



BEAUFORT COUNTY  
STORMWATER MANAGEMENT UTILITY BOARD AGENDA

Wednesday, December 14, 2016

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 – November 9, 2016 ([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](#))
5. UNFINISHED BUSINESS
6. NEW BUSINESS
  - A. Battery Creek 319 Grant – Neil Desai, City of Beaufort and Paul Moore, Ward Edwards
7. PUBLIC COMMENT
8. NEXT MEETING AGENDA
  - A. January 18, 2016 ([backup](#))
9. ADJOURNMENT





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

November 9, 2016 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 11/29/2016

### **Board Members**

#### **Present**

Don Smith  
Allyn Schneider  
Patrick Mitchell  
William Bruggeman  
Marc Feinberg

#### **Absent**

Larry Meisner  
James Fargher

### **Ex-Officio Members**

#### **Present**

Kim Jones  
Andy Kinghorn

#### **Absent**

Van Willis  
Scott Liggett

### **Beaufort County Staff**

Eric Larson  
Patricia Wilson

### **Visitors**

Alice Howard, County Council  
Bryan McIlwee, Town of Bluffton  
Reed Armstrong, Coastal Conservation League  
Neil Desai, City of Beaufort

- 1. Meeting called to order** – Don Smith
  - A. Agenda – Approved.
  - B. September 14, 2016 - Approved.

- 2. Introductions** – Completed.

- 3. Public Comment(s)** – Mr. Eric Larson asked everyone to remember Mrs. Rebecca Baker and her family while they are dealing with some serious personal issues.  
He also mentioned Mrs. Carolyn Wallace was a proud new grandmother and that she was not present at the board meeting because she was out of town taking care of her daughter and new grandbaby. Mrs. Patricia Wilson was gracious enough to return to her role and help with the board meeting in Mrs. Wallace stead.

- 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/2016/110916.pdf>

### **October Stormwater Manager's Report** – Eric Larson

There was no meeting in October but there was a staff packet provided.

### **Utility Update** – Eric Larson

*Intergovernmental Agreements (IGAs) and Memorandums of Agreements (MOAs) for Fiscal Year 2017* – The City of Beaufort signed the agreements and are being returned to the county.



*Hurricane Matthew* – During the event Mr. Larson is acting as the Disaster Recovery Director. During a declared emergency, most of the Public Works, Grounds, Facilities, and Stormwater Department staff are reassigned to the Disaster Recovery Team. The disaster recovery role is to prep to assist with response and immediate removal of debris after the storm and then the long term recovery after the residents have returned to their homes. The County crews worked continuously for 14 days without a break. There is still plenty more work to be done. The county is still assessing the stormsewer systems (systems off of the right of way) and the other municipalities are also. There are trees and debris down all over our system. There is still a lot of work that need to be done. Some of the crews have gone back to their routine work because the county's contractor will be assisting with the cleanup of our stormsewer system after they complete the debris cleanup of the roadside systems. Reimbursement from FEMA is possible and the county is trying to maximize the reimbursement. The reimbursement is 75%. The county's budget will be impacted but not the stormwater budget. County's BMPs and ponds did well during the event. There was not much damage and no structure failures. (post meeting correction – the County had one structural failure of a stormwater pond.) County has four debris sites. County has burn permits for three sites and will be grinding at the Burton site. County has a mutual aid agreement with the Town of Hilton Head Island and they are taking care of all the county roads on the Island. The county did go on the island to clean debris from county-owned facilities.

#### **Monitoring Update – Eric Larson**

*Illicit Discharge* - County dealing with their first illicit discharge since the county's ordinance was passed, both enforcement and (water quality) monitoring. The discharge was sanitary sewage. The county cleaned up the illicit dump and is in the process of identifying the responsible party.

*Monitoring Plan* - Staff working to complete by the end of the month because the deadline for the permit is December 1<sup>st</sup>.

