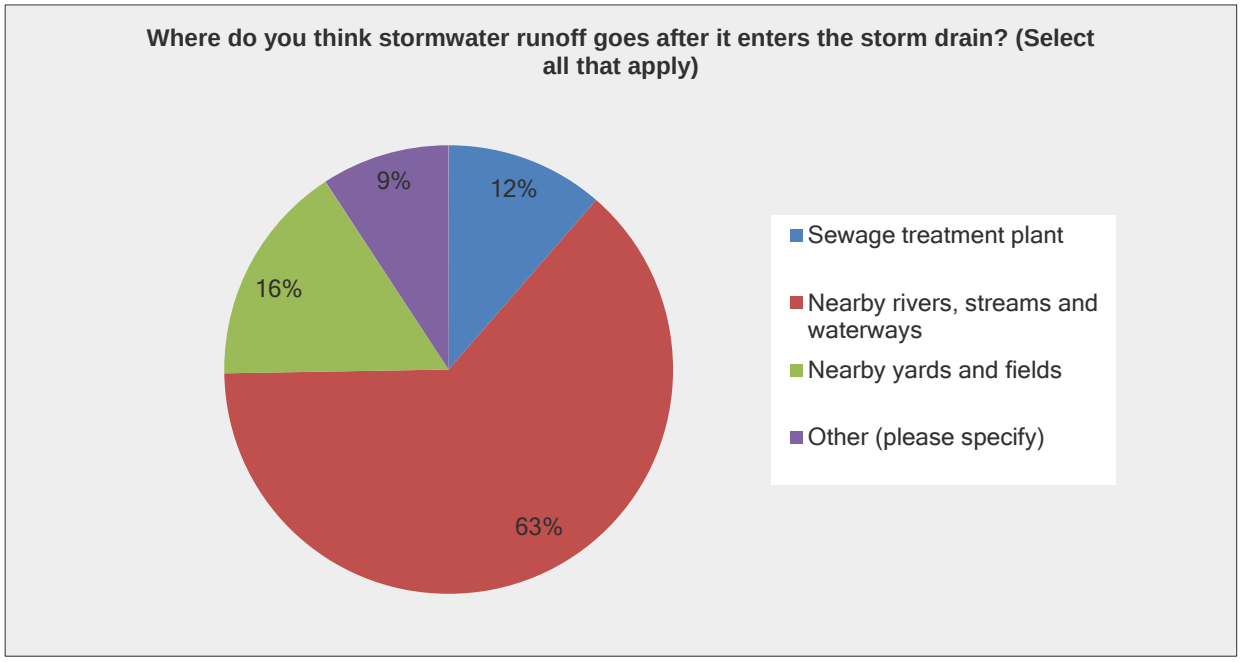
Which are you most concerned about in your community?				
Answer Options	**Response Percent**	**Internet Count**	**Paper Count**	**Total Count**
Water (flooding)	15.2%	109	11	120
Water (pollutants)	23.0%	163	19	182
Both	50.1%	367	30	397
Neither	7.2%	52	5	57
Other	4.5%	32	4	36
TOTAL	**100.0%**	**723**	**69**	**792**



Ponds overflow
Ponds being used for construction dumping and pumping
Crime
Break ins
Over development
The sewer system can't accommodate the quantity of water or drains are placed where water runs past and we flood often
Lack of proper drainage in ditches in our community which causes health problesm and flooding
wasteful use of water e.g. watering lawns
No sewers on my block...old.septic.tanks
With the massive amount of development the storm water issue is the single most important issue facing our estuaries
Poor water quality is an increased concern. Flooding has become a recent problem not normal in the past 30 yrs.
Jenkins Creek pollution
Water Pressure
Overflowing stormwater ditches

POA constructed ditches that are lower than the outflow and become holding ponds and mosquito breeding grounds.
Sewer spills during storms
development
I've never thought about it
There is a strange feral cat that has been killing mice and leaving them at random front doors. Is it a gift or a threat?
Community pond maintenance as many of these are part of this areas storm water system.
good drainage system using lakes
Global warming, sea level rise
Cost of water.
black crud in the toilet and sink
excessive use of water for lawns
The original ditches are grown with trees
taxes for useless government departments
Lack of drainage
Dog/Cat owners that don't pick up after their pets.
Lack of sanitary sewer availability.
(Over) Watering lawns

Where do you think stormwater runoff goes after it enters the storm drain? (Select all that apply)				
Answer Options	**Response Percent**	**Internet Count**	**Paper Count**	**Total Count**
Sewage treatment plant	11.4%	102	14	116
Nearby rivers, streams and waterways	63.3%	594	50	644
Nearby yards and fields	16.0%	140	23	163
Other (please specify)	9.2%	91	3	94
TOTAL	**100.0%**	**927**	**90**	**1017**



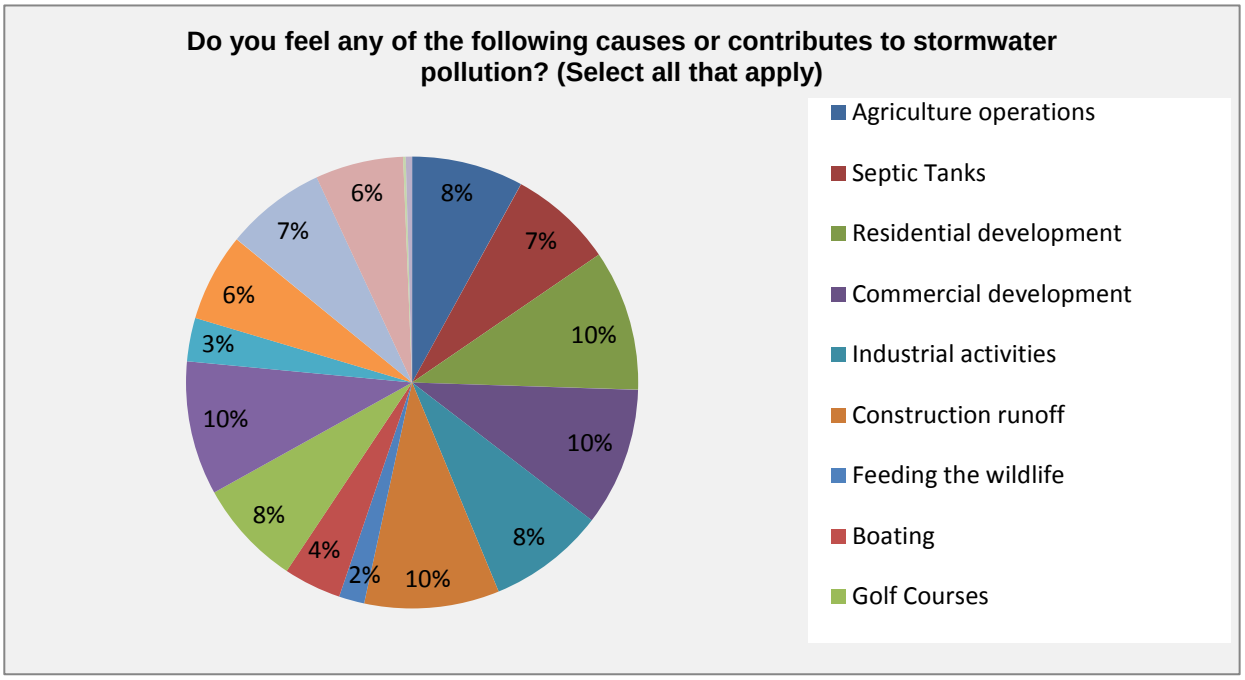
man made ponds
Don't know
Lagoons
lagoons then rivers
Ground absortion
Retention ponds first but can over flow into waterways
Ocean
Don't know.

Most of the yards and some roads on Janette Drive, McTeer, Sea Pines, Ball Park, Seaside, Buchanan, Club Bridge, ...
Ponds on Dataw Island
Our runoff goes no where. It stays in yards and ditches because the ditches are insufficient.
Collection ponds
lagoons
Collection ponds
community pond system -- Dataw
Our community has a system that collects water runoff and puts it into ponds for use in irrigation.
Island ponds
retention ponds, underground retention tanks, etc.
We don't have storm drains. The ditches are full, driveways and yards are flooded.
Retention ponds
retention ponds
containment ponds and then the river
the ocean
Heaven only knows..... Pulte designed the system....
Lagoons
ponds

Retention/Detention ponds
retention ponds
BMP's
The deep, steep "V" drainage ditches that the county digs.
Community holding ponds then to Colleton River
retention ponds
We do not have any storm drains on our part of Ladys Islans.
Since we have no storm drains, and my neighbors have closed up their ditches, much of the runoff comes into my ditches, which are still functional. At one time, they drained into a retention pond.
Where I live has no storm drains.
Ponds and lagoons
At Dataw, it goes to holding ponds on golf course to be used on the course. It cannot go into the marsh until it settles in ponds
retension ponds
The Ocean--so important it must be specified it's more than "nearby rivers, streams & waterways"
wetlands
the water table that we eventually drink, in our case the upper Floridian Aquifer
My understanding was that there is an underground waterpark that only elite Beaufort County is privy to.
The pond next to me & then overflow into Bft river thru the marsh
Ponds
Holding Ponds, excess to streams
Goes to Dataw ponds first
community ponds
Ponds
Retaining ponds
community ponds
Our ponds
community ponds for filtration
Ponds on golf course
Ponds
Ponds
ponds on the island
Irrigation oPonds
run-off is controlled into ponds on Dataw
Golf ponds
ponds within gated community
Golf course ponds
retention ponds
in our community it goes into our ponds
ponds and irrigation
Ponds
Community lakes and ponds for filtering first
Ponds in our community
Ponds,
Into island ponds
irrigation system lagoons
I don't think, I know. To retention ponds which, after treatment, overflow to local marshes and streams
man made ponds
Ponds on the Island
Retention ponds until full, then nearby waterways
our ponds
Our lakes.
Freshwater Ponds in the community
Golf lagoons
drainage ponds
wetlands & nature preserve
stormwater does not migrate from the seldom-maintained stormwater ditch
On-site septic systems
Retention ponds
We have stormwater retention ponds that hold the water and then gradually release to the marsh, and then

waterways
On my personal property, create wet land
Retention ponds throughout the community in which I live.
When it rains my parking lot looks like Lake Hilton head
don't know for sure
Ponds on golf courses
Lagoons, ponds

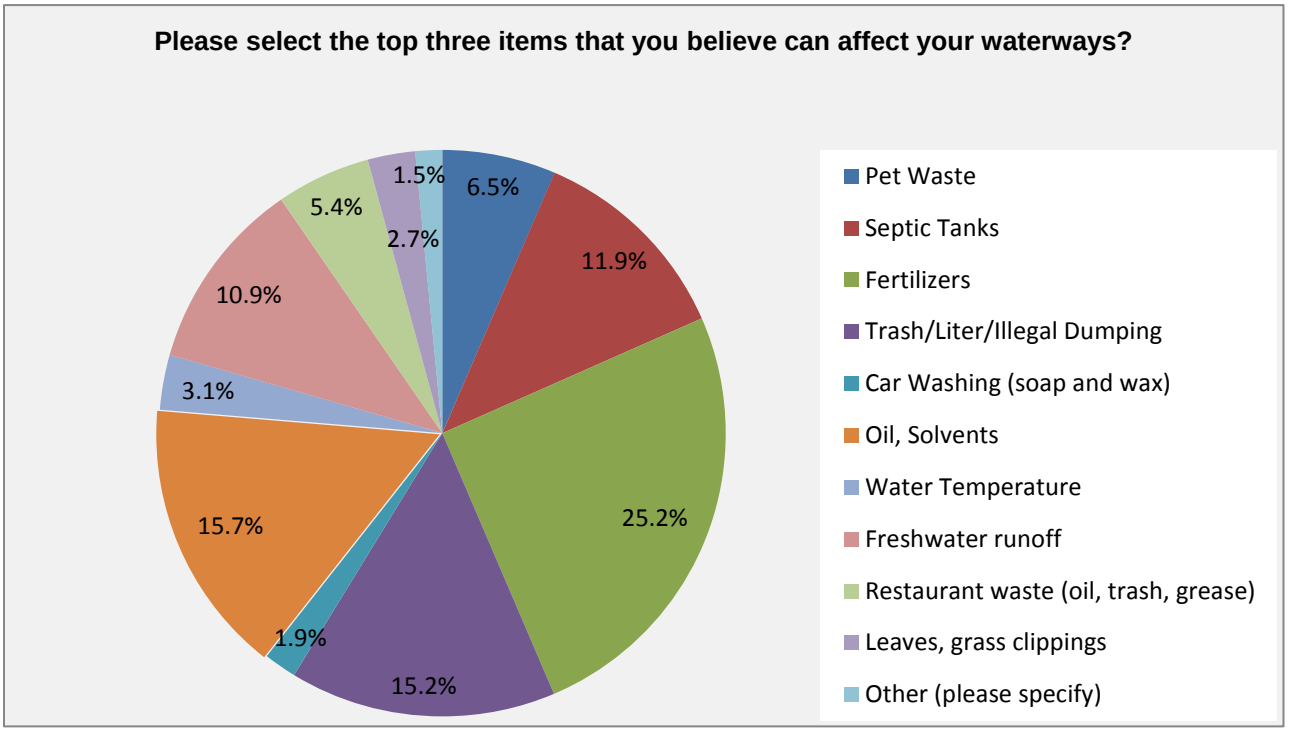
Do you feel any of the following causes or contributes to stormwater pollution? (Select all that apply)				
Answer Options	**Response Percent**	**Internet Count**	**Paper Count**	**Total Count**
Agriculture operations	8.0%	344	29	373
Septic Tanks	7.5%	322	26	348
Residential development	10.1%	438	32	470
Commercial development	9.9%	427	35	462
Industrial activities	8.3%	359	30	389
Construction runoff	9.7%	418	33	451
Feeding the wildlife	1.8%	83	2	85
Boating	4.1%	181	11	192
Golf Courses	7.6%	334	20	354
Landscape Fertilizers	9.6%	447	0	447
Stormwater Ponds	3.1%	136	9	145
Lack of Forested areas	6.3%	276	18	294
Lack of vegetated buffers around waterways	7.2%	316	19	335
All of the above	6.3%	264	29	293
None of the above	0.2%	9	0	9
Other (please specify)	0.4%	21	0	21
TOTAL	**100.0%**	**4375**	**293**	**4668**



cars (dripped oil, gas, etc)
not really sure, just guessing
Poor drainage allowance during development over40 years ago
Fungus on the way tomatoes are planted
government roadways
na
older storm drains not directed to rain gardens and/or retention ponds

golf course use of chemicals & cutting buffers right to the waterways leaving NO buffers at all & fertilizing like crazy!, HUGE problem is no riparian/vegetated buffers in POA/no enforcement of ordinances by County for buffers, no enforcement of tree ordinances in POA, too many lawns & their maintenance
County stormwater management.
Pets
Olestra, the stuff that was in chips in the 90's to make them lower in fat.
Walmart being built in a wetland area
Is this question re our community or in general?
The new Walmart on Ladys' Island
Poorly maintained storm sewers / ditches and retention ponds
Road are obviously the biggest surface area for runoff. How in the world have you not listed roads?
Pet feces
The S.C. Highway dept inadaquet piping
Lack of proper drainage
roadways, bikepaths, driveways and rooftops
Animal waste (Dog/Cat)

Please select the top three items that you believe can affect your waterways?				
Answer Options	**Response Percent**	**Internet Count**	**Paper Count**	**Total Count**
Pet Waste	6.5%	139	18	157
Septic Tanks	11.9%	268	20	288
Fertilizers	25.2%	561	50	611
Trash/Liter/Illegal Dumping	15.2%	334	34	368
Car Washing (soap and wax)	1.9%	40	5	45
Oil, Solvents	15.7%	342	39	381
Water Temperature	3.1%	66	10	76
Freshwater runoff	10.9%	246	19	265
Restaurant waste (oil, trash, grease)	5.4%	106	24	130
Leaves, grass clippings	2.7%	61	5	66
Other (please specify)	1.5%	33	4	37
TOTAL	**100.0%**	**2196**	**228**	**2424**



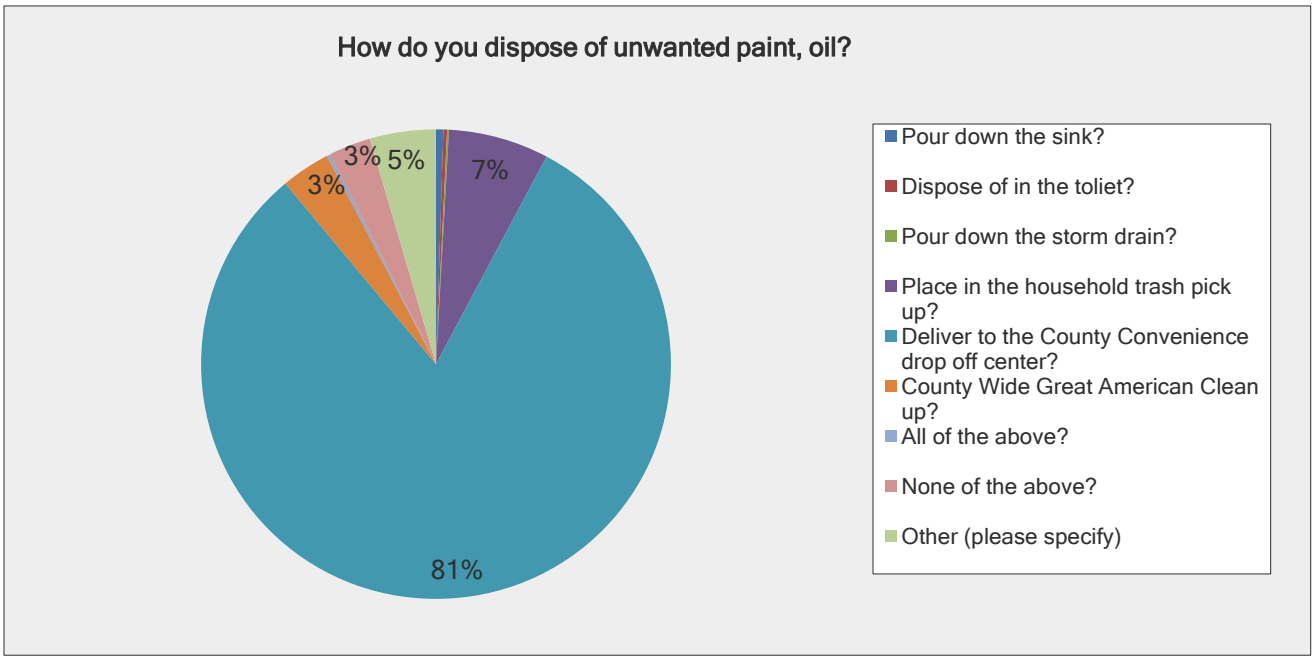
Clean ditches out
all of the above
Rooftop drains being clogged
The way crops are planted by big farmers for the money
government roadways
All of the above
over development, which we are way past already
Fill dirt, branches & debris in stormwater ditches.
pesticides
commercial farm operations with mega animal waste
pesticides & herbicides

improper dumping
Water washing all of the above into waterways
spraying of chemicals to kill vegetation along the roads
lack of buffers, removal of trees
pavement
all of the above
development

For people who claim to love living on the water, I'm disgusted at the amount of roadside litter and trash I see. Crap flies out of garbage trucks and off landscape trucks and gets mowed into a million pieces. Makes me want to vomit--plus it makes Beaufort County look really shitty. Sorry but it does.
horses
Lack of Forested areas due to commercial construction in port royal - Richmond ave
vehicle discharge on roadways and parking lots

pharmaceuticals that are not broken down in waste treatment. pavement that prevents rain water from entering the soil. destroying soil topsoil which is the most efficient way to degrade toxins. storm water ponds are essentially useless because they hold toxic runoff and don't break down dangerous chemicals or bacterias. septic tanks are very efficient if properly designed and maintained.
pesticides
Industrial activity.
wildlife manure due to constricted habitat
Golf course psestisides
Paved roads and parking lots
commercial parking lot runoff
Utility companies spraying roadside foliage for miles and miles
silt from the dirt streets, yards without erosion control and dirt parking areas
roadways
wildlife