#### **Stormwater Implementation Committee (SWIC) Report – Eric Larson**

The SWIC met last week. The group received an update from Ms. Ellen Comeau with Carolina Clear on the Public Outreach effort. The group received an update from ATM on the status of the analysis of priority of watersheds for the update of the master plan.

There was also discussion on the role of the SWIC and changing the SWIC meetings to quarterly or on an as-needed basis.

#### **Stormwater Related Projects – Eric Larson**

*Complaints and Hurricane Recovery* – Staff has identified and/or are addressing the (27) complaints recorded during the first week after the hurricane. The complaints were of clogged pipes, localized flooding, etc. and many took care of themselves as the water receded. Complaints of road flooding or structures flooding were immediately addressed. Staff is continuing this effort.

#### **Professional Contracts Report – Eric Larson**

*Stormwater Management Plan (Master Plan) Update* – ATM provided a presentation on how they prioritized the watersheds. The analysis was based on land use and impervious cover and a comparison of how much has changed in the watershed since 2002. They also looked at the



county's water quality data to identify troubled areas. For budgetary reasons they have identified (7) watersheds for review and the additional (5) that are not going to be studied in detail, have seen little change, are not over-developed watersheds and are not seeing water quality issues.

*SC 170 Widening Drainage* – County received the third party review report. It has not been reviewed at this time.

### **Regional Coordination**

*Horne Development at Okatie Center in Jasper County* – ATM has been given a Task Order to expand the review of stormwater standards across the county to also include Jasper County and City of Hardeeville.

*County Dirt Road Paving Contract #50* – The County has started a team approach and engineering has invited Stormwater and Public Works to be part of the design team to prevent problems later during the operations and maintenance of the project.

*Central Drive causeway failure* – Two weeks after the hurricane, a resident stopped because he saw a sinkhole about the size of a pothole. He heard running water and the hole opened up to about (8) feet by (8) feet wide and (7) feet deep. The cause was a pipe failure. It also broke a water line. Causeway was backfilled with clay to reopen the road and a temporary water line installed. Engineering issued an emergency contract to get this project designed, permitted and under construction as soon as possible. This project will be ongoing for a while.

This system had been significantly impacted by the hurricane and the county had identified it, and had a site visit with the FEMA team and was working to get a contract for repair when the failure happened.

### **Municipal Reports – Eric Larson**

*City of Beaufort* – Mr. Larson said the City was given a time extension for the Battery Creek 319 grant project due to the hurricane. Mr. Neil Desai said the project is about 90% complete and is on schedule to be completed in January.

*Town of Bluffton* – Ms. Kim Jones

*Pine Ridge Project (stormwater volume reduction and irrigation reuse)* – The Town of Bluffton accepted final inspection on their second 319 grant project.

*New Riverside Pond (concentration reduction)* – The town had some funds remaining so they are going back to do some additional work on their first 319 grant project. Ms. Jones presented the finding of the project at the South Carolina Water Resources Conference in October. The pond has a 90% efficiency removal rate, however when you get about 1,300 feet down stream there is no statistical significant difference in concentration reduction of fecal coliform. They are installing additional measures to see if they can maintain the efficiency all the way down the stream to the discharge area of the May River. The next effort will be to try to identify the cause of the failure downstream.

*Green Tree Reservoir* – Town has a new project in the May River Reserve area with 319 grant funding.

*Master Plan Update* – Town is in discussion with the ATM consultants to see how much additional funds it would cost for the consultants to finish their modeling effort.

*Stoney Crest Campground* – Meeting with property owners to talk about design alternatives.

*First South-Atlantic Shellfish Initiative Planning Workshop in Charleston* – Ms. Jones will be participating in this workshop.



*18<sup>th</sup> International Conference on Shellfish Restoration* – Ms. Jones has been invited to be a speaker at the conference.

*Town of Port Royal* – Nothing reported.

*Town of Hilton Head Island* – Nothing reported.

**Municipal Separate Storm Sewer System (MS4 Update)** – Eric Larson

*Inspection Report* – The County will be providing a monthly report on their inspection effort. (The first report has been provided in the agenda packet.)

*Best Management Practices Manual and Stormwater Ordinance*– In October, the changes to the manual and ordinance received its third and final reading at County Council, and has been adopted by the County.

*Public Education* - There was a strategic planning session in September. Ms. Ellen Comeau with Carolina Clear led this effort and will share the plan with the board members in the near future. Ms. Comeau has also started an education newsletter.

*Annual reporting and the SWMP* – End of the first reporting year is December 1<sup>st</sup>. Staff is making revisions to the county's master plan in response to comments when our permit was issued last year. Staff is also working on the annual report due in April.

**Maintenance Projects Report** – Eric Larson

There were three projects in this months' report. Two were of projects where we send the vacuum truck in an area for an extended time to address needs throughout the area.

**Financial Report** – Eric Larson

Finance was not able to produce the quarterly report for the meeting but will probably provide the report for the December meeting.

**5. Unfinished Business** – None.

**6. New Business**

*2017 SWMU Board Calendar* – Calendar was adopted. Mr. Larson will have staff send a meeting request for each month so board members can add the meeting to their personal calendar.

*Hurricane Matthew Briefing* - Mr. Larson provided the following website address to see updates, <http://beaufortcountydasterrecovery.net/>. It is a holistic website set up as blogs on several topics with links to several other websites.

*Special Presentation: Bluffton Gateway* – Mr. Larson provided a copy of the power point presentation in the agenda packet. The project is located at the corner of Highway 278 and Highway 46 in Bluffton. He talked about how this project went through the plan review process and how the project was designed to meet the county's stormwater requirements where post development must meet pre-development conditions for volume, nutrient loading and peak flow. BMPs employed in this project are thoroughfare buffers, wetland preservation, irrigation reuse, wet detention pond, rain gardens, and porous pavers. Site should open in January.



**7. Public Comment(s) – None.**

**8. Next Meeting Agenda – Approved.**

**9. Meeting Adjourned**





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



October 12, 2016

**Stormwater Manager's Report for the Stormwater Utility Board Meeting**

**Utility Update**

1. The SWUB meeting for October 12, 2016 was canceled due to lack of urgent business and scheduled absence of staff. This report serves in place of a meeting agenda.
2. Tax Run for Tax Year 2016 (TY16) – Billing was delayed until October 15, 2016 by County Council action.
3. Submerged Properties, Marshlands, and Condominiums Rate Structure and Billing – The ordinance revision passed third and final reading on September 26, 2016.
4. Easement Manager – With Patricia Wilson's transfer to Engineering as the new Right-of-way Manager, the duties of Stormwater Easement acquisition will transfer to Engineering. Seth Stanbery, our GIS / Data Manager, will provide Patty with GIS support on both ROW and Stormwater easements.
5. Intergovernmental Agreements (IGAs) and Memorandums of Agreements (MOAs) for Fiscal Year 2017 (FY17) – The City of Beaufort agreements are still pending.
6. Eric Larson accepted an invitation to speak to the Governor's South Atlantic Alliance on Stormwater. The workshop is in December in North Myrtle Beach. I am speaking on our volume control standards.

**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. I held a conference call with Dr. Eric Montie with USCB to discuss his continued research on salinity in headwaters. There is potential for incorporating his research into our monitoring program. Additional meetings are needed to finalize the plan, and this will be done as part of the development of the monitoring plan for the County.
3. Monitoring Plan Development – Subcommittee met to review current list of parameters and sampling programs. Below is a summary of each jurisdictions efforts:
  - a) **Beaufort County** – Finalizing Stormwater Management Plan, Illicit Discharge and Monitoring Plan.