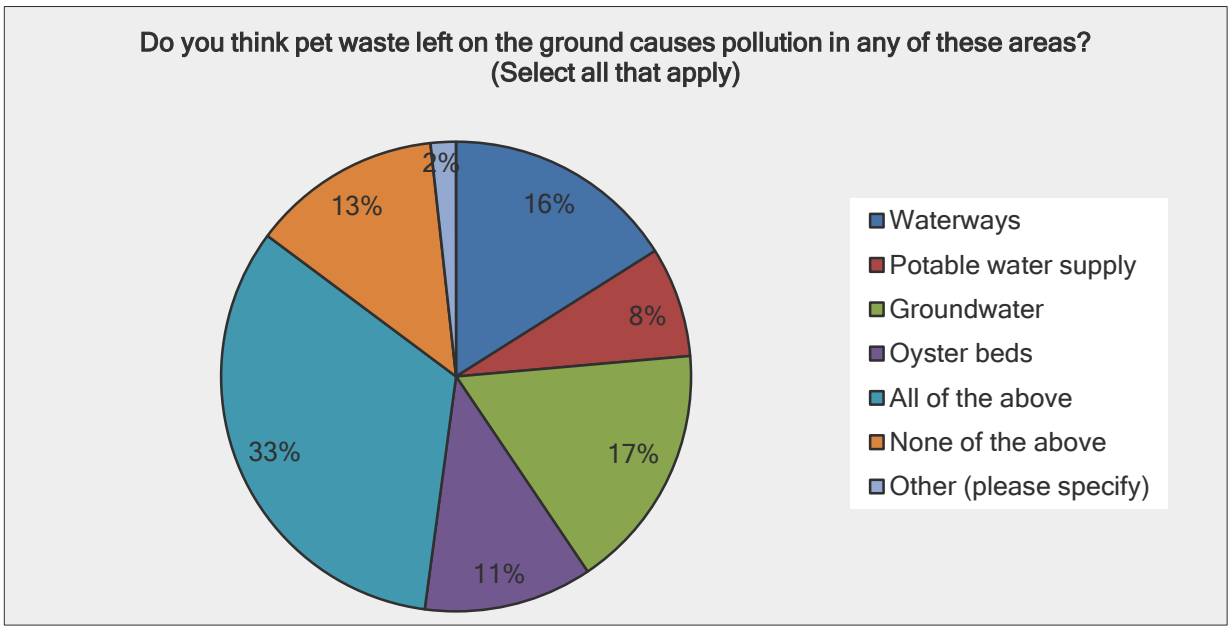
How do you dispose of unwanted paint, oil?				
Answer Options	**Response Percent**	**Internet Count**	**Paper Count**	**Total Count**
Pour down the sink?	0.5%	2	2	4
Dispose of in the toliet?	0.3%	2	0	2
Pour down the storm drain?	0.1%	1	0	1
Place in the household trash pick up?	6.9%	47	8	55
Deliver to the County Convenience drop off center?	81.1%	597	48	645
County Wide Great American Clean up?	3.4%	22	5	27
All of the above?	0.3%	0	2	2
None of the above?	2.9%	19	4	23
Other (please specify)	4.5%	34	2	36
TOTAL	**100.0%**	**724**	**71**	**795**



Freeze oil
No comment.
I don't have any
Clean up in sink. Dry out cans, then throw in trash.
Use it up
Recycle oil at auto parts store
Let dry in can then trash pickup
So far have not had unwanted paint or oil
city dump area labeled paint
Store at home until hazardous waste pick up
leave at our dump
In the trash after adding kitty litter
Wait for hazardous waste drop off through county

paint-dry out then trash/oil-recycle via seller
County hazardous waste disposal
N/A
We haven't had any to dispose of.
fill with sand, take to centers on amnesty days
purchase solidifier and place in trash
Paint cans I will let dry out & then in recycling
Not sure of proper procedure here as we recently moved from VA
I take it to walmart. they will accept used oil etc..
Let dry out in can and throw away.
Burn it
You don't drink it?
county has pick up at the convenience centers about once a year
Let dry and deliver to county drop off
Habitat for Humanity takes paint
Haven't done it yet
have kept the cans so far, will dispose properly
Mix it with sawdust, let dry completely and dispose of normally
Don't know
If we paint, we have a painter
Arrow rd recycle

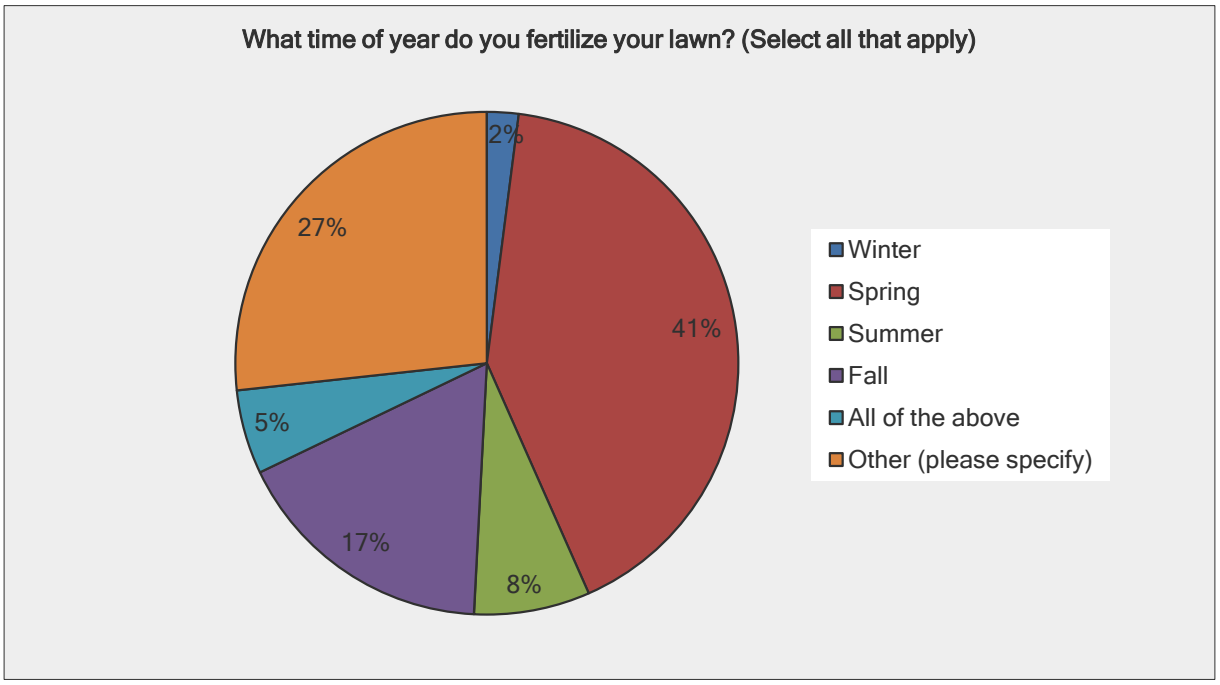
Do you think pet waste left on the ground causes pollution in any of these areas? (Select all that a				
Answer Options	**Response Percent**	**Internet Count**	**Paper Count**	**Total Count**
Waterways	16.0%	181	12	193
Potable water supply	7.6%	86	5	91
Groundwater	17.0%	194	10	204
Oyster beds	11.6%	131	8	139
All of the above	33.1%	359	39	398
None of the above	13.1%	146	11	157
Other (please specify)	1.7%	20	1	21
TOTAL	**100.0%**	**1117**	**86**	**1203**



Not sure
No comment
It could but is negligible compared to other pollutiants
don't know
waterways to an extent. I believe too much blame is laid on pets and not development
not a huge problem but it does have some affect
Never thought about it. I don't have outdoor pets.
Don't know
Depends on location/ yard, insignificant, by waterways signifi
very little vrs. large wildlife population.
We pick up after our pet.....need waste bag stations.....
Septic tanks are a much larger problem than pet waste!
I know that pet waste has ruined a few pairs of my shoes(and days).
not any more than bird or fish poop
Should be no more or less harmful than wildlife waste.
Pet waste is no different than deer or other animal waste.

Don't know
Do the math, so minor you are stupid to ask! What about deer, racoon's, birds, etc.
No idea what it does.
Not sure because we don't clean up your shit or coyote shit and or the many species of bird shit

What time of year do you fertilize your lawn? (Select all that apply)				
Answer Options	**Response Percent**	**Internet Count**	**Paper Count**	**Total Count**
Winter	2.0%	20	0	20
Spring	41.3%	379	26	405
Summer	7.4%	70	3	73
Fall	17.0%	157	10	167
All of the above	5.4%	48	5	53
Other (please specify)	26.7%	232	30	262
TOTAL	**100.0%**	**906**	**74**	**980**



Never
None
Don't the Greenery does
No lawn
Condo
don't
I have a villa, I don't fertilize.
provide by Regime. Don't know when it is done.
na
Do Not Fertilize
do not have a lawn
Condo?
I dont
never
None. No lawn.
I don't know, but we do fertilize our lawn
condo association
i dont fertilize
Don't think we do??
do not fertilize

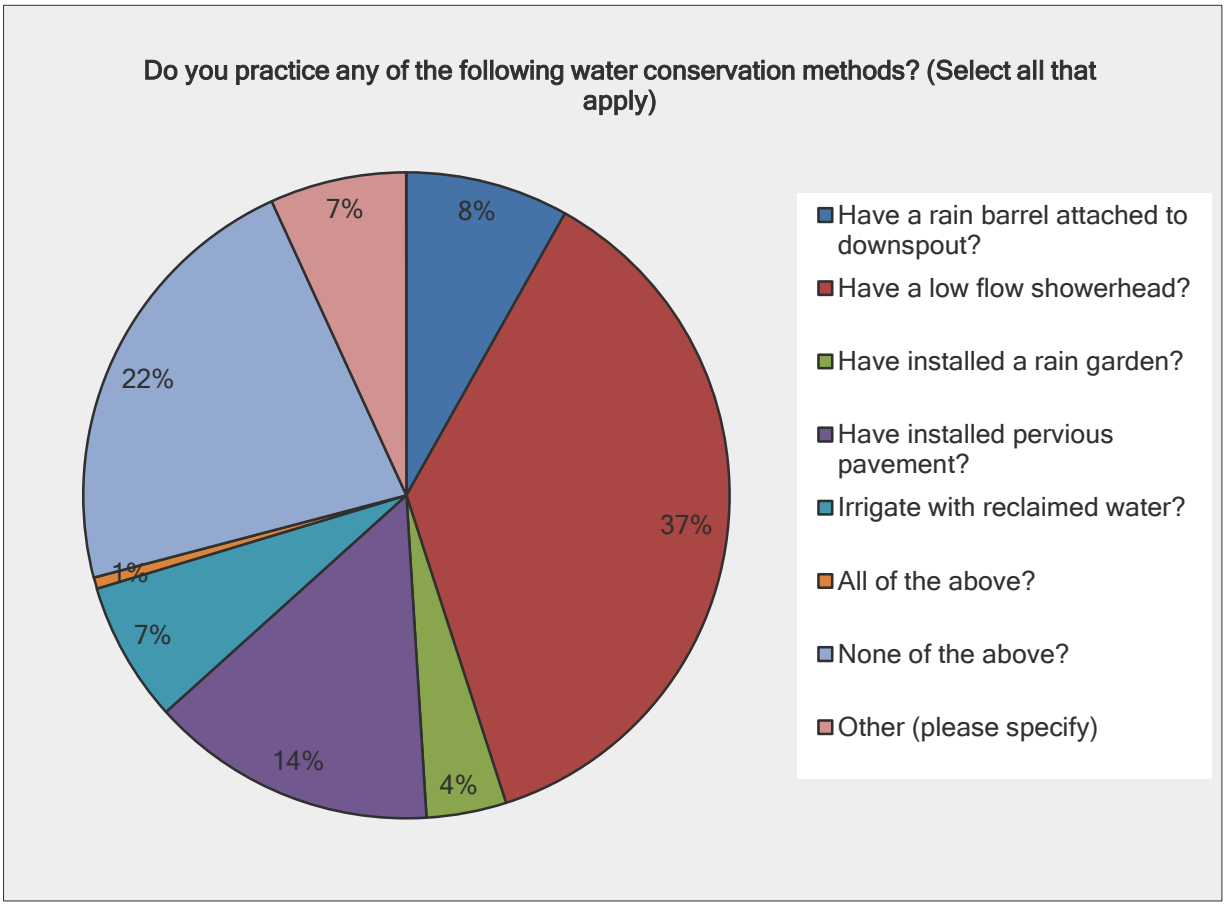
no lawn at Ocean Walk
Dont know done by regime
never
Live in Condo, not aware as to their schedule
Don't
Burning
Never
I don't
n/a
No lawn
I don't
We don't.
Don't have a lawn.
don't
Never
No lawn; no fertilizer
I don't fertilize.
I don't fertilize.
No lawn to fertilize
we do not fertilize
N/A
not fertilized
Don't fertilize
I do not
no lawn, no fertilizer
Never
Never
We do not use fertilizer of any kind
No grass
Never
I don't fertilize my lawn
never
I don't use fertilizer
don't fertilize
I don't. Lawns suck
do not fertilize
i dont have a lawn
don't fertilize
we let the geese do the fertilizing
i dont
fertilizer not used on my lawn or garden
Don't
i dont
We do not have lawn, but a naturalwoodland area.
Do not do it
NA
don't have lawn
n/a
Seldom use fertilizer on "lawn".
dont
I don't have a lawn.
I try not to use fertilizer.
I don't fertilize.
Never
I don't fertilize ,but landscapers hired by association fertilize once in spring and once in fall

Don't fertilize lawn.
I have a 50 foot vegetative buffer on the river and use no fertlizer or pesticides
I do not fertilize my lawn
NEVER.
unsure
We dont
No grass
Do not fertilize
We do not fertile the lawn...but do fertilize some roses.
Do not use lawn fertilizer
as needed
don't have a lawn
none, I seldom fertilize my yard
I do not have a lawn because of its high chemical maintenance
Don't fertilize... country grown grass...
I don't fertilize my lawn
no lawn fertilizer
Do not fertilize.
never
As needed
Don't fertilize...we have no lawn
never
Never
Do NOT use fertilizer, do not have a lawn!
Never; don't have a lawn.
I don't fertilize.
do not fertilize our lawn
we don't
we don't believe in having a lawn
Never
I don't fertilize to the dismay of the HOA.
Never
none
never
Never
I don't fertilize my lawn.
Do not fertilize the yard.
N/A
Do not fertilize
None
No lawn. Fertilize shrubs etc in spring and early summer
don't have a lawn
I donot fertilize.
None
You
do not
we don't - inorder to keep poison out of the lagoon behind us
None
Never
I don't have a lawn. I live in an apartment conplex
I don't
never
We don't
None - lawn handled by commercial service
None

I don't fertilize my lawn
never. i rent and i could care less if i have grass or not!!!
I don't.
Don't
Do not
never
Unkown
N/A
I have no lawn, only native shrubs.
never, we don't have any lawn
None
None
None
I don't but others do all year
We don't
Have never fertilized lawn
None
NEVER, I have a very green low maintenance yard w/ no irrigation either
I don't fertilize
I have a rock yard, and rocks don't need fertilizer
Do not ferilize
Do not fertilize
i don't
Not sure
i don't fertilize
We don't fertilize---native grasses, not sod
We do not fertilize it.
i dont
Not sure, done by Landscapers
n/a No Lawn
No lawn.
No lawn
Have pine straw and garden, not lawn
Only if I think it needs it-once a year, maybe
Do not have a lawn, all natural landscaping
No grass
No Lawn
No grass on property
Never, no lawn.
No lawn
I have no grass lawn; do not fertilize
haven't done it .
Do not have any lawn
Don't fertilize
not sure, lawn service does it
Do not have a lawn.
Not sure. Someone does it for us but uses safe stuff.
Don't fertilize
do not fertilize
Organic fertilizer once a yeat
None
Gromaster does our lawn so they should be educated
none
Don't fertilize.
Do not own property

No time
No lawn
never fertilize lawn
None, no grass
Do not have a lawn
No grass.
do not have a lawn. only gardens.
Do not have a lawn. Fertilize the shrubbery at appropriate times
don't- fertilizing a lawn is ridiculous
i live in a condo
none
don't
Unknown.
Lawn service does as needed
We don't, specifically because we don't wish to add contaminants to our rivers.
Don't know
None of the above
Never
never
N/A
None
* I only fertilize 300 sq ft of my yard.
None
I don't fertilize.
never
Never
no fertilizure
once a year - varies
Don't use composed
We don't
Don't fertilize
do not have a lawn; have gravel and pine straw
None
i don't.
never
I do not use chemicals on my lawn.
Never
we do not fertilize our lawn

Do you practice any of the following water conservation methods? (Select all that apply)				
Answer Options	**Response Percent**	**Internet Count**	**Paper Count**	**Total Count**
Have a rain barrel attached to downspout?	8.2%	73	13	86
Have a low flow showerhead?	36.9%	362	27	389
Have installed a rain garden?	4.0%	36	6	42
Have installed pervious pavement?	14.3%	143	8	151
Irrigate with reclaimed water?	7.0%	64	10	74
All of the above?	0.6%	5	1	6
None of the above?	22.3%	213	22	235
Other (please specify)	6.8%	70	2	72
TOTAL	**100.0%**	**966**	**89**	**1055**