- i. CIP Projects – once a week. Assays depend on project.
  - ii. MS4 – Bluffton currently sampling and providing results to the County. County conducts quarterly wet and dry weather sampling.
  - iii. TMDL (Okatie) – once a week for bacteria.
- b) **City of Beaufort** –
  - i. The County performs all sampling for the City using the same protocols as defined above.
  - ii. Beaufort County staff will start sampling the Battery Creek Duck Pond once a week for fecal coliform and E. coli. This is a joint funded 319 grant project.
- c) **Town of Bluffton** – Finished their SWMP and Dry weather monitoring plan.
  - i. CIP program – once a week
  - ii. MS4 program– quarterly
  - iii. TMDL – once a week
- d) **Town of HHI** – Working on Illicit discharge and wet weather monitoring plan. Renewing contract with GEL for sampling.
- e) **Town of Port Royal** –
  - i. The County performs all sampling for the City using the same protocols as defined above.
  - ii. Wetland Project restoration. Doing one wet and one dry. USCB is testing for *E. coli*. TN, TP and in-situ.

#### Stormwater Implementation Committee (SWIC) Report

1. The SWIC meeting for October 5, 2016 was canceled due to lack of business.

#### Stormwater Related Projects

1. US 278 Retrofit Ponds (\$356,000 Budget) – the 4<sup>th</sup> and final pond began clearing.
2. Okatie West / SC 170 Widening Retrofit (Design and Construction = \$915,000 Budget) – Nothing new to report.
3. SC 170 Widening Pond #8 project (Design and Construction = \$630,840) – Nothing new to report.
4. Easements – Staff is working on numerous easement requests. Significant locations are Salem Dr. East, Young Circle, Roseida / Glaze, and Gadwell Dr. East. The County attorney is pursuing an alternate means of easement acquisition for Salem Dr. East that may eliminate the need for condemnation.
5. Complaints and special requests – The Stormwater Infrastructure Operations crews are scheduling and prioritizing multiple projects created as a result of citizen requests, including those made during recent public meetings on St. Helena and Hilton Head Island.



## Professional Contracts Report

1. Stormwater Management Plan (Master Plan) Update – (\$475,000 Budget; \$239,542 County portion) – work continues on the land use analysis and identification of pollutants of concern. A technical memo on these work products is due in November.
2. Mint Farm Basin B Modification – (\$8,000 Budget) – Nothing new to report.
3. SC 170 Widening Drainage – (\$17,500 Budget with 50% of funding from the Stormwater Department) – The 3<sup>rd</sup> party review report is still pending submittal. An additional extension was allowed to review as-built drawings that were not available until early October.

## Regional Coordination

1. Factory Creek Watershed Regional Detention Basin “Phase I” & Academy Park Subdivision (cost is pending) – Nothing new to report.
2. Factory Creek Watershed Regional Detention Basin “Phase II” (Design Cost = \$63,390, Tree Mitigation Cost is pending, Construction Cost by the Developer) – Nothing new to report.
3. Horne Development at Okatie Center in Jasper County – ATM has been given a Task Order to review Jasper County and City of Hardeeville stormwater standards and compare to our own.
4. Hilton Head National Redevelopment – Nothing new to report.
5. FEMA CRS five year update – Staff has been working with Hakim Bayyoud, County Floodplain Manager, to prepare the five year review application for the Community Rating System. With the recent changes to the BMP Manual, we anticipate an improved rating.

## Municipal Reports

1. Town of Hilton Head Island (From Bates Rambow, SW Data Analyst)
  - i. No information was available at the time of this report.
2. Town of Bluffton (From Kim Jones, Watershed Management Division Director)

### WATERSHED MANAGEMENT PROJECTS UPDATE:

- i. **Stoney Creek Wetlands Restoration: Data Collection & Analysis Phase**
  - Following receipt of the draft water budget including hydrology and hydraulics reports on 4/1/16, data collection in support of developing design alternatives was extended due to above average rainfall over the winter.
  - Data collection continued for approximately two months into the “dry” season to measure the effects on the water table. This activity is in support of



developing preliminary conceptual designs for property owner review/negotiations.

- Final Summary Memo including conceptual design options was received July 2016, staff provided review, final documents anticipated first week of October.
- Conceptual designs have been forwarded to the property owners for review.
- **Next Steps:**
  - Staff is coordinating with the property owners to review the conceptual designs. Date for meeting has not yet been set.

ii. **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 ponds in the Pine Ridge Community.
- The grant amendment was approved by SCDHEC and the amended contract has been executed.
- Contractor will complete final inspection punch list items by the first week of October.
- **Next Steps:**
  - Purchase and install engineered bacteria removal filter socks.
  - Design and install littoral shelf plantings as needed.

iii. **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.
- Grant package is under review by EPA prior to forwarding to SCDHEC and the Town for execution.
- After receiving property access approval, pre-project water quality and flow monitoring has commenced.
- **Next Steps:**
  - Execute grant contract with SCDHEC.
  - Obtain easement for construction and maintenance from property owner.

iv. **Stormwater Utility Management Plan Update**

- Beaufort County is the managing partner for this county-wide stormwater master plan update by Applied Technology & Management.
- A series of public meetings were held across the County to gather input for the Management Plan Update. The Bluffton meeting was held on 6/22/16.
- Following public input, staff is investigating with ATM if the May River Watershed Action Plan water quality model can be completed as part of the Management Plan Update. Contractor was to provide alternatives and cost-estimates to complete the Water Quality Model in August, but requested more data.



- Staff provided updated Best Management Practice locations throughout the watershed to the contractor to develop alternatives and cost estimates. Rough scope and budget estimates are anticipated the first week of October.
- **Next Steps:**
  - Staff will receive scope and budget estimates to complete the May River Watershed Water Quality Model from ATM and assess budget.
  - Staff will continue to participate in the county-wide effort to update the Beaufort County Stormwater Management Plan as needed.

### **Watershed Management Division/Staff Updates:**

- v. Plan reviews
  - In support of the Development Review process staff performed:
    - 14 Development Plan Reviews
    - 4 Development Surety Reviews
    - 6 Certificate of Construction Compliance Inspections
    - 4 Pre-Construction Meetings
    - 4 Pre-Clearing Inspections
    - 1 Post-Construction BMP
- vi. **September Data Collection –**
  - Collected data from four monitoring stations at Stoney Crest Property.
  - Collected data from two monitoring stations at Pine Ridge.
  - Four in-stream flow/velocity measurements collected at our sampling locations in the headwaters of the May River.
- vii. Watershed Management staff participated in the Stormwater Utility Board, Stormwater Implementation Committee, and MS4 and Water Quality Monitoring sub-committee meetings. These meetings allow the three MS4 permit holders/jurisdictions to partner on permit requirements including education and outreach and water quality monitoring.
- viii. May River Watershed Management Plan Advisory Committee met 9/22/16.
- ix. Watershed Management Division organized the Beach Sweep/River Sweep on 9/17/16.
- x. Kim Jones, Beth Lewis, Andrea Berry and Matthew Carey passed their Clemson University Post-Construction BMP Inspector course and will receive certifications. They join Bill Baugher and Sam Connor as Post-Construction BMP Inspectors.
- xi. Lewis and Berry provided a presentation to the Marsh Association, an organization of POA Managers, regarding local stormwater and Low Impact Design (LID) opportunities for our local communities.
- xii. Watershed Management staff presented and held a Q&A with residents of The Haven community with regards to the HOA's Stormwater Detention Ponds.
- xiii. Watershed Management staff attended the South Carolina Department of Natural Resources Communicating Climate Change Class on 9/7/16.



- xiv. Watershed Management staff attended Town Finance training on grant procedures and project management procurement protocols.
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) – Work continues. The selection of the mechanical pre-treatment device is complete.
    - ii. No further information was available at the time of this report.
  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 summary – 13 Plans Reviewed.