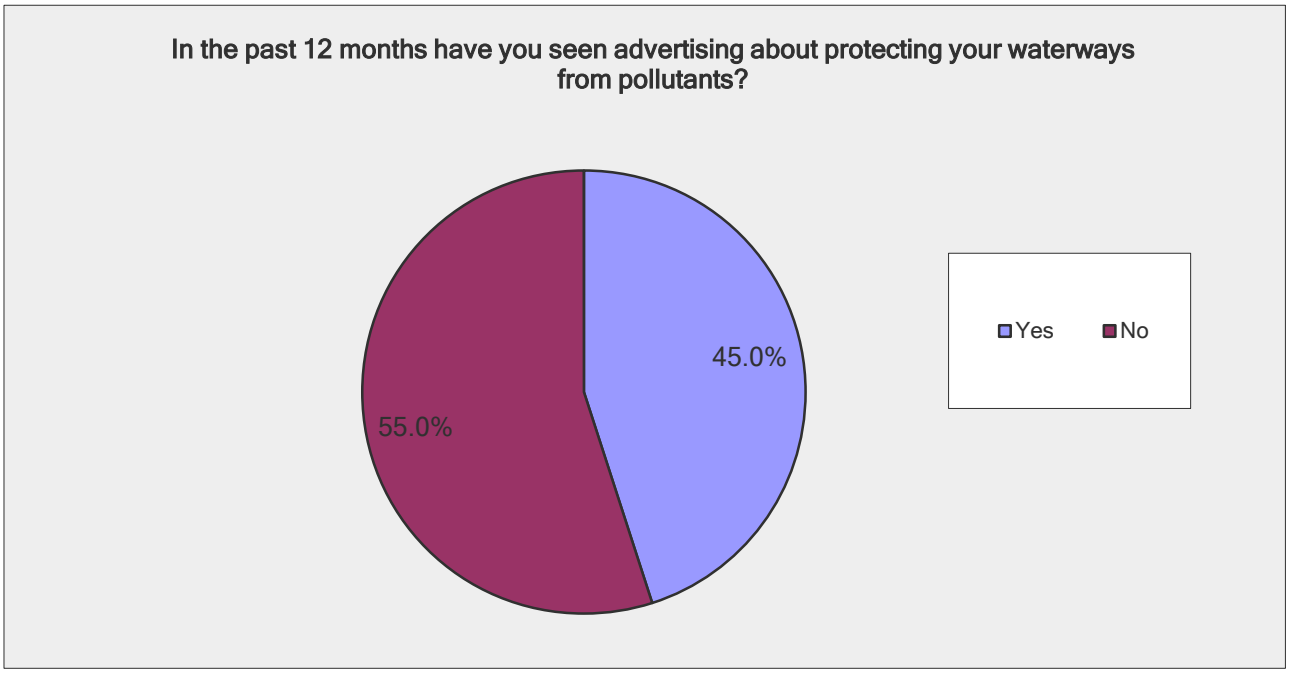


under water
Use reclaimed H20 for toilet.
No comment.
Don't know what the Regime does.
I live in a villa
Need to water meter
Cisturn for irrigation
I believe in conservation for clean water
Rain gauge on sprinkler system, short showers, energy/water efficient appliances,
Conservative John tank
All my pavement is dirt. None applies
limit toilet flushing and running water while brushing teeth
natural landscape, no irrigation system
Catch some roof runoff in container for yard use.
Love flow toilets. Use water as sparingly as possible.
Don't use pavement - wood chips, repurpose broken bricks etc...
Cruahed stone driveway, gravel paths, no irrigation system
No pavement
Low flow flush on toilet
Buffer zone between yard and marsh
Minimal daily use.
Use sprinkler system sparingly
Turned off irrigation system. Removed 50% of lawn replaced with native plants/straw.
limit lawn size
low flow toilets
We have a rain barrel on order to install.
use a/c condensate to water plants
arroyo (little creek bed that takes up runoff before entering marsh
use drip rather than spray irrigation
water saving toilet flush valve, don't irrigate lawn
Water catch pond
No grass in back yard
We have 2 stormwater ponds in our community.
drip irrigation
I save water from washing vegetables to water indoor/outdoor planats
Low flow toilets
None of the above yet but will be installing rain barrels for watering
Do not irrigate or have lawn sprinkling system and rarely shower due to disability.
minimal impervious surfaces

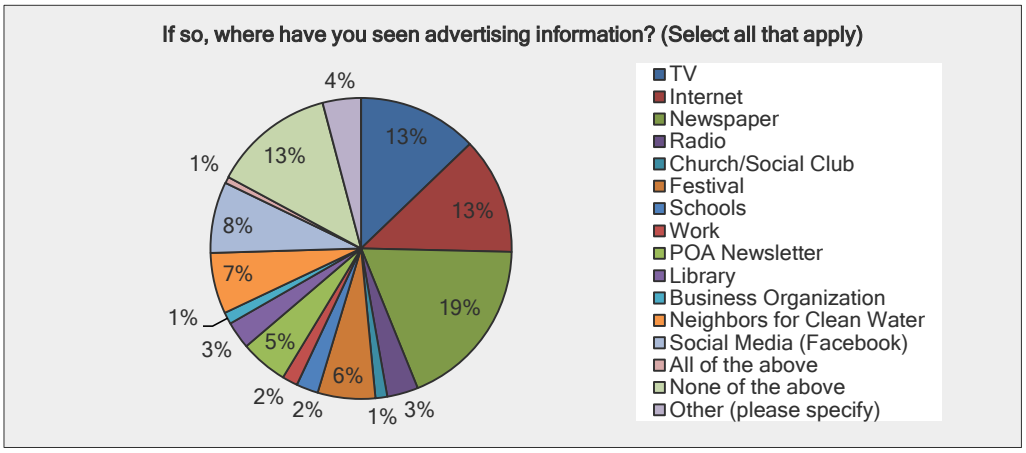
We take shorter showers, don't use the dishwasher and shut off the water while
brushing our teeth
Irrigate out of stormwater ponds
If it's yellow, let it mellow. If it's brown, flush it down.
utilize own water well
No impervious surfaces other than house, barn roof
Full loads when running dishwasher and washer, quick showers, not using rain
bird system an watering only what needs to be watered
our gated community irrigates with pond water
Rain sensor on irrigation sysrem
We really try and watch water use, ie flushing, car washing, watering lawn.
Drought tolerant plants and removed lawn for low maintenance jasmine

Heavily vegetated buffer areas around house
dual flush toilets
Irrigate with well. Use water conservatively
Do not irrigate
Irrigate with a well.
Low flow toilets
Have very little pavement except for a small driveway.
practice wise-use of water and only irrigate to meet community standards
gravel driveway
Minimal lawn irrigation and use of fertilizer, planting with native plants
We are very conscious of our water usage, but have not taken
needed steps as outlined above.
I water my plants with gray water from the house.
natural pinestraw lawn
Do not use more water than we need
switch irrigation controller off after rain
Rarely run sprinkler system. didn't use at all last season.
Rain sensor on irrigation and before daylight watering
live alone but careful not to waste water
No grass lawn, mulched shady yard with mostly native plants
Newer toilets and washing machine that use less water.
Wash boat in grass

In the past 12 months have you seen advertising about protecting your waterways from pollutants?				
Answer Options	**Response Percent**	**Internet Count**	**Paper Count**	**Total Count**
Yes	45.0%	316	37	353
No	55.0%	405	26	431
TOTAL	**100.0%**	**721**	**63**	**784**



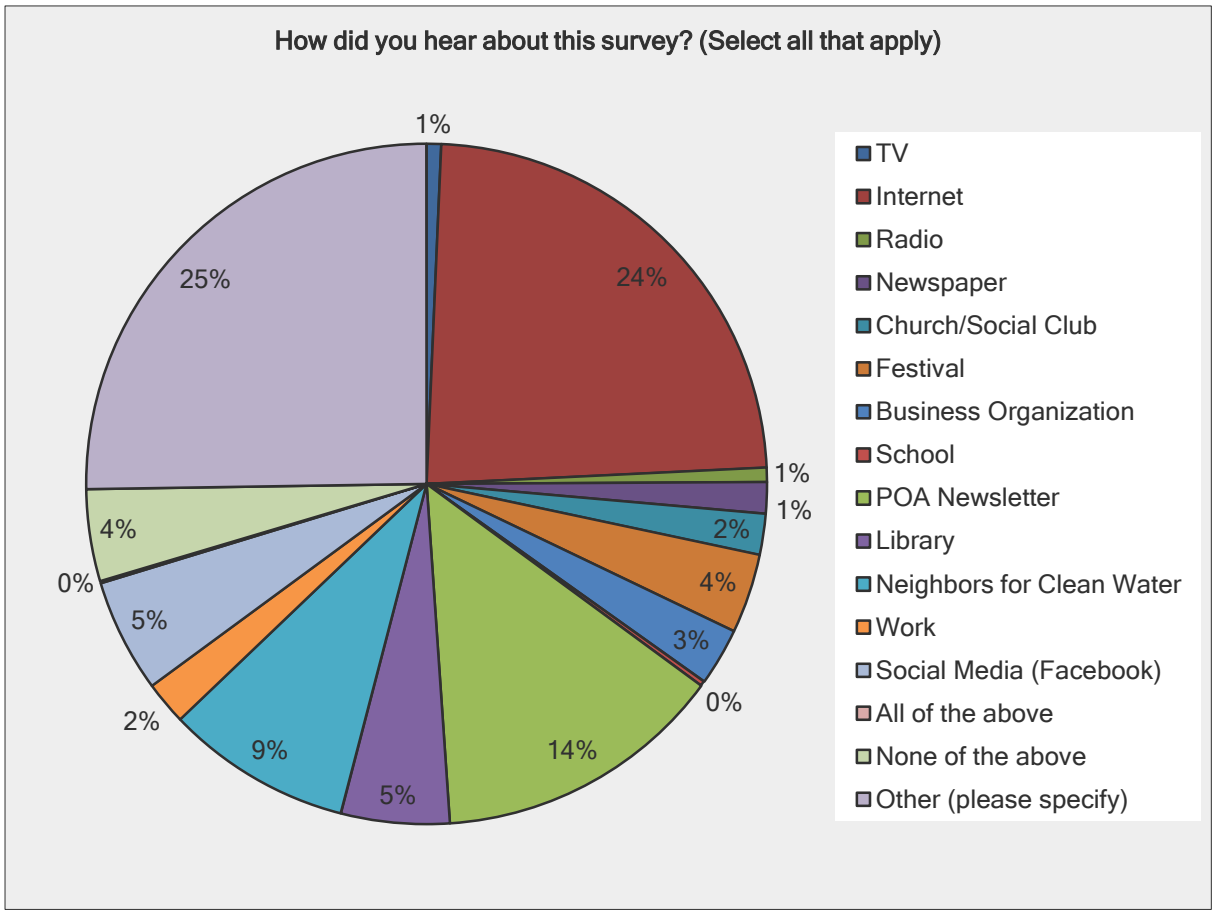
If so, where have you seen advertising information? (Select all that apply)				
Answer Options	**Response Percent**	**Internet Count**	**Paper Count**	**Total Count**
TV	12.8%	112	19	131
Internet	12.5%	115	13	128
Newspaper	18.5%	173	16	189
Radio	3.3%	26	8	34
Church/Social Club	1.3%	9	4	13
Festival	6.2%	49	14	63
Schools	2.4%	11	13	24
Work	1.7%	13	4	17
POA Newsletter	5.1%	48	4	52
Library	2.9%	20	10	30
Business Organization	1.3%	12	1	13
Neighbors for Clean Water	6.6%	54	13	67
Social Media (Facebook)	7.6%	68	10	78
All of the above	0.7%	6	1	7
None of the above	13.0%	125	8	133
Other (please specify)	4.1%	39	3	42
TOTAL	**100.0%**	**880**	**141**	**1021**



Master Naturalist info
Environmental Periodicals
No comment
billboards
Billboard
realtor association had seminar on water quality
Roadside billboards
farmers market, earth day
Lectures by DNR
Not seen any
Master Naturalists and Master Gardeners
Billboard
Billboards
County regs., garden club, master gardeners assoc.
Don't know
Have not seen ads but since moving here became a Master Naturalist and attended programs to educate myself on this subject
Bluffton signage
Bumper sticker
Master Naturalist workshops; Greendrinks
Billboard
Billboards
Billboard
County Waste Management speaker & Lowcountry Institute
Overheard

billboard
State & National Conservation News, SC Farm Bureau Publications, Sc Forestry Association Publications, & SC Farmers Market Bulletins.
signs on drains in Bluffton
billboards
Signs at public parks and launches
Dataw community very involved in sharing information
Master Gardener Booth at Farmer's Market
Not sure. Seems there was a brochure about pet waste that caught my eye.
stormwater flyer published by County Soil & Water Conservation Service
road sign Charleston
County Channel
Billboard
billboard
None
attendance at government meetings

How did you hear about this survey? (Select all that apply)				
Answer Options	**Response Percent**	**Internet Count**	**Paper Count**	**Total Count**
TV	0.7%	5	1	6
Internet	23.5%	206	0	206
Radio	0.7%	4	2	6
Newspaper	1.5%	12	1	13
Church/Social Club	1.9%	15	2	17
Festival	3.8%	1	32	33
Business Organization	2.7%	23	1	24
School	0.2%	1	1	2
POA Newsletter	13.8%	120	1	121
Library	5.1%	24	21	45
Neighbors for Clean Water	8.8%	68	9	77
Work	2.1%	17	1	18
Social Media (Facebook)	5.4%	46	1	47
All of the above	0.1%	1	0	1
None of the above	4.3%	35	3	38
Other (please specify)	25.3%	213	8	221
TOTAL	**100.0%**	**791**	**84**	**875**



Luncheon
BCSWD

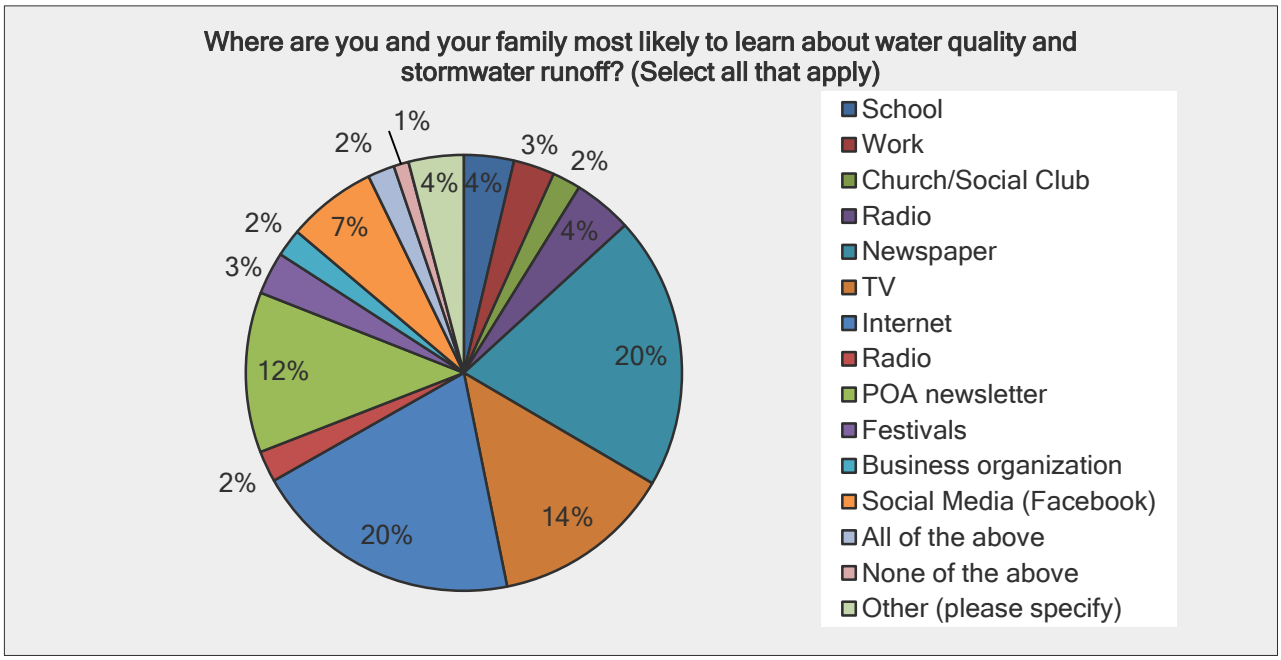
Stormwater Management Plan
Engineer
Home owners association
forest beach association
Forest Beach Homeowners Association
Neighborhood organization
Friend
Forest Beach Assoc.
Forest Beach Owners Assn.
Master Naturalists
routine email
Homeowners association
email
email
Forest beach owners assn
home owners assoc
Forest Beach owners assoc
Forest Beach Homeowners Association
Farmers market
Friend
Email
Master Naturalist organization
From LowCountry Master Naturalist
Email
Gated community
master naturalist
Friend
Neighbor on Board
Via email thru our homeowners association
Plantation request
Family member.
Master Naturalist listserv
Neighborhood email group
Neighbor
email
POA member who sent out internet information
personal e-mail
Town of Bluffton
Master Naturalists
Master Naturalist Program
Email
Email
Friend
Lowcountry Institute
master naturalist organization
Master Naturalist
Master Naturalists
master naturalist email
Master naturalist
asds office
county agent (Clemson) through farmers' market manager
Friend
Email from friend

Master naturalists
LCMNA
Master Naturalists listserve
Lowcountry master naturalist email
Local agricultural agent
Master Naturalist Program
forwarded to master naturalists
Email
Low Country Master Naturalist
Neighborhood
port royal farmers market
Master Gardener Association
LCMNA listserv
Master Naturalist Association
Master naturalist organization
Clemson and Soil & Water
Master Naturalist Spring Island
masternaturalist program
master naturalist group
Master Naturalist Program
Memo from LCMNA
LC Master Naturalists Asso
LowCountry Master Naturalists
Lcmna
A friend
forwarded to me
Master Naturalists - Lowcountry Region
Lowcountry Master Naturalists
Master Naturalist email
Master Naturalist Program
Low Country Master Naturalists
Master naturalists
Master Naturalist organization
Master Naturalist list serve
County organization
Master Naturalist list
Port Royal Town weekly newsletter
friend
email from Carol Murphy
Master Naturalist Society
Jerry Meisner
master naturalist
Master Naturalist email list
Master Naturalist
Lowcountry Master Naturalist Assoc
master naturalist group email
Friend
Master Naturalist Association & Beaufort Conservation District
Master Naturalist mailing
Master Naturalist program email
LCMNA
email
Master Naturalists

Through master naturalist
lowcountry master naturalists
Conservation District email
Email from LOWCOUNTRY Inst.
Port Royal newsletter
Master Naturalists
thru master naturalist program
Master naturalist email
Low Country Master Naturalist Association
Master Naturalist
Master Naturalist mailing list
SC Master Naturalist program
Low Country Master Naturalists
LCMNA
Master Naturalist Listserve
Master Naturalists Association
Mailing List
Master Naturalist organization - Low Country Institute
Low Country Master Naturalists
Master Naturalist program
Master Naturalist
Master Naturalists
Nextdoor neighbor
from a friend
Stormwater Utility Board meeting
Beaufort Co. Soil & Water Conservation District
employee referral
Port Royal email
From Port Royal newsletter
"Neighbors" online chat/info communication between local communities
Nextdoor.com
Social Media: Next Door
Beaufort County Website
Neighbors
Marsh Assoc.
Marsh Assoc.President
Overheard
NextDoor (social media)
email
Email
Beaufort Soil & Water Conservation District
Came across it on the website when I was looking for something else
Neighborhood app
a friend sent it to me
You know where.
e-mail message from a neighbor
saw it while visiting Town's website
County website
Staff person of Beaufort County Stormwater Mr. TJ Allen
Conservation Disrict
human service alliance newsletter
Dataw Island
HOA

Island Controller
Survey sent out on DatawNet
Dataw Community internet
Dataw staff distributed to residents
POA email
Gated community manager email
HOA
Forwareed by community
Neighborhood Association email
Kim
Community e-mail
Neighborhood association
Management of our community
Island Communications
forwarded by neighbor
Distributed in our neighborhood
e-mail from gated community official.
Homeowners Assn.
Our assistant GM emailed it
HOA
Club asst. manager
Our gated community management
Our community comptroller
Email from POA
Dataw Island management
Email
Distribution by POA assistant manager
email forwarded from lady at work
forwarded from Dataw Island Club Management
Emailed to me
Dataw Net email
POA e-mail
Dataw club news
Dataw People
neighbor sent it to me
neighborhood newsletter
HOA email
Next Door ap
email sent to me
Next door Neighbor
Beaufort County website
Sent to me by Shelby Berry
Neighborhood email
Sent to me.
County website www.bcgov.net
bcgov.net
emailed directly to me by Beaufort County Government
Gated Community Newsletter
Sent to long cove members
Town of Bluffton SC website
tOWN OF BLUFFTON WEBSITE
Family Member

Where are you and your family most likely to learn about water quality and stormwater runoff?				
Answer Options	**Response Percent**	**Internet Count**	**Paper Count**	**Total Count**
School	3.7%	49	18	67
Work	3.0%	45	10	55
Church/Social Club	2.1%	29	9	38
Radio	4.4%	66	13	79
Newspaper	20.2%	344	22	366
TV	13.4%	223	19	242
Internet	20.0%	341	20	361
Radio	2.3%	36	6	42
POA newsletter	11.9%	209	6	215
Festivals	3.2%	41	16	57
Business organization	2.0%	34	3	37
Social Media (Facebook)	6.6%	106	14	120
All of the above	2.0%	27	9	36
None of the above	1.1%	20	0	20
Other (please specify)	4.1%	67	7	74
TOTAL	**100.0%**	**1637**	**172**	**1809**

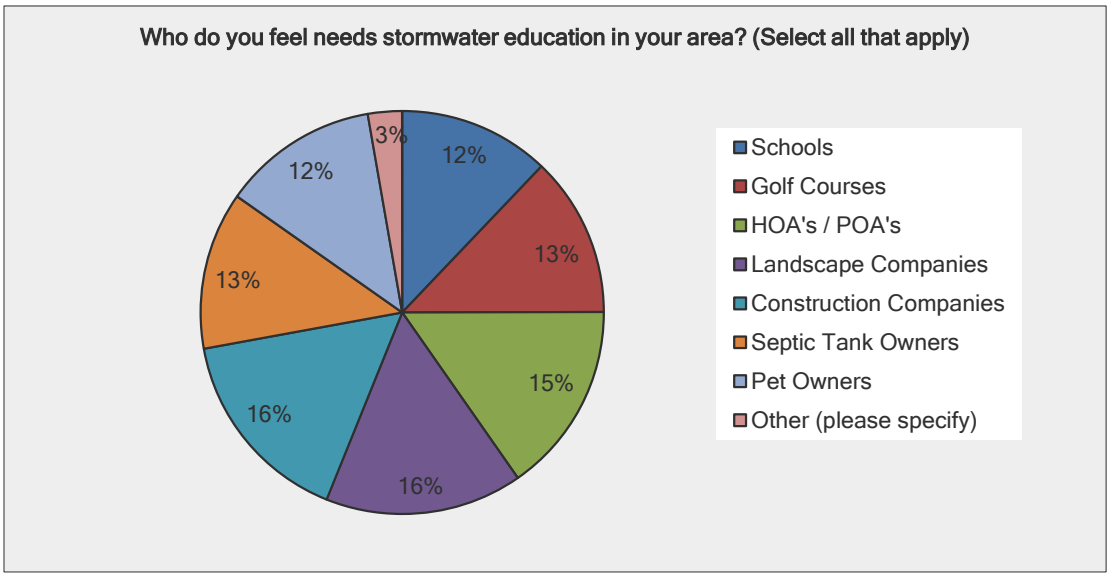


Environmental Periodicals
Home owners association -we don't live locally
forest beach association
Neighborhood organization
I am on the planning board in Greenwood Lake NY for 12 years
Direct involvement with watershed group

used to work for DHEC
Library,Community Meeting
Master Naturalist organization
More on Facebook
Plantation speakers and lectures
Community Leders and elected officials
Neighbors sharing the survey and other information
Town of Bluffton
From me
stormwater workshops
Master Gardener and Master Naturalist meetings
master naturalist communications
Our Spring Island naturalists
Profession - civil engineers in environmaental area
Clemson
Community Speakers
Low Country Institute and Port Royal Sound Foundation
Master Naturalist Association
Master Naturalists, Master Gardeners, Clemson Ext.
Our county government
ETV radio
local university and development seminars
Radio, but only if it is on PRN
Environmental groups
Port Royal Sound Foundation, Low Country Master Naturalist
County organization
conservation groups newsletters
Environmental organizations
insert in water bills
Especially NOT the POA
LowCountry Institute programs
Radio is mentioned twice. Is this a trick?
LCMNA
Master gardener/ Master Naturalist
Lowcountry Master Gardener Association
 have always been environmentally concious
County Education
Marsh Assoc.
Marsh Assoc
The Marsh Association
Staff member
billboard
DatawNet, CCL e-mail
HOA
Kim
City of Beaufort resident emails. Conservation groups.
beaufort city government
Arcsa Professional organization
Dataw Island Management
DATAW communications
POA assistant manager
Have had presentations in our comm. by county water reps

??
Dataw Net perhaps
not facebook, maybe twitter
HOA email
me- fisheries biologist
Master Gardener Association
Our county tax bill
By accident
conferences

Who do you feel needs stormwater education in your area? (Select all that apply)				
Answer Options	**Response Percent**	**Internet Count**	**Paper Count**	**Total Count**
Schools	12.1%	382	48	430
Golf Courses	12.9%	419	37	456
HOA's / POA's	15.3%	503	41	544
Landscape Companies	15.8%	511	50	561
Construction Companies	16.0%	519	49	568
Septic Tank Owners	12.6%	410	38	448
Pet Owners	12.5%	402	42	444
Other (please specify)	2.7%	87	10	97
TOTAL	**100.0%**	**3233**	**315**	**3548**



Community
Everyone
Everybody
Everyone
Developers on SW use in new developments
Town officials
Hilton Head Town Council
Home owners
government officials
You the storm water department
Everyone
The public works department
Everyone
Give everyone a sewer system
all town council members, mayors, etc. stop talking and start walking
All above
general residents
elected officials and planners
All above
Newcomers to SC Low Country
Politicians
Developers and County/City Government

All of the above
City Government!!!!
All of the above
County
Political "leaders"
City Council needs to understand issue and how it has knock on effect on city issue beyond just clean water.
All
Storm drains need labels/Drain Flows to Creek etc.
I heatd about it at city council but never understood ehat 'storm drainage' meant. I know how important it is
all of the above
Everyone
School board members
give it to the kids to bring it home
County and city administrators
All of the above, but only government can manage WQ
ELECTED OFFICIALS!!!!@!
Boaters, Marinas, State/County/City employees; homes, businesses, non profits whose property abuts waterways
elected county officials
City of Beaufort
All of the above
Everyone -the increase of trash thrown everywhere/roads/ down sewers/ marshes/ wetlands /beaches is horrific and offensive
local gov.
Everyone
Everyone
Everyone!
elected officials
Everyone!
Government leadership
Developers
EVERY SINGLE PERSON YOUNG AND OLD
Port Royal Planners need to understand the repercussions of destroying forested areas (what little
Richmond Ave. Where was the environmental report in all of this? SHAME on your Port Royal. The
cypress wetlands and animals NEEDED the one forested area that was left on Richmond Ave. What
happens when the wetlands fills up and starts overflowing because there are no trees to absorb the flood
water? Where will the wildlife go? Port Royal took away forested land that could absorb and FILTER
stormwater runoff and a home for wildlife that was untouched by people.
Developers and local and state council
Men who urinate outside.
psd's, government
All of the above
Everyone
City/county about keeping storm drains clear
Everyone
County Leaders
All of the above
SCDOT, US government, Military installations, Beaufort County schools construction dept.
Government agency that approve and supervise land developement
All of the above.
Government entities that approve things like the new walmart, the development down Sams point road
Everyone who use water
This is a matter for government regulation. All the education in the world won't make a difference if people
aren't forced to do what they don't want to do.
Walmart and the city, city councils that allowed them in here.
All of the above
The County. Your roads are the runoff issue, not these other items.
non-pet owners
Government officials
Everyone?!
Everyone does! Thank you.

?
Thanks
None
Landscape Companies and Contractors, especially
Agricultural enterprises
local, state and federal government
all of the above
Evryone
Enforcement and education
All of the above
POA/HOA management companies as well as the boards
All

Lowcountry Stormwater Partners
2016-2018 Strategic Regional Stormwater Outreach Plan

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12/1/2016

Carolina CLEAR
A Public Service of Clemson University

Introduction

Beaufort County, the City of Beaufort, Town of Bluffton, Town of Hilton Head Island, and Town of Port Royal have agreed to work together across municipal and watershed boundaries to address stormwater education and awareness needs. With this commitment, the communities have selected to work with the Clemson Extension Carolina Clear program. Carolina Clear seeks to develop outreach and involvement opportunities that lead to sustained behavior changes that protect water resources. This is best accomplished through meaningful partnerships; thus, the region has selected to work locally as the Lowcountry Stormwater Partners (LSP), inviting other educational institutions, utilities, non-profits, property management companies, and the supporting municipal and county partners to deliver consistent outreach programming to target audiences. Additionally, the partnership will work towards a comprehensive and whole community change in increasing personal responsibility for the discharge of polluted stormwater runoff and freshwater impacts to this unique marine system in the Lowcountry of South Carolina.

Through surveys, regional communication, and data gathering, LSP has worked towards the development of a strategic outreach plan to address major concerns of partners, relevant and involved audiences, and documented water quality concerns. This strategic outreach plan is believed to also meet the public education and involvement requirements of the 2013 National Pollution Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Regulated Small Municipal Separate Storm Sewer Systems (SMS4s) and will be implemented beginning in July 2016 through 2018.

In the development of this strategic stormwater education and involvement plan, Carolina Clear and partners worked together to identify the Hilton Head Urbanized Area (UA) pollutants of concern. Multiple methods were used to identify the pollutants of concern, including:

- Resident stormwater awareness and knowledge surveys that were used to identify target behaviors and audiences.
- Public Works and Engineering staff surveys that identified potential issues, audiences, and concerns of those most directly involved in stormwater management.
- Ongoing area water quality monitoring results that were evaluated.
- A strategic planning meeting with local Municipal Separate Storm Sewer Systems (MS4s) and educational partners was held in order to determine the current state of water quality, ongoing stormwater projects, and to discuss potential pollutants of concern and related behaviors.
- Small group discussions were facilitated during the meeting to further evaluate audiences associated with these polluting behaviors or the decision-making processes affecting these runoff-associated pollutants. Information on events, opportunities for education, and motivation for adoption of water-protecting behaviors was collected.

The following is a summary of these efforts, accompanying the presentation of the strategic stormwater education and involvement plan for the Hilton Head UA.

I. Local Perspectives and Knowledge Surveys

In 2015, a survey was instrumented online and in-person to determine awareness, knowledge, and behaviors related to local stormwater issues in Beaufort County. Ten percent of the surveys were collected

at public locations, and 90% of the surveys were collected online at MS4 websites. There were over 700 respondents, and 50% of respondents stated that they lived in gated communities. Findings were supplemented with the results of the 2014 Carolina Clear Environmental Awareness, Knowledge and Behaviors Survey. The results were the following:

- Seventy-three percent of respondents recognized that stormwater is not treated before reaching surface waters.
- Thirty-one percent of respondents recognized the most correct definition of a watershed.
- There was some confusion between wastewater and stormwater.
- Respondents identified a wide array of audiences who they felt needed stormwater education (Figure 1).
- Eighty-five percent of respondents think pet waste contributes to water pollution.
- Eighty-one percent dispose of oil and paint at drop off centers.
- Residents did not strongly perceive stormwater ponds, feeding wildlife, boating, or golf courses as contributors to stormwater pollution (Figure 2).
- Drainage was referenced as a common issue.
- Respondents were interested in water conservation, as long as watering could occur.

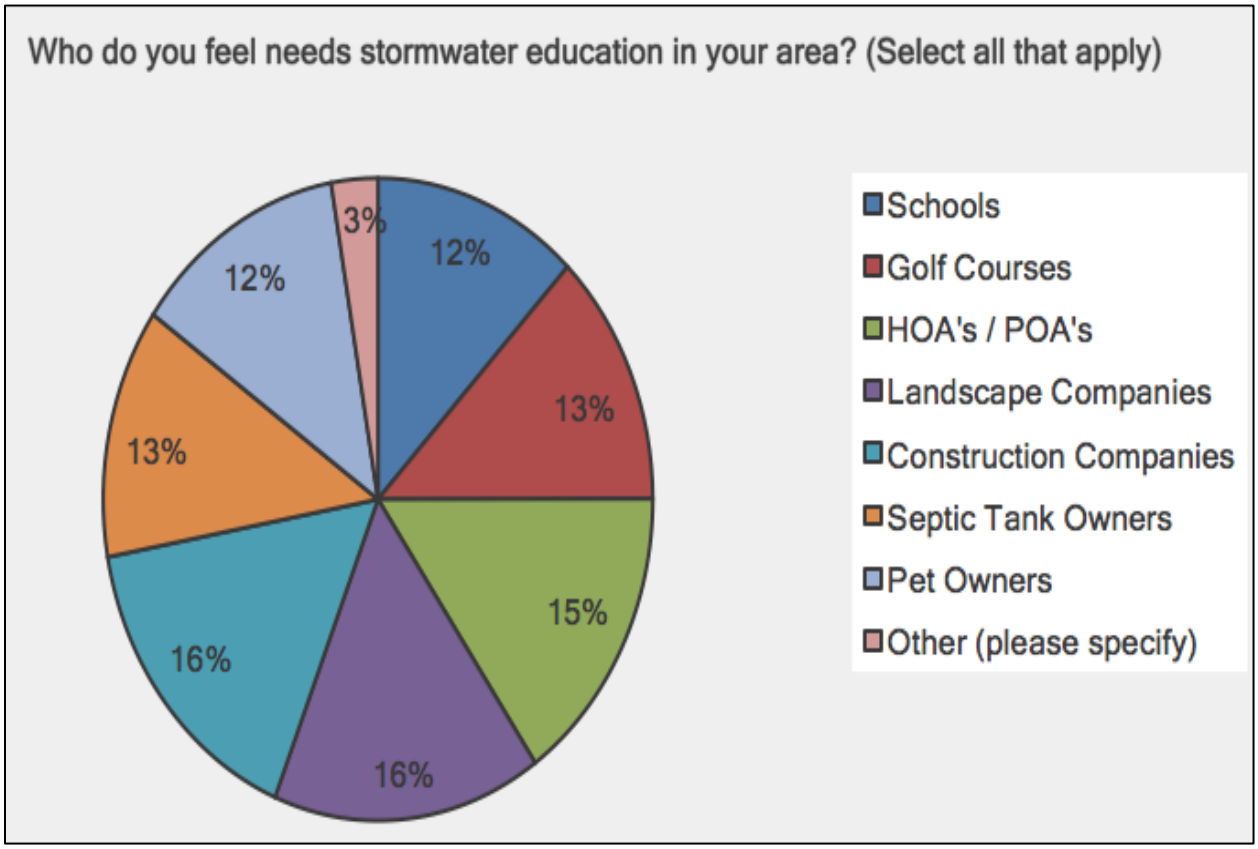


Figure 1. Public perceptions on which audiences need stormwater education in Beaufort County. These data were collected from the 2015 public stormwater awareness survey.

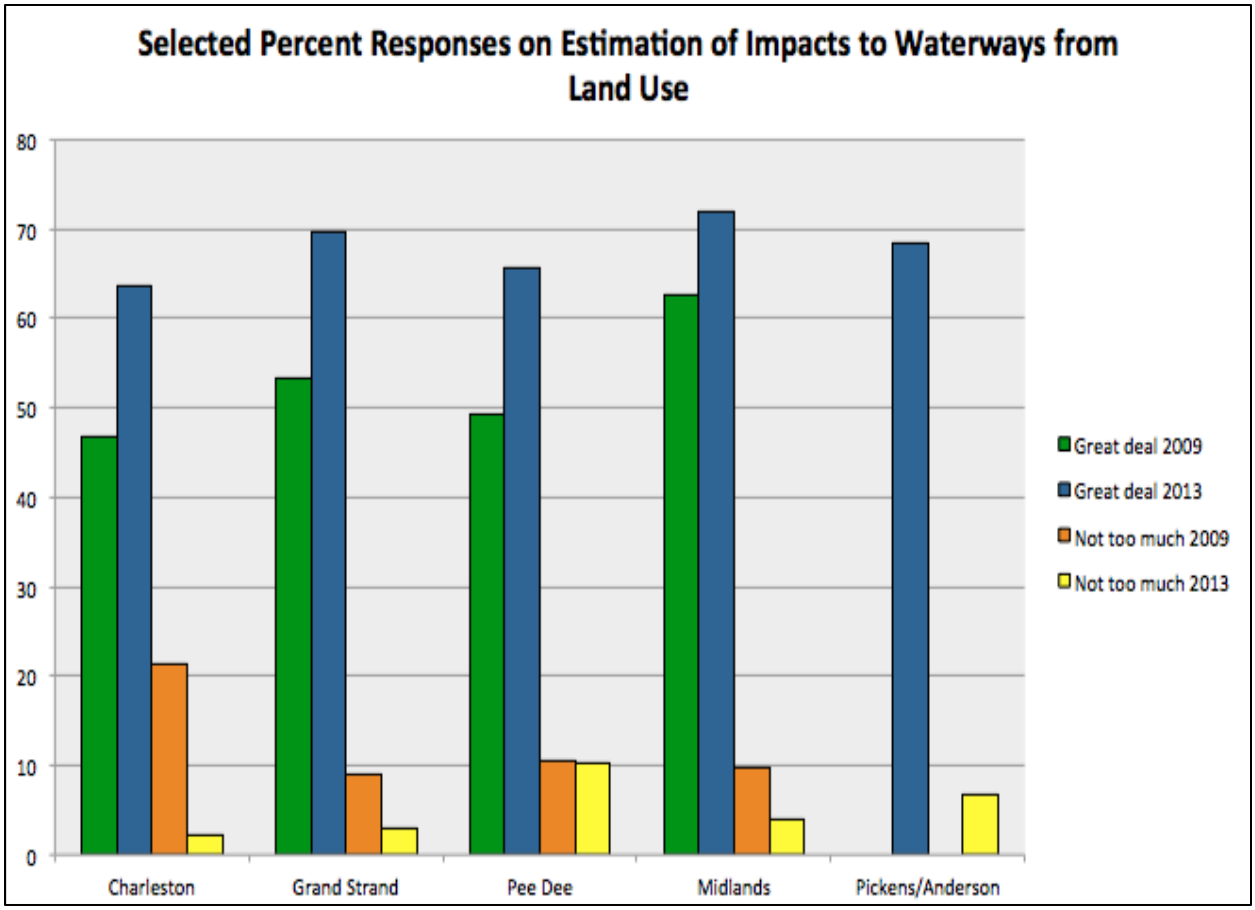


Figure 2. Public perceptions from selected areas on the estimation of impacts to waterways from land use. Charleston is the closest geographic area to Beaufort County. These data were collected from the 2014 Carolina Clear Environmental Awareness, Knowledge and Behaviors Survey.

In 2016, Carolina Clear created a survey for area Public Works' employees through Survey Monkey; its intent was to identify audiences, behaviors, and overall stormwater education needs from the perspectives of those most on-the-ground conducting stormwater management and maintenance. This survey was not made public; the 19 respondents included those familiar with stormwater operations, issues, and complaints across the region. The findings were the following:

- The priority target audiences for stormwater education are engineers, developers, landscapers, contractors, designers, HOA board members, and homeowners (Figure 3).
- The priority target pollutants to be addressed through education are bacteria, sediment from construction sites, dissolved oxygen (DO), contaminants, and trash (Figure 4).
- Forty-seven percent of the responding staff witnessed an illegal discharge or illicit connection over three times per year during their tenure.