<b>Projects Name</b>	<b>SRT Review Date</b>	<b>Review Type</b>	<b>Comments</b>
Bluffton Dollar General	9/28/2016	Conceptual	Deferred
Ernest Mine Drive	9/28/2016	Conceptual	Deferred
Bluffton Dollar General	9/28/2016	Discussion	Deferred
Cat Island Lot 3A and 5A Waiver	9/21/2016	Waiver	Withdrawn
Spring Island Lot 14	9/21/2016	Waiver	Approved w conditions
Taylor Quality Landscaping	9/21/2016	Conceptual	Removed from agenda
Sommerset Pt. Lot 7	9/20/2016	Waiver	Removed from agenda
Fripp Island Lot 6 Blue Gill	9/14/2016	Waiver	Approved with conditions.
Fripp Island Lot 1B	9/14/2016	Waiver	Deffered w/condtions.
Harbor Island Lot 165	9/14/2016	Waiver	Approved
Oyster Bluff Phase II	9/14/2016	Conceptual	Deffered
St. James Pritchardville	9/14/2016	Conceptual	Deffered
8 Duck Pen Court	9/7/2016	Bulkhead	Approved

2. Inspection summary since last Board meeting (Danny Polk, Superintendent)
  - Number of active permits = 25
  - Number of inspections performed =47
  - Number of drainage related complaints investigated =4
3. BMP Manual - BMP manual was approved last month and the Stormwater Ordinance is in the process of the third reading on October 24, 2016.



4. Public Education - There was a strategic planning meeting held on September 29th from 9:00 to 12:00 at the Port Royal Sound Maritime Center. Ellen Comeau, the new Water Quality Agent for Clemson Extension in Beaufort County, will be working on summarizing the results of the meetings and presenting the strategic plan at a future Board meeting.
5. Annual reporting and the SWMP – Rebecca Baker is working on revisions to our Management Plan as part of the submittal for the annual report to DHEC. The reporting period ends on December 1, 2016 and the report is due in April.
6. [Maintenance Project Report](#) – Dave Wilhelm





## MEMORANDUM

Date: October 12, 2016

To: Stormwater Management Utility Board

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

Re: **Maintenance Project Report**

This report will cover one major and fourteen minor or routine projects. The Project Summary Reports are attached. ([Stormwater Summary Map by District](#))

### **Major Projects – Storm Drainage System Improvements:**

- **Pinewood Circle Subdivision – Port Royal Island – Stormwater Utility District (SWUD 6):** This project consisted of improving 3,909 feet of roadside drainage ditches and jet cleaning 50 driveway pipes. The disturbed area was hydroseeded for erosion control. Work began August 4<sup>th</sup> and was completed August 29<sup>th</sup>. The total cost of the project was **\$14,131.96.**

### **Minor or Routine Projects:**

- **Salem Drive East – Port Royal Island (SWUD 6):** Work for this project consisted of installing an inlet drain connecting to an existing drainage pipe and also dewatering approximately 1,000 feet of existing channel. The total cost of the project was **\$7,168.92.**
- **Lady's Island Vacuum Truck (SWUD 7):** This six month effort of vacuum cleaning work included cleaning out various drainage structures at multiple locations. The total cost of this effort was **\$7,100.64.**
- **Fire Station Lane – Sheldon (SWUD 5):** This project consisted of replacing the driveway pipe at the Sheldon Fire Station. The total project cost was **\$4,047.56.**
- **St. Helena Island Vacuum Truck (SWUD 8):** This vacuum cleaning work included cleaning out several drainage structures at multiple locations on St. Helena Island. The total cost of this project was **\$3,541.59.**
- **Pin Oak Street – Town of Bluffton (SWUD 4):** This project consisted of jet cleaning 220 feet of roadside pipe and two catch basins. The total cost was **\$3,377.55.**
- **Alljoy Area / Bluffton Township (SWUD 9):** Work consisted of cleaning out 623 feet of roadside ditch. The total cost was **\$3,021.40.**
- **Port Royal Island Vacuum Truck (SWUD 6):** This vacuum cleaning work included cleaning out nine catch basins, five crossline pipes, and four driveway pipes. The total cost of this project was **\$2,828.12.**
- **Bluebell Lane – Town of Hilton Head Island (SWUD 3):** Our crew installed one driveway pipe for a new residential home. The total cost was **\$1,807.12.**