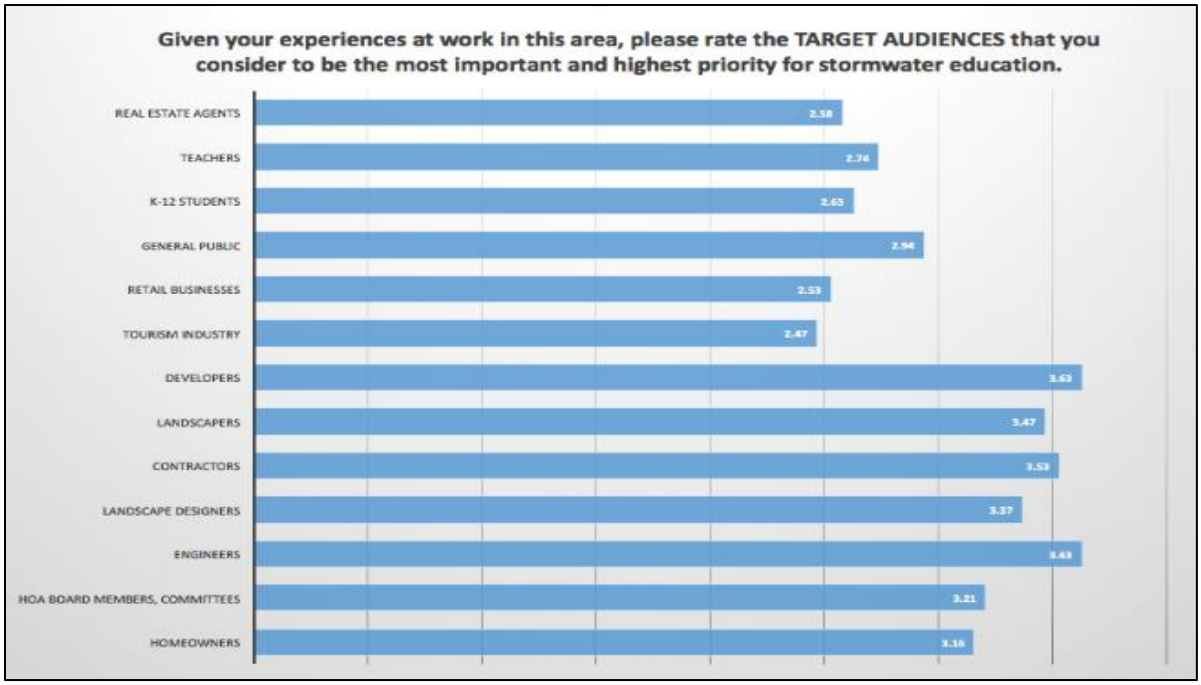


Figure 3. Perceptions of Beaufort County Public Works employees concerning target audiences for stormwater education, according to the 2016 survey conducted by Carolina Clear.

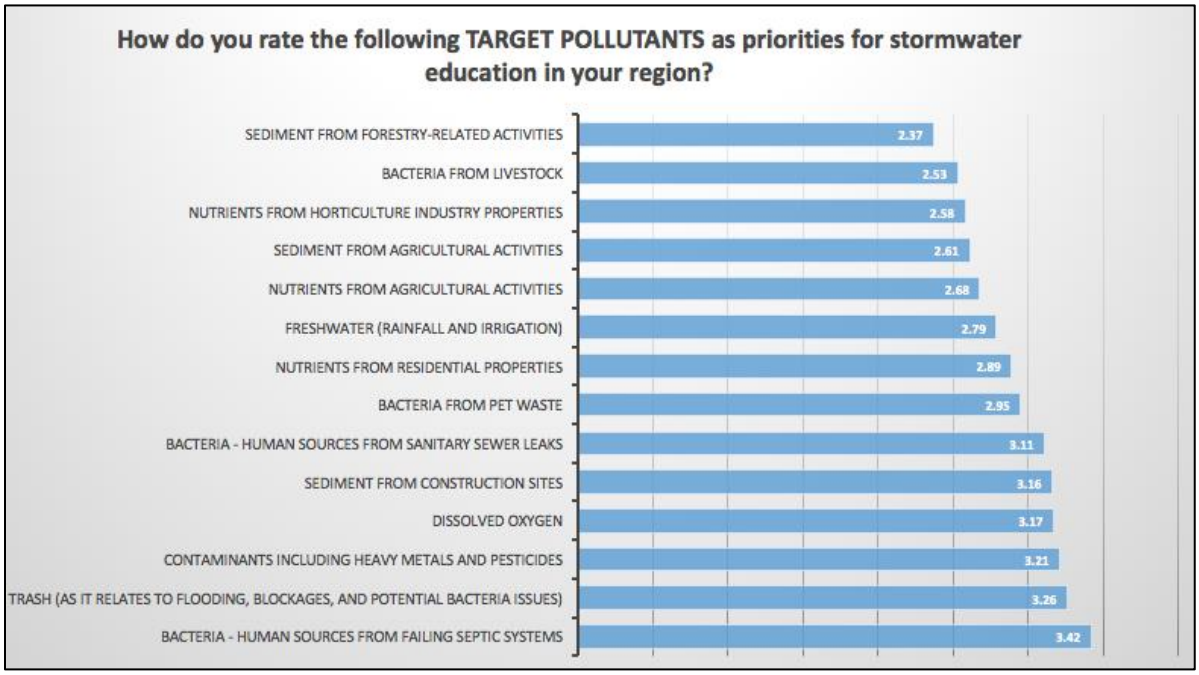


Figure 4. Perceptions of Beaufort County Public Works employees concerning target pollutants for the region, according to the 2016 survey conducted by Carolina Clear.

Results of the current 2016 Applied Technology & Management (ATM) study regarding local watershed modeling will be considered in regards to developing and implementing education and outreach programs, but is not listed here as the data have not been finalized.

II. Strategic Planning Meeting

The strategic planning meeting was held on September 29, 2016 at the Port Royal Sound Foundation, Okatie, SC. The agenda was as follows:

1. A presentation of the findings from the Local Perspectives and Knowledge surveys.
2. Presentations by the county and each of the local municipalities on the current status of water quality and stormwater programming in their area.
3. Given the presented information, a facilitated large group discussion worked to identify all pollutants of concern related to stormwater in the area.
4. Primary pollutants of concern (POCs) were identified through this list via a prioritization exercise and then discussed in small groups to identify target audiences and behaviors as well as to identify potential partners and programs.

MS4 Presentations

Beaufort County

- Adopted volume control to meet Total Maximum Daily Loads (TMDLs).
- Sample for fecal coliform due to shellfish bed closures.
- Okatie River: Fecal Coliform TMDL and on the 303(d) List of Impaired Waterbodies for Fecal Coliform
- Battery Creek: Impaired for bacteria
- Beaufort River: TMDL for DO

City of Beaufort

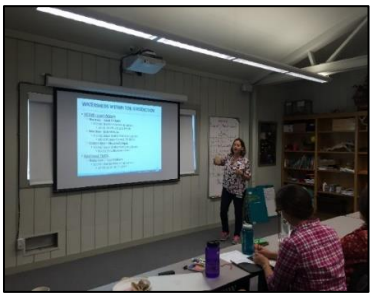
- Retrofitting detention pond with 319 funds

Town of Bluffton

- New River: Increasing Biological Oxygen Demand (BOD) and pH. On the 303(d) list for Enterococcus.
- May River: On the 303(d) list for Fecal Coliform
- Okatie River: Fecal Coliform TMDL
- Colleton River: Increasing BOD and decreasing pH and DO. On the 303(d) list for DO
- Monitoring program used to help inform Capital Improvement Program projects, development requirements and to determine the efficacy of Best Management Practices (BMPs)

Town of Hilton Head Island

- One beach monitoring station added to 303(d) list for enterococcus
- Monitoring samples for E. coli in freshwater, Fecal Coliform in saltwater, for nutrients (Total Nitrogen, Total Phosphorous), and for metals.
- No current TMDLs



Town of Port Royal

- No current TMDLs
- Cypress wetlands rehabbed into stormwater system
- Town attraction and working effectively as evidenced by accumulated sediment and maintenance requirements.

Hilton Head UA POC Group Discussion and Identification

Table 1. The list of all pollutants of concern and target behaviors and activities in Beaufort County identified during the strategic planning meeting. This list is not in any priority order.

Pollutant and Behaviors of Concern	Target Behavior and/or Activity
Post-Construction Maintenance	Stormwater pond focus
Runoff Volume	Dilution of saltwater, impacts on estuary and ecosystem, influence on pollutant loading
Littering	Plastic litter, tires, trash, environmental hazards, health hazards
Bacteria	Bacteria's impact to waterways and risk to public health awareness for area residents
Fertilizer (Nutrients)	Proper application of fertilizers, use of natural fertilizers (e.g. leaves, grass clippings, compost, etc.)
Irrigation Practices	Proper timing and amounts of irrigation
Irrigation Source	Pond water, reclaimed water, collecting stormwater
Septic Tanks	Installation, proper maintenance, knowledge of septic safe materials
Construction Runoff	Awareness of sediment control options, safe options around trees
Sanitary Sewer Overflows	User disposal practices
Failing Infrastructure	Maintenance, knowing when to call for repairs, public versus private infrastructure
Linking Land Use Change to Natural Resources	Quality of community, livelihoods of fisherman, shrimpers, and oyster farmers, property values, human health
Illegal Dumping	Proper disposal practices, supplies for spill prevention and control
Lawn Debris	Proper disposal of grass clippings and other landscape debris
Infiltration	Site-specific better management practices, reducing and/or mitigating impervious cover
Pesticides	Proper use and application of pesticides, Integrate Pest Management (IPM) as an alternative
Copper	Pond applications, toxicity to organisms
Commercial Grease Trap Maintenance	Awareness and regular maintenance
Boat/Dock/Marina Maintenance	Awareness of boat maintenance practices, local ordinances, and proper waste disposal
Gas Stations	Maintenance and runoff
Commercial Car Washes	Polluted runoff, pop-up, and charity car washes
Pharmaceuticals	Opportunity to properly dispose of pharmaceuticals
Pool Discharge	Proper de-chlorination, low or no impact draining
Large Item Dumping	Proper disposal, illegal dumping, link to bacteria and rodents, flooding concerns in ditches

*Though not listed in the table, industrial sites will be a priority of Beaufort County.

III. LSP Strategic Public Education and Outreach Plan

Primary POCs Ranked through Group Discussion Exercise

1. Post-Construction Maintenance and Inspection, especially related to Stormwater Ponds
2. Runoff Volume Mitigation and Minimization of Freshwater Loading to Estuarine Systems
3. Illegal Littering
4. Bacteria Impact Awareness and Septic System Management
5. Fertilizer Need, Selection, and Application
6. Sediment Related to Construction Site Runoff

Identifying Target Audiences, Behaviors, Potential Partners, and Programs for Primary POCs with Small Group Discussions

1. Post-Construction Maintenance and Inspection, especially related to Stormwater Ponds

- *Concern:* Failure to maintain an engineered stormwater practice is affecting the quality of receiving waters and could be contributing to municipal and county operations and monitoring requirements.
- *Target Audiences*: Homeowner Association (HOA) management, property management companies, golf course management, commercial property management, county/municipal staff, developers, elected officials, waterfront residents, pond management and landscape companies
- *Messages*: the purpose of BMPs and their function, regular maintenance is required for long-term BMP function and healthy waterways, recognition of ownership and responsibilities (public versus private), relationship to stormwater utility fee, benefits of maintenance
- *Resources and Partners:* Lagoon committees, Marsh Association, pond management companies, Department of Natural Resources (DNR), Port Royal Sound Fountain (PRSF), State/MS4 design manuals
- *Short-term Goals*: To increase awareness of proper inspection and maintenance practices
- *Long-term Goals*: Demonstrate the application of this knowledge and training for better site control, maintenance, and less polluted discharge

2. Runoff Volume Mitigation and Minimization of Freshwater Loading to Estuarine Systems

- *Concern*: Large amount of freshwater runoff is harming the local ecosystem and shellfish harvests.
- *Target Audiences*: elected officials and local planning departments (to set up comprehensive plan for development impacts), developers and engineers (designing with Low Impact Development (LID)), HOAs, residents (landscaping choices), schools
- *Messages:* Freshwater as a conveyance for other pollutants, grassroots approach to drive political will, saltwater vs freshwater, impact to local seafood – shellfish and finfish – and the subsequent economic impact to the community
- *Resources and Partners*: Eco-tours, Department of Natural Resources (DNR), Lowcountry Institute, local communities, Experience Green, Savannah River Keeper, native plant nurseries, existing presentations to HOA groups, existing Low Impact Development (LID) presentations, rain barrel giveaways, county credit program, Port Royal Sound Foundation (PRSF)
- *Short-term Goals*: To increase awareness of the effect of freshwater on saltwater ecosystems, increase use of infiltration and retention practices
- *Long-term Goals*: Community-wide acceptance of infiltration and retention practices to curb freshwater intrusion

3. Illegal Littering

- *Concern*: Poorly maintained dumpsters, unsecured trash in vehicles, illegal dumping, and tourist generated trash as well as plastic, tires, grass clippings are contributing marine debris and reducing the quality of local waterways for both wildlife and residents
- *Target Audiences*: Tourists, boating community, motorists, residents, commercial businesses, contractors, schools
- *Messages:* Prevent litter in the first place instead of picking it up
- *Resources and Partners*: Palmetto Pride, Keep Beaufort County Beautiful, National Oceanic and Atmospheric Administration (NOAA) Marine Debris program, Adopt-A-Highway, Department of Transportation (DOT), Beaufort County environmental crime unit and app, Sea Grant Clean Marine program, Port Royal Sound Foundation (PRSF)
- *Short-term Goals*: To increase awareness of proper disposal practices
- *Long-term Goals*: To decrease the amount of litter in local waterways and to receive feedback from residents detailing a reduced amount of illegal dumping and littering in their neighborhoods

4. Bacteria Impact Awareness

- *Concern*: There public needs to be made aware of the multiple sources of bacteria in our watersheds and their impacts on our waterways.
- *Target Audiences*: Pet owners, area residents, commercial businesses, schools
- *Message*: High levels of bacteria within our waterways can be a risk to shellfish beds, awareness of bacteria sources in watersheds
- *Resources and Partners*: Department of Health and Environmental Control (DHEC), National Resources Conservation Service (NRCS), Soil and Water Conservation District (SWCD), University of South Carolina Beaufort (Dr. Warren), Department of Natural Resources (DNR), National Estuarine Research Reserves (NERR), Port Royal Sound Foundation (PRSF)
- *Short-term Goals*: To increase awareness of the sources of bacteria in local watersheds and the impact bacteria has on local waterways
- *Long-term Goals*: Affect practices that contribute to bacterial loading in waterways

5. Septic System Management

- *Concern:* Septic systems that are not properly designed, maintained, or used can become a source of bacteria in local waterways and cause negative environmental and health impacts.
- *Target Audiences:* septic system owners
- *Messages:* identification and responsibility of ownership of septic systems, better management practices for septic systems, improved record keeping of septic system maintenance
- *Resources and Partners:* Installers, Department of Health and Environmental Control (DHEC), National Resources Conservation Service (NRCS), Soil and Water Conservation District (SWCD), University of South Carolina Beaufort (Dr. Warren), Department of Natural Resources (DNR), National Estuarine Research Reserves (NERR), Port Royal Sound Foundation (PRSF)
- *Short-term Goals*: To increase awareness of proper septic system inspection and maintenance
- *Long-term Goals*: Septic system owners reporting knowledge gain and application in regards to awareness, inspection, and maintenance

6. Fertilizer Need, Selection, and Application

- *Concern:* Residents and landscapers applying fertilizer without acquiring a soil test first can apply too much fertilizer, select a fertilizer which doesn't suit their needs (leading to over application), and/or apply fertilizer when the plants will be less able to absorb it, leading to nutrient-rich stormwater runoff
- *Target Audiences:* Homeowners, landscapers, turf industry
- *Messages:* Don't guess- soil test!, apply fertilizer based upon need, soil testing and selecting the appropriate type and amount of fertilizer for the need can save time, money, and protect local waterways, over application of fertilizer can lead to higher levels of nutrients in waterways which can cause oxygen depletion, fish kills, harmful algal blooms, and unsightly conditions.
- *Resources and Partners:* Experience Green, National Resources Conservation Service (NRCS), Soil and Water Conservation District (SWCD), University of South Carolina Beaufort (Dr. Warren), Department of Natural Resources (DNR), National Estuarine Research Reserves (NERR), Port Royal Sound Foundation (PRSF)
- *Short-term Goals*: To increase awareness of soil testing, facilitate following and interpreting soil test results, and proper fertilizer selection and application
- *Long-term Goals*: Demonstrate increase in soil testing awareness, knowledge gain and application of knowledge in regards to fertilizer need, selection, when to fertilize and/or how much fertilizer to use

7. Sediment Related to Construction Site Runoff

- *Concern:* When construction sites do not properly install, use, and/or maintain sediment and erosion control measures, it indicates a lack of understanding of the importance of these measures as well as local compliance and enforcement policies. The sediment leaving these sites can impact the quality of local waterways and shellfish beds.
- *Target Audiences*: Engineers, developers, contractors, sub-contractors
- *Messages:* Sediment and erosion controls are important and necessary parts of an active construction site; their maintenance and combination of practices protects water quality, maintains a site as active and in compliance, and minimizes costly revisits and frequent replacements of BMPs.
- *Resources and Partners:* Soil and Water Conservation District (SWCD), local planning departments, local stormwater inspectors, developers, engineering firms
- *Short-term Goals*: To increase awareness of how to stay in compliance with local construction ordinances, to increase awareness of sediment and erosion control measure function and maintenance
- *Long-term Goals*: Local stormwater divisions reporting a decrease in the number of violations after construction sites receive education

Supporting Information for Addressing Priority POCs

Events and outreach activities for each priority POC have been identified for the region and are listed in the attached spreadsheet. This is a fluid plan, with expectations that modifications will be made along the way as new partners are identified, and opportunities arise to address an audience or provide a workshop, demonstration, presentation, or other activity.

In order for this outreach plan to be effective, an analysis of this behavior or pollutant and related audience has been conducted. This analysis includes the concern as it relates to polluted stormwater

runoff, related and involved audience(s), consistent and effective messaging, and also considers motivations for change, interests in a topic, and convenience of receiving that message.

It is recognized that education and assistance to those target audiences evolves and must include systematic changes in how individuals consider their own personal sense of responsibility in pollution and waterway protection; the value of healthy waterways and the relationship to quality of life and community; an operational norm or pressure to change a practice or behavior; the realization of these impacts in water quality and watershed management perspectives. The LSP have chosen to select these priorities recognizing that this work is only beginning. All programs will include some type of assessment or evaluation; an instrumented survey will be used to broadly capture changes in awareness, knowledge, and behaviors that may be the result of stormwater and watershed education and involvement efforts.

Key Educational Messages

Overall larger messages of water resource protection and personal responsibility are currently in development for use towards consistency in outreach materials and events. Overall, the regional consortium seeks to incorporate messages that include a sense of personal responsibility for stormwater pollution and regional water quality as well as the recognition that the quality of local waterways directly impacts the livelihoods, health, and quality of local communities. These messages will be partly based upon previous work with focus groups in the greater Bluffton area, where the theme of personal responsibility for water quality was ubiquitous. Specific messages containing information about local compliance and enforcement mechanisms will also be developed.

The LSP are also considering the creation of a character and costume that can be used by all partners for outreach activities. The intention will be to create a recognizable and approachable steward of local waterways. This initiative will be further discussed at future consortium meetings.

IV. LSP Strategic Participation/Involvement Plan

Opportunities for Public Input

Opportunities for public input are received through community-wide surveys, program evaluations, social media, and other regional communication.

1. Surveys
   - The third iteration of Carolina Clear's Environmental Attitudes, Knowledge, and Perceptions Survey, currently in planning for 2018-2019, will also be made available to Beaufort County residents. This survey will be used to shape outreach activities and measure changes over time. Many of the questions in Carolina Clear's Environmental Attitudes, Knowledge, and Perceptions Survey are similar to the 2015 Beaufort County survey to allow for comparison and measuring changes that can be related to education and involvement programming as well as to identify successful programs, audiences that could be served by additional programming, and additional target pollutants.

2. Program Evaluation
    - Each program will include a form of evaluation or assessment that will be used to tailor educational programs to best fit the audience's needs and enhance their overall experience.

3. Social media
    - The LSP will continue a Facebook page to be used as a means to receive input from the public. Posts will be made once a week with information about upcoming events and pictures of past events. Social media allows for the public to stay up to date on upcoming events and programs, as well as share their experience on programs where they have participated.

4. Regional Communication
    - The LSP will also provide opportunities for public input through their upcoming website, monthly e-newsletter to interested members of the public, and regular consortium meetings.
    - Beaufort County developed the 311 mobile application where the public can report stormwater issues, illicit discharges, and other concerns throughout the region. The LSP will promote this application through all of their educational efforts.