- **Rice Road – Port Royal Island (SWUD 6):** This project improved 305 feet of existing drainage swales. The total cost for this effort was **\$1,796.79.**
- **Port Royal Island Tree Removal (SWUD 6):** Our crew removed fallen trees from the roadside ditch and workshelf. The total cost was **\$1,589.06.**
- **Branford Circle – Sheldon (SWUD 5):** This project consisted of repairing a failed crossline pipe. The total cost of the work was **\$1,512.41.**
- **Lonesome Court and Taylor Street – Port Royal Island (SWUD 6):** This project consisted of repairing washouts to two roadside ditches. The total cost was **\$1,443.02.**
- **Sheldon Valley Drains (SWUD 5):** This project consisted of cleaning 9,336 feet of paved valley drains in the Sheldon area. The total cost was **\$1,303.77.**
- **Floyd Road – Sheldon (SWUD 5):** This project consisted of one separated section of drainage pipe. The total cost was **\$864.92.**





**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Pinewood Circle Subdivision

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

**Duration:** 8/4/16 - 8/29/16

Project improved 3,909 L.F. of drainage system. Cleaned out 3,909 L.F. of roadside ditch. Jetted (50) driveway pipes.  
Hydroseeded for erosion control.

<b>2017-513 / Pinewood Circle Subdivision</b>	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
DPJT / Driveway Pipe - Jetted	46.0	\$1,057.68	\$199.64	\$144.68	\$0.00	\$684.24	\$2,086.24
HAUL / Hauling	49.0	\$1,091.23	\$461.58	\$105.12	\$0.00	\$706.58	\$2,364.51
RSDCL / Roadside Ditch - Cleanout	225.0	\$4,979.90	\$909.67	\$596.22	\$0.00	\$3,158.10	\$9,643.89
UTLOC / Utility locates	0.5	\$12.35	\$0.00	\$0.00	\$0.00	\$6.62	\$18.97
<b>2017-513 / Pinewood Circle Subdivision Sub Total</b>	<b>321.0</b>	<b>\$7,152.91</b>	<b>\$1,570.89</b>	<b>\$846.02</b>	<b>\$0.00</b>	<b>\$4,562.15</b>	<b>\$14,131.96</b>
 <b>Grand Total</b>	 <b>321.0</b>	 <b>\$7,152.91</b>	 <b>\$1,570.89</b>	 <b>\$846.02</b>	 <b>\$0.00</b>	 <b>\$4,562.15</b>	 <b>\$14,131.96</b>

Before



During



After







Project: Pinewood Circle

Activity: Routine/ Preventive Maintenance

Project #: 2017-513

Township/SW Dist: Port Royal Island/6

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



1 inch = 420 feet





**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Salem Drive East

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Dewatered channel. Installed inlet drain.

**Duration:** 11/3/15 - 3/30/16

**2016-554 / Salem Drive East**

	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
DC / Dewatered Channel	85.0	\$1,905.89	\$123.90	\$40.75	\$0.00	\$1,215.55	\$3,286.09
HAUL / Hauling	13.0	\$294.67	\$71.00	\$29.93	\$0.00	\$189.55	\$585.15
INLET DI / Inlet Drain Installed	20.0	\$439.50	\$48.11	\$4.26	\$0.00	\$280.80	\$772.67
NONPRO / Non-Professional Services	0.0	\$0.00	\$0.00	\$0.00	\$222.00	\$0.00	\$222.00
ONJV / Onsite Job Visit	27.0	\$935.37	\$95.98	\$34.08	\$0.00	\$627.02	\$1,692.45
PI / Project Inspection	3.0	\$136.80	\$10.86	\$4.26	\$0.00	\$101.88	\$253.80
PP / Project Preparation	1.0	\$45.60	\$3.62	\$1.42	\$0.00	\$33.96	\$84.60
SVCREQ / Service Request	3.0	\$136.80	\$10.86	\$4.26	\$0.00	\$101.88	\$253.80
<b>2016-554 / Salem Drive East Sub Total</b>	<b>152.5</b>	<b>\$3,906.38</b>	<b>\$364.33</b>	<b>\$118.96</b>	<b>\$222.00</b>	<b>\$2,557.25</b>	<b>\$7,168.92</b>