Education Through Involvement

The LSP seek to educate through involvement, teaching individuals how to prevent pollution through responsible, simple changes in practices, behaviors, and procedures. There are many program efforts that are regional activities, which include:

- Publicizing and hosting the post-construction BMP inspector certification course to increase the number of trained professionals conducting post-construction BMP inspections
- Rain garden workshops, where participants install a rain garden at the end of classroom instructions.
- Rain barrel sales with information and demonstrations on installation
- Carolina Yards workshops with opportunities for soil testing and demonstrations
- Storm drain Marking

Activities more targeted to Beaufort County include:

- Shorescaping workshops, where participants install a shorescape at the end of classroom instructions.
- Regional river clean-up and beach sweeps
- Septic Inspection Training, where citizens learn to inspect their own septic tanks.
- Citizen monitoring of local waterways through the promotion of the South Carolina Adopt-A-Stream resources and distribution of kits to local interest groups.

Projects completed through public participation and involvement allow for more demonstration sites in Beaufort County, a more involved public, and a training grounds for professional development, while making meaningful water quality improvements.

MEMORANDUM

Date: February 15, 2017

To: Stormwater Management Utility Board

From: David Wilhelm, P. E., Public Works Director

Re: **Maintenance Project Report**

This report will cover twelve minor projects. The Project Summary Reports are attached.

Minor or Routine Projects:

- **St. Helena Island bush hog - (SWUD 8):** Work for this project included Bush hogging the work shelves at twenty-two different locations. Routine cutting of vegetation on the work shelf is necessary to maintain accessibility to the drainage channel. The work was performed over a five month period. The cost of this project was **$41,190.85.**
- **Huspah Court South – Sheldon (SWUD 5):** The project scope included cleaning 205 feet of drainage channel, installing one access pipe, and placing rip rap. The total cost was **$11,884.54.**
- **Lady's Island Vacuum Truck – Lady's Island (SWUD 7):** This project included vacuum cleaning drainage systems at five locations. Structures cleaned included 92 feet of roadside pipe, 5 catch basins, 1 driveway pipe, and 6 crossline pipes. The total cost was **$4,830.27.**
- **Bluffton Vacuum Truck – Bluffton (SWUD 9):** This project included vacuum cleaning drainage systems at five locations. Structures cleaned included 313 feet of roadside pipe, 4 catch basins, 20 driveway pipes, 7 crossline pipes, and 60 feet of channel pipe. The total cost was **$4,641.45.**
- **Port Royal Island Vacuum Truck – Port Royal Island (SWUD 6):** This project included vacuum cleaning drainage systems at four locations. Structures cleaned included 4 catch basins, 2 driveway pipes, 5 crossline pipes, and 8 feet of channel pipe. The total cost was **$3,282.28.**
- **St. Helena Island Vacuum Truck – St. Helena Island (SWUD 8):** This project included vacuum cleaning drainage systems at six locations. Structures cleaned included 10 catch basins, 1 driveway pipes, 3 crossline pipes, and 300 feet of channel pipe. The total cost was **$2,786.19.**
- **Sheldon Vacuum Truck – Sheldon (SWUD 5):** This project included vacuum cleaning drainage systems at three locations. Structures cleaned included 25 driveway pipes, 10 crossline pipes, 1 access pipe, and 40 feet of channel pipe. The total cost was **$2,598.60.**
- **Rivers End Drive – Bluffton (SWUD 9):** Work for this project included repairing a washout and installing rip rap. The total cost was **$2,135.79.**

- **McTeer Drive – St. Helena Island (SWUD 8):** This project included jet cleaning two crossline pipes to remove sediment build up. The total cost was **$2,001.20.**
- **Port Royal Island Repair Washouts – Port Royal Island (SWUD 6):** This project consisted of repairing a washout on Quarter Horse Road. The total cost was **$1,391.64.**
- **Orange Grove Road – St. Helena Island (SWUD 8):** This project included removing blockages from the flowline of the drainage channel and installing 30 feet of drainage pipe. The total cost was **$1,375.62.**
- **Beaufort County Administration Building Parking Lot – City of Beaufort (SWUD 1):** This project included jet cleaning 176 feet of channel pipe. The total cost was **$1,333.58.**

Beaufort County
Public Works
Stormwater Infrastructure
Project Summary

Project Summary: St. Helena Island Bush Hog

Activity: Routine/Preventive Maintenance

Narrative Description of Project:

Completion: 10/4/16

First rotation from June 2016 to October 2016. Project improved 62,491 L.F. of drainage system.
Bush hogged 62,491 L.F. of channel. This project consisted of the following areas: Mattis Drive (812 L.F.), Faith Memorial Church (1,500 L.F.), Orange Grove Road (5,600 L.F.), James D. Washington Road (500 L.F.), Bridgewood Road (806 L.F.), Sycamore Hill Road (2,370 L.F.), Capers Island Road (1,205 L.F.), David Green Road (960 L.F.), James Grant Road (1,082 L.F.), Scott Hill Road (12,408 L.F.), Candy Johnson Drive (935 L.F.), Peaches Hill Circle (12,996 L.F.), No Man Land (1,242 L.F.), Wiggfall Road (550 L.F.), Jack Johnson Drive (1,362 L.F.), Adam Church Channel (309 L.F.), Toomer Road (4,700 L.F.), Tombee Road (1,600 L.F.), Cuffy Drop Off Center (400 L.F.), Halifax Drive (5,054 L.F.), Archer Fields Lane (1,000 L.F.), and Kelis Lane (5,100 L.F.)

2017-300 / St. Helena Island Bush Hog	**Labor Hours**	**Labor Cost**	**Equipment Cost**	**Material Cost**	**Contractor Cost**	**Indirect Labor**	**Total Cost**
AUDIT / Audit Project	2.0	$46.98	$0.00	$0.00	$0.00	$26.46	$73.44
CBH / Channel- bushhogged	868.0	$19,420.55	$7,106.75	$1,706.27	$0.00	$12,527.10	$40,760.67
ONJV / Onsite Job Visit	2.0	$68.36	$7.08	$7.52	$0.00	$48.94	$131.90
WSBH / Workshelf - Bush Hogged	4.0	$99.84	$35.36	$22.92	$0.00	$66.72	$224.84
2017-300 / St. Helena Island Bush Hog Sub Total	**876.0**	**$19,635.73**	**$7,149.19**	**$1,736.71**	**$0.00**	**$12,669.22**	**$41,190.85**
Grand Total	**876.0**	**$19,635.73**	**$7,149.19**	**$1,736.71**	**$0.00**	**$12,669.22**	**$41,190.85**

Before

During

After

Beaufort County
Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Huspah Court South

Activity: Routine/Preventive Maintenance

Narrative Description of Project:

Duration: 12/8/16 - 12/12/16

Project improved 205 L.F. of drainage system. Cleaned out 205 L.F. of channel. Installed (1) access pipe and rip rap for erosion control.

2017-520 / Huspah Court South	**Labor Hours**	**Labor Cost**	**Equipment Cost**	**Material Cost**	**Contractor Cost**	**Indirect Labor**	**Total Cost**
APINS / Access pipe - installed	30.0	$704.80	$184.62	$1,176.17	$0.00	$461.70	$2,527.29
AUDIT / Audit Project	0.5	$11.75	$0.00	$0.00	$0.00	$6.62	$18.36
CCO / Channel - cleaned out	30.0	$692.80	$177.48	$46.31	$0.00	$451.50	$1,368.09
HAUL / Hauling	35.0	$779.45	$308.25	$6,378.40	$0.00	$504.70	$7,970.80
2017-520 / Huspah Court South Sub Total	**95.5**	**$2,188.80**	**$670.35**	**$7,600.88**	**$0.00**	**$1,424.52**	**$11,884.54**
Grand Total	**95.5**	**$2,188.80**	**$670.35**	**$7,600.88**	**$0.00**	**$1,424.52**	**$11,884.54**

Before

During

After

Project: Huspah Court South

Activity: Routine/ Preventive Maintenance

Project #: 2017-520

Township/SW Dist: Sheldon/5

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 40 80 160 240 320 Feet

1 inch = 170 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/26/17
File:C:\project summaries map/Huspah Court South_2017-520

Beaufort County
Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Ladys Island Vacuum Truck - Ethel Grant Lane, Black Skimmer Court, Gumwood Drive, Mockingbird Drive and Flamingo Cove

Activity: Routine/Preventive Maintenance

Narrative Description of Project:
Project improved 92 L.F. of drainage system. Cleaned out (5) catch basins. Jetted (1) driveway pipe, (6) crossline pipes and 92 L.F. of roadside pipe.

Duration: 7/14/16 - 11/1/16

2017-307 / Ladys Island Vacuum Truck	**Labor Hours**	**Labor Cost**	**Equipment Cost**	**Material Cost**	**Contractor Cost**	**Indirect Labor**	**Total Cost**
AUDIT / Audit Project	0.5	$11.75	$0.00	$0.00	$0.00	$6.62	$18.36
CBCO / Catch basin - clean out	24.0	$549.12	$104.16	$2,906.76	$0.00	$349.26	$3,909.30
CLPJT / Crossline Pipe - Jetted	16.0	$367.12	$69.44	$43.51	$0.00	$234.36	$714.43
DPJT / Driveway Pipe - Jetted	4.0	$92.04	$17.36	$18.96	$0.00	$59.82	$188.18
2017-307 / Ladys Island Vacuum Truck Sub Total	**44.5**	**$1,020.03**	**$190.96**	**$2,969.23**	**$0.00**	**$650.05**	**$4,830.27**
Grand Total	**44.5**	**$1,020.03**	**$190.96**	**$2,969.23**	**$0.00**	**$650.05**	**$4,830.27**

Before

During

After

Project: Lady's Island Vacuum Truck- Ethel Grant Lane
Map #1

Activity: Routine/ Preventive Maintenance

Project #: 2017-307

Township/SW Dist: Lady's Island/7

Completed: November 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 5 10 20 30 40 Feet

1 inch = 25 feet

Prepared By: BC Stormwater Management Utility
Date Print:1/26/17
File:C:\project summaries map/Ladys Island Vacuum Truck- Ethel Grant Lane Map#1_2017-307

Project: Lady's Island Vacuum Truck- Black Skimmer Court Map #2

Activity: Routine/ Preventive Maintenance

Project #: 2017-307

Township/SW Dist: Lady's Island/7

Completed: November 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 10 20 40 60 80 Feet

1 inch = 42 feet

Prepared By: BC Stormwater Management Utility
Date Print:1/26/17
File:C:\project summaries map/Ladys Island Vacuum Truck- Black Skimmer Court Map#2_2017-307

Project: Lady's Island Vacuum Truck- Gumwood Drive
Map #3

Activity: Routine/ Preventive Maintenance

Project #: 2017-307

Township/SW Dist: Lady's Island/7

Completed: November 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 25 50 100 150 200 Feet

1 inch = 100 feet

Prepared By: BC Stormwater Management Utility
Date Print:1/26/17
File:C:\project summaries map/Ladys Island Vacuum Truck- Gumwood Drive Map#3_2017-307

Project: Lady's Island Vacuum Truck- Flamingo Cove
Map #4

Activity: Routine/ Preventive Maintenance

Project #: 2017-307

Township/SW Dist: Lady's Island/7

Completed: November 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 25 50 100 150 200 Feet

1 inch = 100 feet

Prepared By: BC Stormwater Management Utility
Date Print:1/26/17
File:C:\project summaries map/Ladys Island Vacuum Truck- Flamingo Cove Map#4_2017-307

Project: Lady's Island Vacuum Truck-Mockingbird Drive
Map #5

Activity: Routine/ Preventive Maintenance

Project #: 2017-307

Township/SW Dist: Lady's Island/7

Completed: November 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 10 20 40 60 80 Feet

1 inch = 50 feet

Prepared By: BC Stormwater Management Utility
Date Print:1/26/17
File:C:\project summaries map/Ladys Island Vacuum Truck- Mockingbird Drive Map#5_2017-307

Beaufort County
Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Bluffton Vacuum Truck - Fairfax Street, Graves Road, Bluffton Fuel Site, Palmetto Beach Lane, and Lake Point Drive

Activity: Routine/Preventive Maintenance

Narrative Description of Project:

Duration: 6/23/16 - 12/13/16

Project improved 350 L.F. of drainage system. Cleaned out (4) catch basins. Jetted (7) crossline pipes, (20) driveway pipes, 60 L.F. of channel pipe and 313 L.F. of roadside pipe.

2017-310 / Bluffton Vacuum Truck	**Labor Hours**	**Labor Cost**	**Equipment Cost**	**Material Cost**	**Contractor Cost**	**Indirect Labor**	**Total Cost**
AUDIT / Audit Project	0.5	$11.75	$0.00	$0.00	$0.00	$6.62	$18.36
CLPJT / Crossline Pipe - Jetted	39.0	$894.14	$173.60	$111.40	$0.00	$570.57	$1,749.71
PRRECON / Project Reconnaissance	10.0	$228.80	$43.40	$34.38	$0.00	$143.40	$449.98
RSPJ / Roadside Pipe - Jetted	40.0	$927.40	$173.60	$149.13	$0.00	$605.90	$1,856.03
SPSWI / Special Project - SWI	11.0	$260.78	$69.44	$68.76	$0.00	$168.39	$567.37
2017-310 / Bluffton Vacuum Truck Sub Total	**100.5**	**$2,322.87**	**$460.04**	**$363.67**	**$0.00**	**$1,494.88**	**$4,641.45**
Grand Total	**100.5**	**$2,322.87**	**$460.04**	**$363.67**	**$0.00**	**$1,494.88**	**$4,641.45**

Before

During

After

Project: Bluffton Vac Truck- Fairfax Street Map #1

Activity: Routine/ Preventive Maintenance

Project #: 2017-310

Township/SW Dist: Bluffton/9

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 15 30 60 90 120 Feet

1 inch = 67 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/24/17
File:C:\project summaries map/Bluffton Vac Truck- Fairfax Street Map #1_2017-310

Project: Bluffton Vac Truck- Fairfax Street Map #2

Activity: Routine/ Preventive Maintenance

Project #: 2017-310

Township/SW Dist: Bluffton/9

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 10 20 40 60 80 Feet

1 inch = 42 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/24/17
File:C:\project summaries map/Bluffton Vac Truck- Fairfax Street Map #2_2017-310

Project: Bluffton Vac Truck- Graves Road Map #3

Activity: Routine/ Preventive Maintenance

Project #: 2017-310

Township/SW Dist: Bluffton/9

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 20 40 80 120 160 Feet

1 inch = 83 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/24/17
File:C:\project summaries map/Bluffton Vac Truck- Graves Road Map #3_2017-310

Project: Bluffton Vac Truck- Graves Road Map #4

Activity: Routine/ Preventive Maintenance

Project #: 2017-310

Township/SW Dist: Bluffton/9

Completed: December 2016

Legend

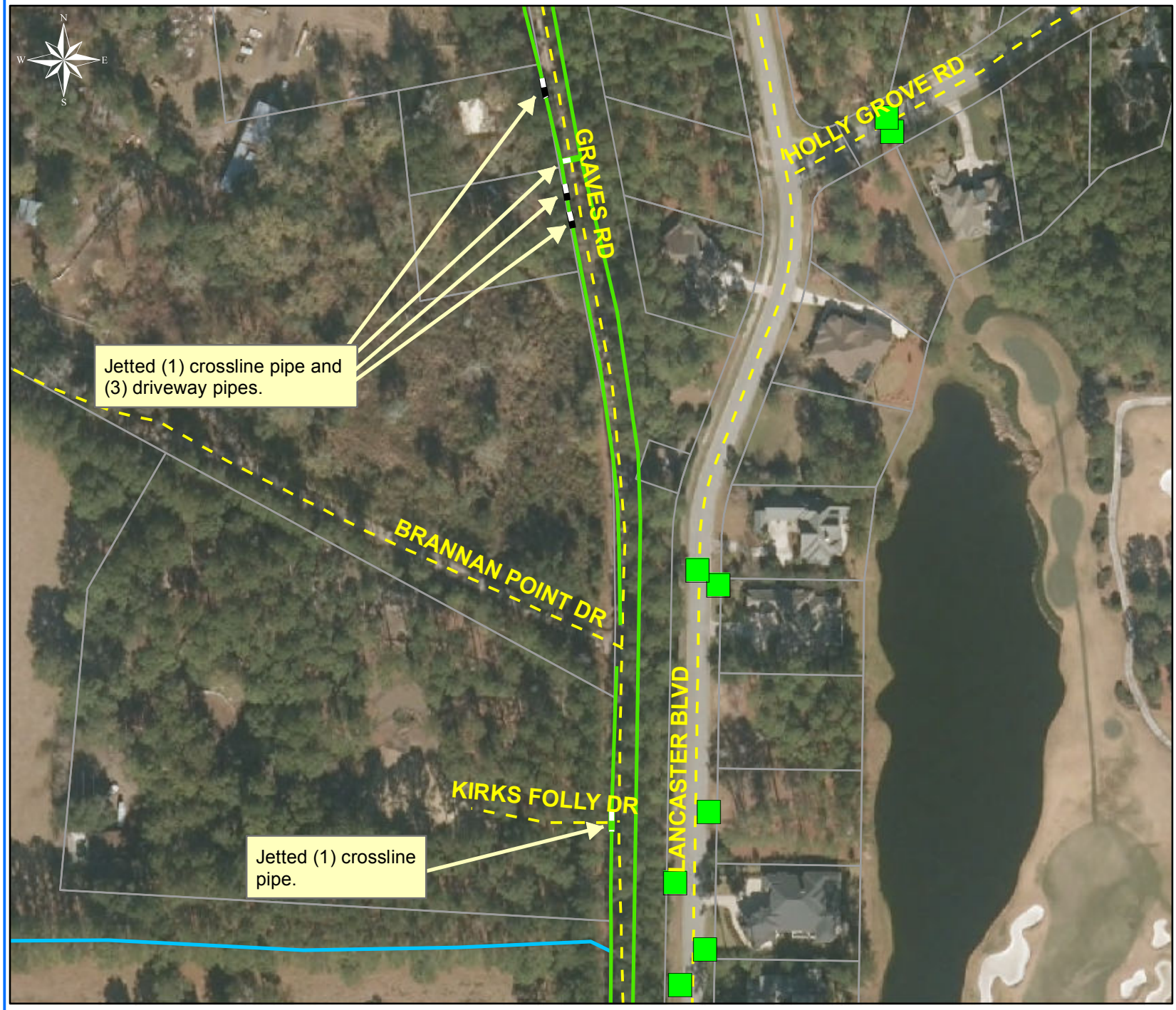
Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 30 60 120 180 240 Feet

1 inch = 130 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/24/17
File:C:\project summaries map/Bluffton Vac Truck- Graves Road Map #4_2017-310



Project: Bluffton Vac Truck- Graves Road Map #5

Activity: Routine/ Preventive Maintenance

Project #: 2017-310

Township/SW Dist: Bluffton/9

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 40 80 160 240 320 Feet

1 inch = 170 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/24/17
File:C:\project summaries map/Bluffton Vac Truck- Graves Road Map #5_2017-310

Project: Bluffton Vac Truck- Lake Point Drive Map #6

Activity: Routine/ Preventive Maintenance

Project #: 2017-310

Township/SW Dist: Bluffton/9

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 20 40 80 120 160 Feet

1 inch = 83 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/24/17
File:C:\project summaries map/Bluffton Vac Truck- Lake Point Drive Map #6_2017-310

Beaufort County
Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Port Royal Island Vacuum Truck - Biddie Lane, Donaldson Camp Road, Public Works Complex, and Roosevelt Avenue.

Activity: Routine/Preventive Maintenance

Narrative Description of Project:

Project improved 8 L.F. of drainage system. Cleaned out (4) catch basins. Jetted (2) driveway pipes, (5) crossline pipes and 8 L.F. of channel pipe.

Duration: 8/30/16 - 12/8/16

2017-306 / Port Royal Island Vacuum Truck	**Labor Hours**	**Labor Cost**	**Equipment Cost**	**Material Cost**	**Contractor Cost**	**Indirect Labor**	**Total Cost**
AUDIT / Audit Project	0.5	$11.75	$0.00	$0.00	$0.00	$6.62	$18.36
CBCO / Catch basin - clean out	56.0	$1,264.48	$243.04	$56.29	$0.00	$817.32	$2,381.13
CLPJT / Crossline Pipe - Jetted	19.0	$442.72	$104.16	$46.65	$0.00	$289.26	$882.79
2017-306 / Port Royal Island Vacuum Truck Sub Total	**75.5**	**$1,718.95**	**$347.20**	**$102.94**	**$0.00**	**$1,113.20**	**$3,282.28**
Grand Total	**75.5**	**$1,718.95**	**$347.20**	**$102.94**	**$0.00**	**$1,113.20**	**$3,282.28**

Before

During

After

Project: PRI Vac Truck- Biddie Lane
Map #1

Activity: Routine/ Preventive Maintenance

Project #: 2017-306

Township/SW Dist: Port Royal Island/6

Completed: December 2016

Legend

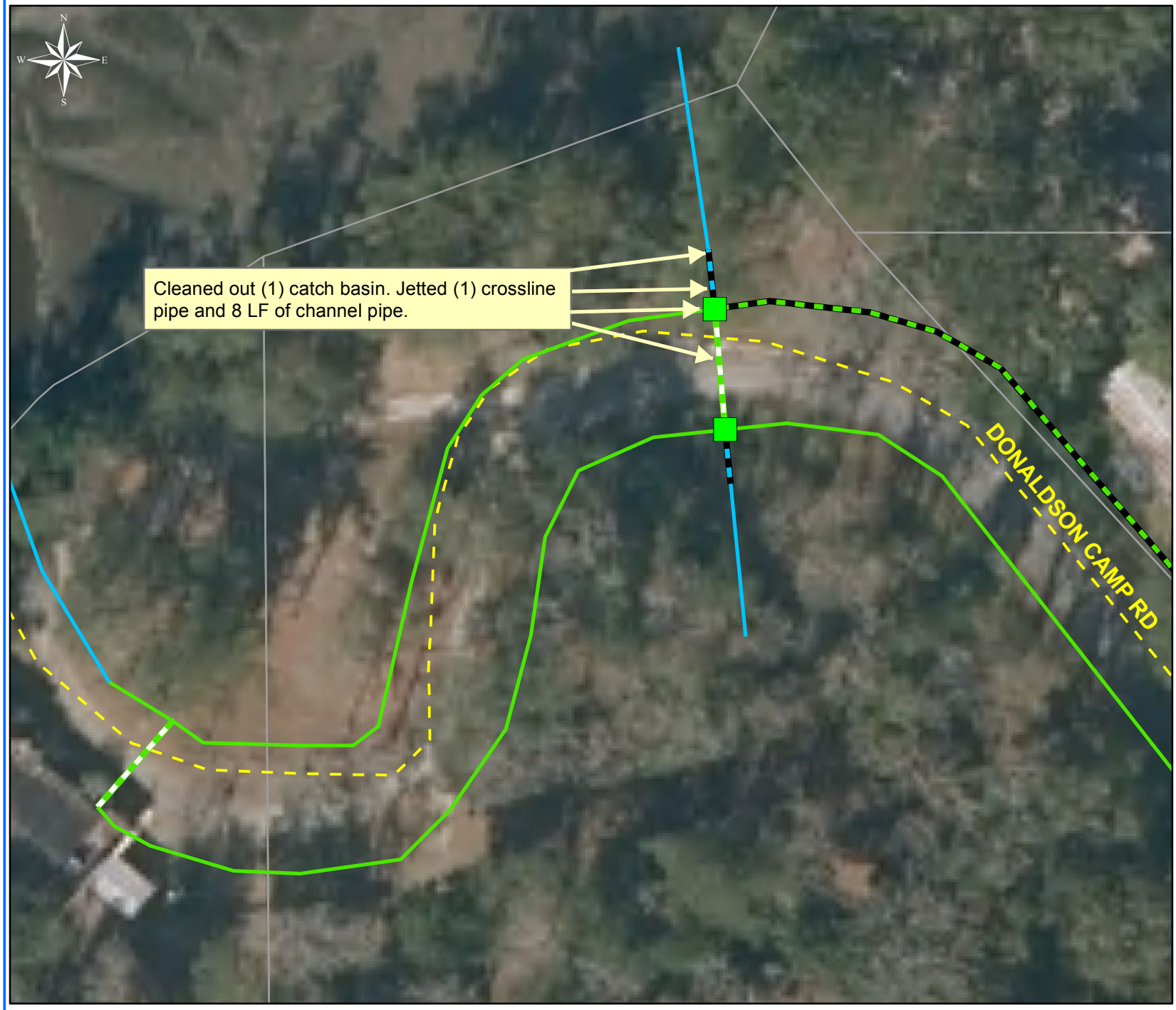
Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 10 20 40 60 80 Feet

1 inch = 50 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/24/17
File:C:\project summaries map/Biddie Lane Map#1_2017-306



Project: PRI Vac Truck- Donaldson Camp Road Map #2

Activity: Routine/ Preventive Maintenance

Project #: 2017-306

Township/SW Dist: Port Royal Island/6

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 10 20 40 60 80 Feet

1 inch = 50 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/24/17
File:C:\project summaries map/PRI Vac Truck- Donaldson Camp Road_Map#2_2016-502

Project: PRI Vac Truck- Public Works Complex Map #3

Activity: Routine/ Preventive Maintenance

Project #: 2017-306

Township/SW Dist: Port Royal Island/6

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 25 50 100 150 200 Feet

1 inch = 100 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/24/17
File:C:\project summaries map/PRI Vac Truck- Public Works Complex_Map#3_2016-306

Project: PRI Vac Truck- Roosevelt Avenue
Map #4

Activity: Routine/ Preventive Maintenance

Project #: 2017-306

Township/SW Dist: Port Royal Island/6

Completed: Decembert 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 25 50 100 150 200 Feet

1 inch = 100 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/24/17
File:C:\project summaries map/PRI Vac Truck- Roosevelt Avenue_Map#4_2016-306

Beaufort County
Public Works
Stormwater Infrastructure
Project Summary

Project Summary: St Helena Island Vacuum Truck - Bay Point Road, Mary Jenkins Circle, Penn Center Circle West, St Helena Island Library, Hunters Grove Road and Tombee Road

Activity: Routine/Preventive Maintenance

Narrative Description of Project:

Project improved 300 L.F. of drainage system. Cleaned out (10) catch basins. Jetted (1) driveway pipe, (3) crossline pipes and 300 L.F. of channel pipe.

Duration: 8/23/16 - 12/7/16

2017-309 / St Helena Island Vacuum Truck	**Labor Hours**	**Labor Cost**	**Equipment Cost**	**Material Cost**	**Contractor Cost**	**Indirect Labor**	**Total Cost**
AUDIT / Audit Project	0.5	$11.75	$0.00	$0.00	$0.00	$6.62	$18.36
CBCO / Catch basin - clean out	32.0	$735.28	$138.88	$119.78	$0.00	$477.72	$1,471.66
CLPJT / Crossline Pipe - Jetted	17.0	$394.42	$86.80	$83.90	$0.00	$250.17	$815.29
CPJ / Channel Pipe - Jetted	2.0	$45.76	$8.68	$9.80	$0.00	$28.68	$92.92
DPJT / Driveway Pipe - Jetted	6.0	$138.06	$26.04	$45.70	$0.00	$89.73	$299.53
PRRECON / Project Reconnaissance	2.0	$46.02	$8.68	$3.82	$0.00	$29.91	$88.43
2017-309 / St Helena Island Vacuum Truck Sub Total	**59.5**	**$1,371.29**	**$269.08**	**$263.00**	**$0.00**	**$882.83**	**$2,786.19**
Grand Total	**59.5**	**$1,371.29**	**$269.08**	**$263.00**	**$0.00**	**$882.83**	**$2,786.19**

Before

After

Project: St. Helena Island Vac Truck- Bay Point Road Map #1

Activity: Routine/ Preventive Maintenance

Project #: 2017-309

Township/SW Dist: St. Helena Island/8

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 35 70 140 210 280 Feet

1 inch = 150 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/26/17
File:C:\project summaries map/St. Helena Island Vac Truck- Bay Point Road Map #1_2017-309

Project: St. Helena Island Vac Truck- Mary Jenkins Circle Map #2

Activity: Routine/ Preventive Maintenance

Project #: 2017-309

Township/SW Dist: St. Helena Island/8

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 15 30 60 90 120 Feet

1 inch = 67 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/26/17
File:C:\project summaries map/St. Helena Island Vac Truck- Mary Jenkins Circle Map #2_2017-309

Project: St. Helena Island Vac Truck- Penn Center Circle West
Map #3

Activity: Routine/ Preventive Maintenance

Project #: 2017-309

Township/SW Dist: St. Helena Island/8

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 15 30 60 90 120 Feet

1 inch = 67 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/26/17
File:C:\project summaries map/St. Helena Island Vac Truck- Penn Center Circle West Map #3_2017-309

Project: St. Helena Island Vac Truck- St. Helena Island Library
Map #4

Activity: Routine/ Preventive Maintenance

Project #: 2017-309

Township/SW Dist: St. Helena Island/8

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 20 40 80 120 160 Feet

1 inch = 83 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/26/17
File:C:\project summaries map/St. Helena Island Vac Truck- St. Helena Island Library Map #4_2017-309

Project: St. Helena Island Vac Truck- Hunters Grove Road Map #5

Activity: Routine/ Preventive Maintenance

Project #: 2017-309

Township/SW Dist: St. Helena Island/8

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 25 50 100 150 200 Feet

1 inch = 100 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/26/17
File:C:\project summaries map/St. Helena Island Vac Truck- Hunters Grove Road Map #5_2017-309

Project: St. Helena Island Vac Truck- Tombee Road Map #6

Activity: Routine/ Preventive Maintenance

Project #: 2017-309

Township/SW Dist: St. Helena Island/8

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 30 60 120 180 240 Feet

1 inch = 130 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/26/17
File:C:\project summaries map/St. Helena Island Vac Truck- Tombee Road Map #6_2017-309

Project: St. Helena Island Vac Truck- Tombee Road Map #7

Activity: Routine/ Preventive Maintenance

Project #: 2017-309

Township/SW Dist: St. Helena Island/8

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 25 50 100 150 200 Feet

1 inch = 100 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/26/17
File:C:\project summaries map/St. Helena Island Vac Truck- Tombee Road Map #7_2017-309

Project: St. Helena Island Vac Truck- Tombee Road Map #8

Activity: Routine/ Preventive Maintenance

Project #: 2017-309

Township/SW Dist: St. Helena Island/8

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 25 50 100 150 200 Feet

1 inch = 100 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/26/17
File:C:\project summaries map/St. Helena Island Vac Truck- Tombee Road Map #8_2017-309

Beaufort County
Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Sheldon Vacuum Truck - Paige Point Bluff, Paige Point Landing and Backache Acres

Activity: Routine/Preventive Maintenance

Narrative Description of Project:

Project improved 40 L.F. of drainage system. Jetted (1) access pipe, (10) crossline pipes, (25) driveway pipes and 40 L.F. of channel pipe.

Duration: 8/22/16 - 8/31/16

2017-308 / Sheldon Vacuum Truck	**Labor Hours**	**Labor Cost**	**Equipment Cost**	**Material Cost**	**Contractor Cost**	**Indirect Labor**	**Total Cost**
AUDIT / Audit Project	0.5	$11.75	$0.00	$0.00	$0.00	$6.62	$18.36
CLPJT / Crossline Pipe - Jetted	36.0	$843.18	$199.64	$147.08	$0.00	$543.69	$1,733.59
CPJ / Channel Pipe - Jetted	4.0	$104.16	$17.36	$11.26	$0.00	$70.38	$203.16
DPJT / Driveway Pipe - Jetted	10.0	$247.00	$86.80	$43.28	$0.00	$164.70	$541.78
PRRECON / Project Reconnaissance	2.0	$46.02	$8.68	$17.10	$0.00	$29.91	$101.71
2017-308 / Sheldon Vacuum Truck Sub Total	**52.5**	**$1,252.11**	**$312.48**	**$218.72**	**$0.00**	**$815.30**	**$2,598.60**
Grand Total	**52.5**	**$1,252.11**	**$312.48**	**$218.72**	**$0.00**	**$815.30**	**$2,598.60**

Before

During

After

Project: Sheldon Vac Truck- Paige Point Bluff Map #1

Activity: Routine/ Preventive Maintenance

Project #: 2017-308

Township/SW Dist: Sheldon/5

Completed: August 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 30 60 120 180 240 Feet

1 inch = 130 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/18/17
File:C:\project summaries map/Sheldon Vac Truck-Paige Point Bluff Map#1_2017-308

Project: Sheldon Vac Truck- Paige Point Bluff Map #2

Activity: Routine/ Preventive Maintenance

Project #: 2017-308

Township/SW Dist: Sheldon/5

Completed: August 2016

Legend

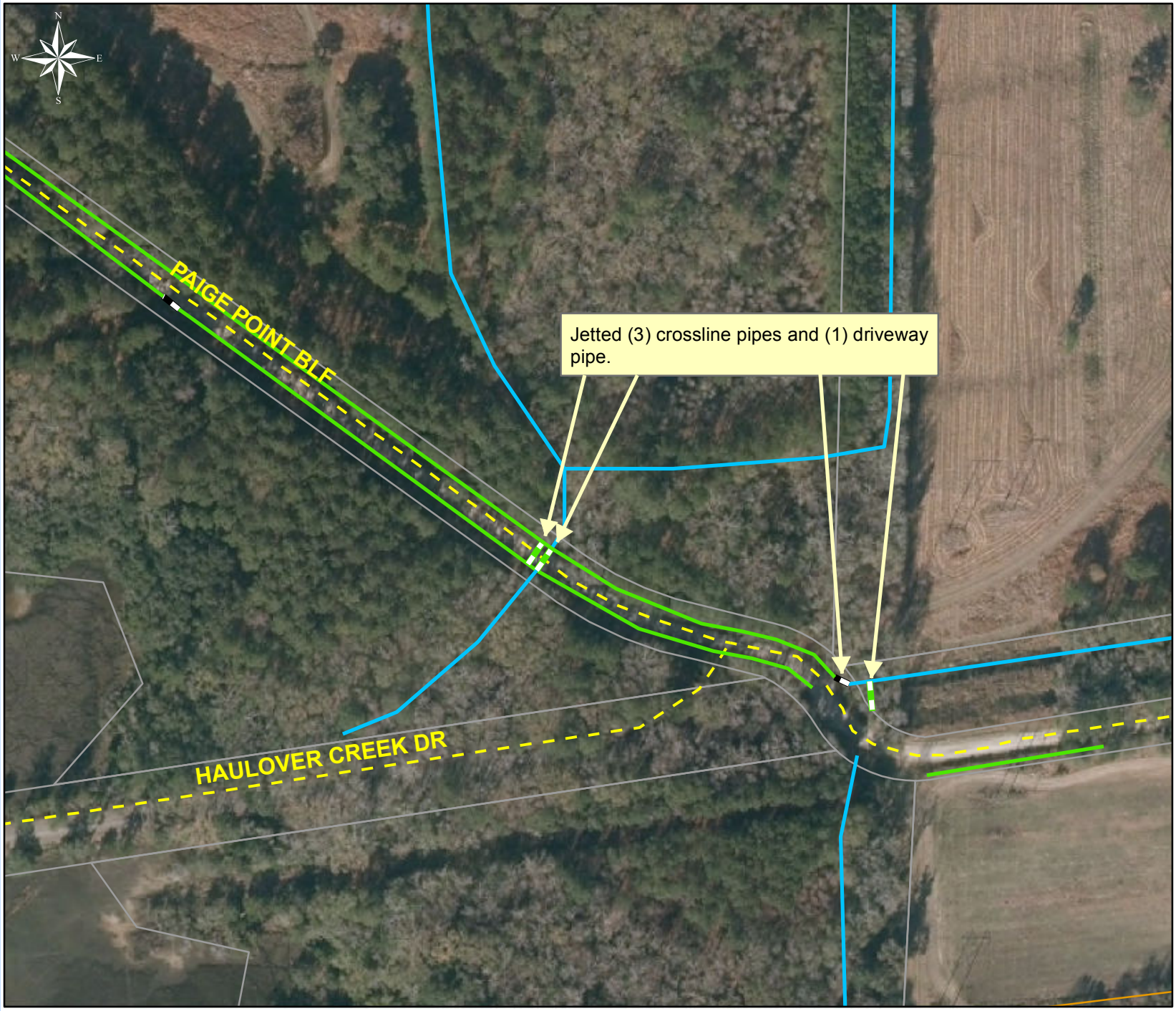
Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 20 40 80 120 160 Feet

1 inch = 83 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/18/17
File:C:\project summaries map/Sheldon Vac Truck-Paige Point Bluff Map#2_2017-308



Project: Sheldon Vac Truck- Paige Point Bluff Map #3

Activity: Routine/ Preventive Maintenance

Project #: 2017-308

Township/SW Dist: Sheldon/5

Completed: August 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 40 80 160 240 320 Feet

1 inch = 170 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/18/17
File:C:\project summaries map/Sheldon Vac Truck-Paige Point Bluff Map#3_2017-308

Project: Sheldon Vac Truck- Paige Point Bluff Map #4

Activity: Routine/ Preventive Maintenance

Project #: 2017-308

Township/SW Dist: Sheldon/5

Completed: August 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 60 120 240 360 480 Feet

1 inch = 250 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/18/17
File:C:\project summaries map/Sheldon Vac Truck-Paige Point Bluff Map#4_2017-308

Project: Sheldon Vac Truck- Paige Point Bluff Map #5

Activity: Routine/ Preventive Maintenance

Project #: 2017-308

Township/SW Dist: Sheldon/5

Completed: August 2016

Legend

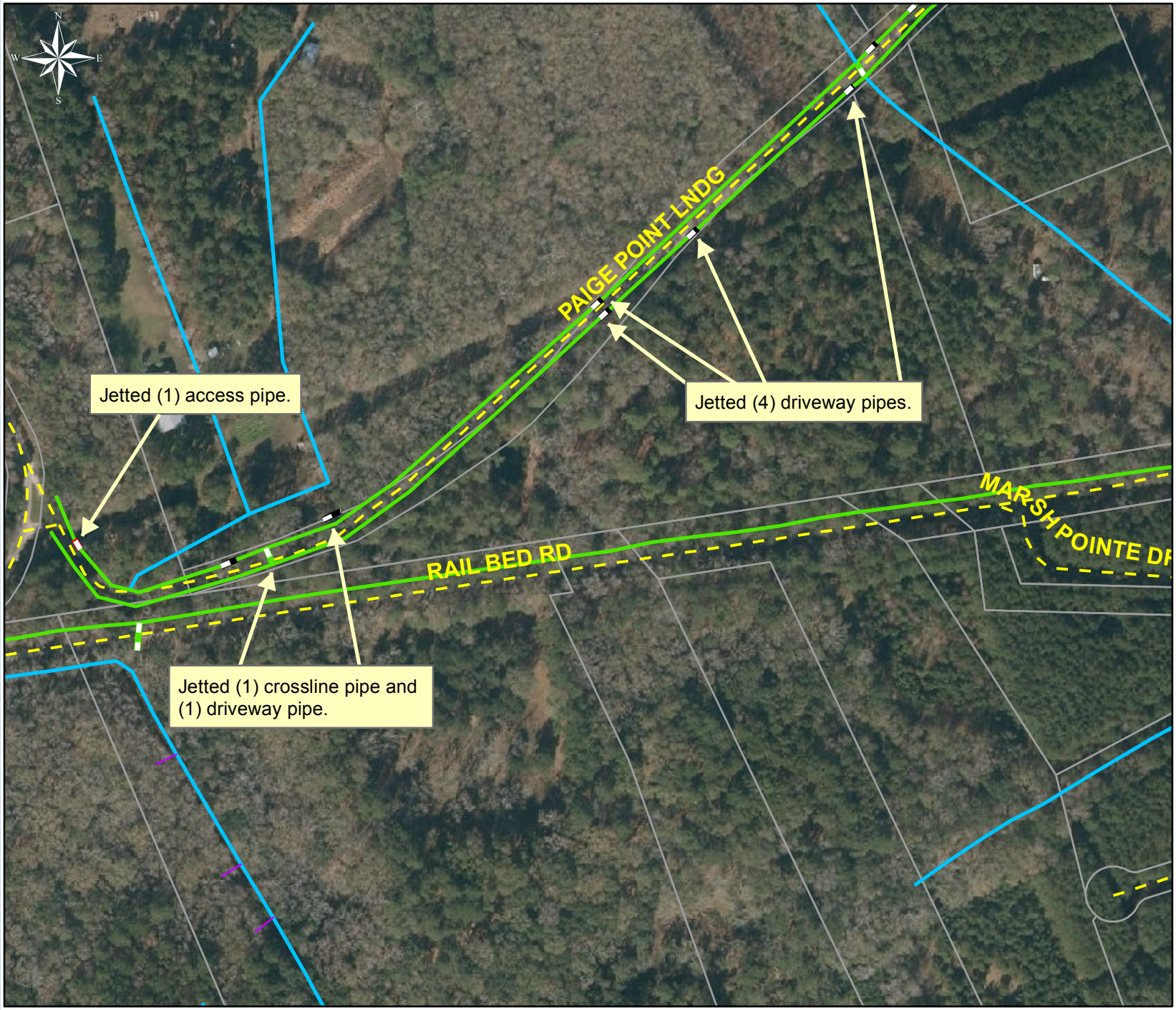
Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 30 60 120 180 240 Feet

1 inch = 130 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/18/17
File:C:\project summaries map/Sheldon Vac Truck-Paige Point Bluff Map#5_2017-308



Project: Sheldon Vac Truck- Paige Point Landing Map #6

Activity: Routine/ Preventive Maintenance

Project #: 2017-308

Township/SW Dist: Sheldon/5

Completed: August 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 60 120 240 360 480 Feet

1 inch = 250 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/18/17
File:C:\project summaries map/Sheldon Vac Truck-Paige Point Landing Map#6_2017-308

Project: Sheldon Vac Truck- Paige Point Landing Map #7

Activity: Routine/ Preventive Maintenance

Project #: 2017-308

Township/SW Dist: Sheldon/5

Completed: August 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 30 60 120 180 240 Feet

1 inch = 130 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/18/17
File:C:\project summaries map/Sheldon Vac Truck-Paige Point Landing Map#7_2017-308

Project: Sheldon Vac Truck-Backache Acres Map #8

Activity: Routine/ Preventive Maintenance

Project #: 2017-308

Township/SW Dist: Sheldon/5

Completed: August 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 25 50 100 150 200 Feet

1 inch = 100 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/18/17
File:C:\project summaries map/Sheldon Vac Truck-Backache Acres Map#8_2017-308

Beaufort County
Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Rivers End Drive

Activity: Routine/Preventive Maintenance

Narrative Description of Project:
Repaired washout. Installed rip rap for erosion control.

Duration: 12/7/16

2017-519 / Rivers End Drive	**Labor Hours**	**Labor Cost**	**Equipment Cost**	**Material Cost**	**Contractor Cost**	**Indirect Labor**	**Total Cost**
AUDIT / Audit Project	0.5	$11.75	$0.00	$0.00	$0.00	$6.62	$18.36
HAUL / Hauling	5.0	$111.35	$47.10	$453.21	$0.00	$72.10	$683.76
PROFS / Professional Services	0.0	$0.00	$0.00	$0.00	$564.92	$0.00	$564.92
RPWO / Repaired Washout	20.0	$475.95	$67.54	$22.30	$0.00	$302.95	$868.74
2017-519 / Rivers End Drive Sub Total	**25.5**	**$599.05**	**$114.64**	**$475.52**	**$564.92**	**$381.66**	**$2,135.79**
Grand Total	**25.5**	**$599.05**	**$114.64**	**$475.52**	**$564.92**	**$381.66**	**$2,135.79**

(Pictures Not Available)

Project: Rivers End Drive

Activity: Routine/ Preventive Maintenance

Project #: 2017-519

Township/SW Dist: Bluffton/9

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 10 20 40 60 80 Feet

1 inch = 42 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/26/17
File:C:\project summaries map/Rivers End Drive_2017-519

Beaufort County
Public Works
Stormwater Infrastructure
Project Summary

Project Summary: McTeer Drive

Activity: Routine/Preventive Maintenance

Narrative Description of Project:
Jetted (2) crossline pipes.

Duration: 6/1/16 - 8/24/16

2016-012 / McTeer Drive	**Labor Hours**	**Labor Cost**	**Equipment Cost**	**Material Cost**	**Contractor Cost**	**Indirect Labor**	**Total Cost**
AUDIT / Audit Project	0.5	$11.75	$0.00	$0.00	$0.00	$6.62	$18.36
CLPJT / Crossline Pipe - Jetted	18.0	$418.98	$78.12	$47.20	$0.00	$274.09	$818.39
LP / Locate Pipe	20.0	$446.79	$17.70	$8.00	$0.00	$266.50	$738.99
MEET / Meetings	3.0	$136.80	$10.86	$6.40	$0.00	$101.88	$255.94
SVCREQ / Service Request	2.0	$91.20	$7.20	$3.20	$0.00	$67.92	$169.52
2016-012 / McTeer Drive Sub Total	**43.5**	**$1,105.52**	**$113.88**	**$64.80**	**$0.00**	**$717.00**	**$2,001.20**
Grand Total	**43.5**	**$1,105.52**	**$113.88**	**$64.80**	**$0.00**	**$717.00**	**$2,001.20**

Before

During

After

Project: McTeer Drive

Activity: Routine/ Preventive Maintenance

Project #: 2016-012

Township/SW Dist: St. Helena Island/8

Completed: August 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 40 80 160 240 320 Feet

1 inch = 170 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/26/17
File:C:\project summaries map/Mcteer Drive_2016-012

Beaufort County
Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Port Royal Island Repaired Washouts - Quarter Horse Road

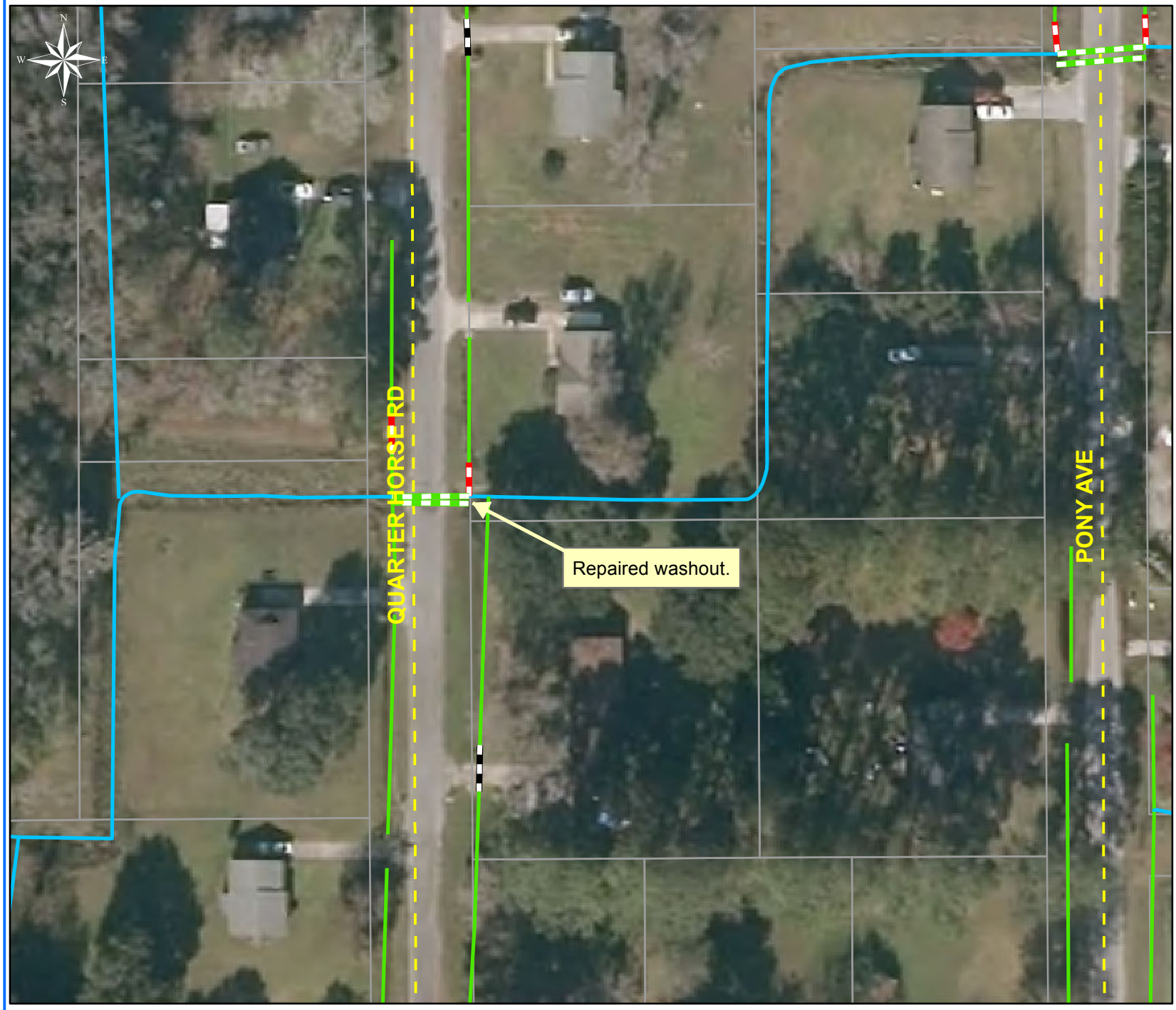
Activity: Routine/Preventive Maintenance

Narrative Description of Project:
Repaired washout.

Duration: 9/29/16

2017-320 / Port Royal Island Repaired Washouts	**Labor Hours**	**Labor Cost**	**Equipment Cost**	**Material Cost**	**Contractor Cost**	**Indirect Labor**	**Total Cost**
AUDIT / Audit Project	0.5	$11.75	$0.00	$0.00	$0.00	$6.62	$18.36
RPWO / Repaired Washout	20.0	$458.90	$114.64	$501.69	$0.00	$298.05	$1,373.28
2017-320 / Port Royal Island Repaired Washouts Sub Total	**20.5**	**$470.65**	**$114.64**	**$501.69**	**$0.00**	**$304.66**	**$1,391.64**
Grand Total	**20.5**	**$470.65**	**$114.64**	**$501.69**	**$0.00**	**$304.66**	**$1,391.64**

(Pictures Not Available)



Project: Port Royal Island Washout Repairs

Activity: Routine/ Preventive Maintenance

Project #: 2017-320

Township/SW Dist: Port Royal Island/6

Completed: September 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 15 30 60 90 120 Feet

1 inch = 67 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/26/17
File:C:\project summaries map/Port Royal Island Washout Repair_2017-320

Beaufort County
Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Orange Grove Road

Activity: Routine/Preventive Maintenance

Narrative Description of Project:

Duration: 12/13/2016

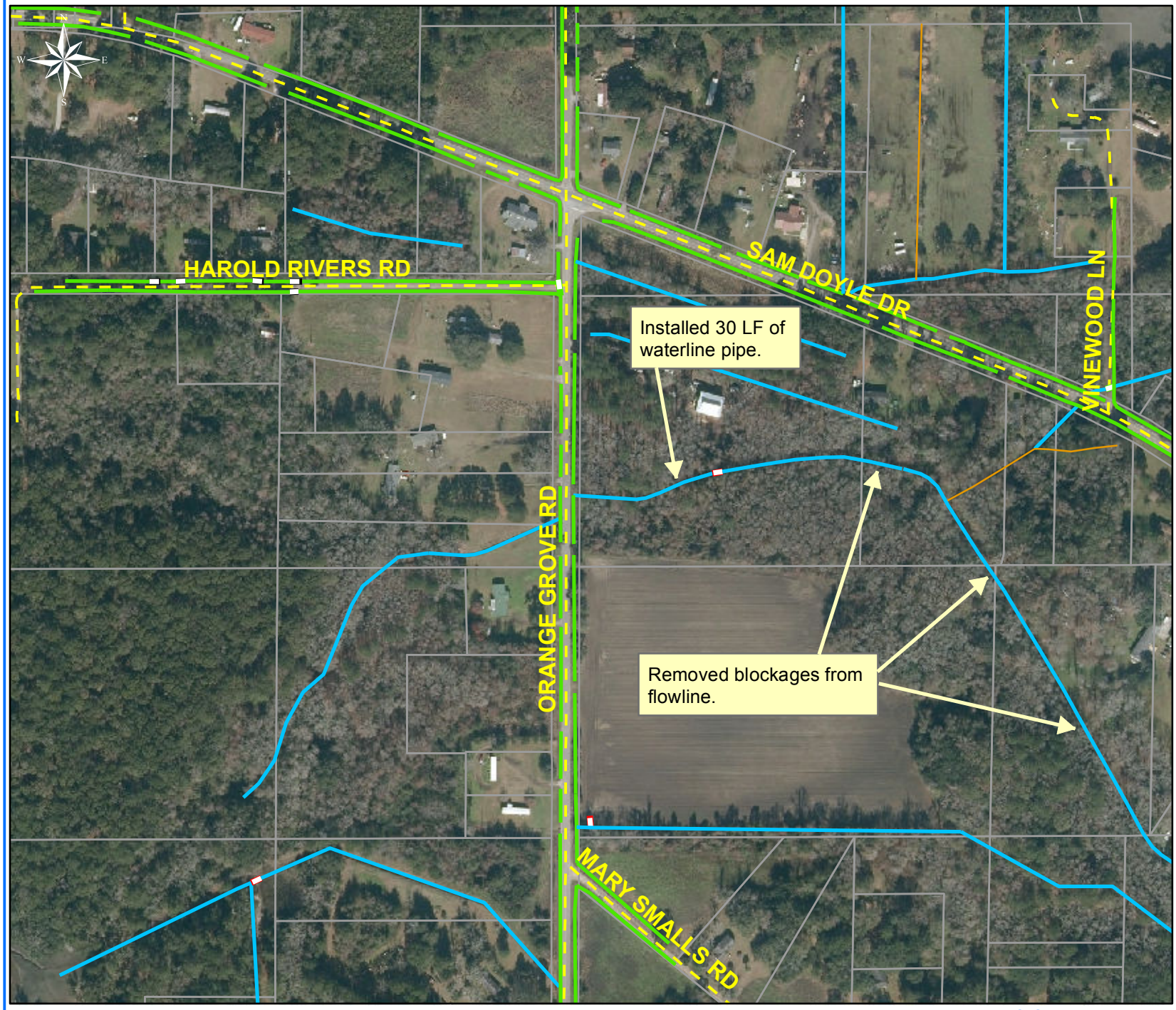
Installed 30 L.F. of waterline pipe. Removed blockages from flowline.

2017-521 / Orange Grove Road	**Labor Hours**	**Labor Cost**	**Equipment Cost**	**Material Cost**	**Contractor Cost**	**Indirect Labor**	**Total Cost**
AUDIT / Audit Project	0.5	$11.75	$0.00	$0.00	$0.00	$6.62	$18.36
HAUL / Hauling	11.0	$244.97	$96.47	$64.09	$0.00	$158.62	$564.15
RB / Remove blockage from flowline	18.0	$415.68	$95.91	$22.92	$0.00	$258.60	$793.11
2017-521 / Orange Grove Road Sub Total	**29.5**	**$672.40**	**$192.38**	**$87.01**	**$0.00**	**$423.83**	**$1,375.62**
Grand Total	**29.5**	**$672.40**	**$192.38**	**$87.01**	**$0.00**	**$423.83**	**$1,375.62**

Before

During

After



Project: Orange Grove Road

Activity: Routine/ Preventive Maintenance

Project #: 2017-521

Township/SW Dist: St. Helena Island/8

Completed: December 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 80 160 320 480 640 Feet

1 inch = 330 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/26/17
File:C:\project summaries map/Orange Grove Road_2017-521

Beaufort County
Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Beaufort County Administration Building Parking Lot

Activity: Routine/Preventive Maintenance

Narrative Description of Project:

Project improved 176 L.F. of drainage system. Jetted 176 L.F. of channel pipe.

Duration: 9/27/16 - 10/3/16

2017-529 / Beaufort County Admin. Bldg Parking Lot	**Labor Hours**	**Labor Cost**	**Equipment Cost**	**Material Cost**	**Contractor Cost**	**Indirect Labor**	**Total Cost**
AUDIT / Audit Project	0.5	$11.75	$0.00	$0.00	$0.00	$6.62	$18.36
CPJ / Channel Pipe - Jetted	31.0	$696.54	$104.16	$77.75	$0.00	$436.77	$1,315.22
2017-529 / Beaufort County Admin. Bldg Parking Lot Sub Total	**31.5**	**$708.29**	**$104.16**	**$77.75**	**$0.00**	**$443.39**	**$1,333.58**
Grand Total	**31.5**	**$708.29**	**$104.16**	**$77.75**	**$0.00**	**$443.39**	**$1,333.58**

(Pictures Not Available)

Project: Beaufort County Administrative Building Parking Lot

Activity: Routine/ Preventive Maintenance

Project #: 2017-529

Township/SW Dist: City of Beaufort/1

Completed: October 2016

Legend

Drainage Type

- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 10 20 40 60 80 Feet

1 inch = 50 feet

Prepared By: BC Stormwater Management Utility
Date Print:01/23/2017
File:C:\project summaries map/Beaufort County Administrative Bldg Parking Lot_2017-529

BEAUFORT COUNTY
STORMWATER MANAGEMENT UTILITY BOARD AGENDA
Wednesday, March 15, 2017
2:00 p.m.
Executive Conference Room, Administration Building
Beaufort County Government Robert Smalls Complex
100 Ribaut Road, Beaufort, South Carolina
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 – February 15, 2017 (backup)

2. INTRODUCTIONS

3. PUBLIC COMMENT

4. REPORTS
   A. Utility Update – Eric Larson, P.E. (backup)
   B. Monitoring Update – Eric Larson, P.E. (backup)
   C. Stormwater Implementation Committee Report – Eric Larson, P.E. (backup)
   D. Stormwater Related Projects – Eric Larson, P.E. (backup)
   E. Upcoming Professional Contracts Report – Eric Larson, P.E. (backup)
   F. Regional Coordination – Eric Larson, P.E. (backup)
   G. Municipal Reports – Eric Larson, P.E. (backup)
   H. MS4 Update – Eric Larson, P.E. (backup)
   I. Maintenance Projects Report – David Wilhelm (backup)
   J. Financial Report –Chanel Lewis (backup)

5. UNFINISHED BUSINESS

6. NEW BUSINESS
   A. Special Presentation: TBD

7. PUBLIC COMMENT

8. NEXT MEETING AGENDA
   A. April 19, 2017 (backup)

9. ADJOURNMENT

DRAFT