<b>Grand Total</b>	<b>152.5</b>	<b>\$3,906.38</b>	<b>\$364.33</b>	<b>\$118.96</b>	<b>\$222.00</b>	<b>\$2,557.25</b>	<b>\$7,168.92</b>
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Before



During



After







Project: Salem Drive East

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2016-554

Township/SW Dist:  
Port Royal Island/6

Completed:  
March 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 50 100 200 300 400  
Feet

1 inch = 210 feet

Prepared By: BC Stormwater Management Utility

Date Print: 09/28/16

File: C:\project summaries map\Salem Drive East\_2016-554





# Beaufort County Public Works Stormwater Infrastructure Project Summary

**Project Summary:** Ladys Island Vacuum Truck - Judge Island Drive, Professional Village Circle, Reeds Road, Trotters Loop, Johnson Landing Road, Blythewood Road, Bent Oak Road, Wiggins Road, Faculty Drive, and Needlerush Court

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Project improved 8 L.F. of drainage system. Cleaned out (11) catch basins. Jetted (1) access pipe, (13) crossline pipes, (22) driveway pipes and 8 L.F. of channel pipe.

**Duration:** 11/24/15 - 5/25/16

2016-307A / Ladys Island Vacuum Truck	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AUDIT / Audit Project	1.0	\$23.49	\$0.00	\$0.00	\$0.00	\$13.23	\$36.72
CBCO / Catch basin - clean out	70.0	\$1,627.26	\$318.88	\$230.58	\$0.00	\$1,065.15	\$3,241.87
CLPJT / Crossline Pipe - Jetted	18.0	\$411.84	\$78.12	\$44.70	\$0.00	\$267.30	\$801.96
DPJT / Driveway Pipe - Jetted	46.0	\$1,103.48	\$303.80	\$170.98	\$0.00	\$729.12	\$2,307.37
PRRECON / Project Reconnaissance	4.0	\$91.52	\$17.36	\$6.60	\$0.00	\$59.40	\$174.88
SD / Soft Digging	12.0	\$274.56	\$52.08	\$33.00	\$0.00	\$178.20	\$537.84
<b>2016-307A / Ladys Island Vacuum Truck Sub Total</b>	<b>151.0</b>	<b>\$3,532.15</b>	<b>\$770.24</b>	<b>\$485.86</b>	<b>\$0.00</b>	<b>\$2,312.40</b>	<b>\$7,100.64</b>
<b>Grand Total</b>	<b>151.0</b>	<b>\$3,532.15</b>	<b>\$770.24</b>	<b>\$485.86</b>	<b>\$0.00</b>	<b>\$2,312.40</b>	<b>\$7,100.64</b>

Before



After







**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Fire Station Lane

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Replaced (1) driveway pipe.

**Duration:** 8/4/16 - 8/9/16

**2017-508 / Fire Station Lane**

	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
DPRPL / Driveway Pipe - Replaced	24.0	\$556.00	\$147.66	\$186.84	\$0.00	\$353.28	\$1,243.78
DWASPH / Driveway - Asphalt	20.0	\$483.10	\$64.78	\$35.28	\$0.00	\$292.90	\$876.06
HAUL / Hauling	19.0	\$433.00	\$171.83	\$1,030.55	\$0.00	\$273.98	\$1,909.36
<b>2017-508 / Fire Station Lane Sub Total</b>	<b>63.5</b>	<b>\$1,483.85</b>	<b>\$384.27</b>	<b>\$1,252.67</b>	<b>\$0.00</b>	<b>\$926.77</b>	<b>\$4,047.56</b>

<b>Grand Total</b>	<b>63.5</b>	<b>\$1,483.85</b>	<b>\$384.27</b>	<b>\$1,252.67</b>	<b>\$0.00</b>	<b>\$926.77</b>	<b>\$4,047.56</b>
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Before



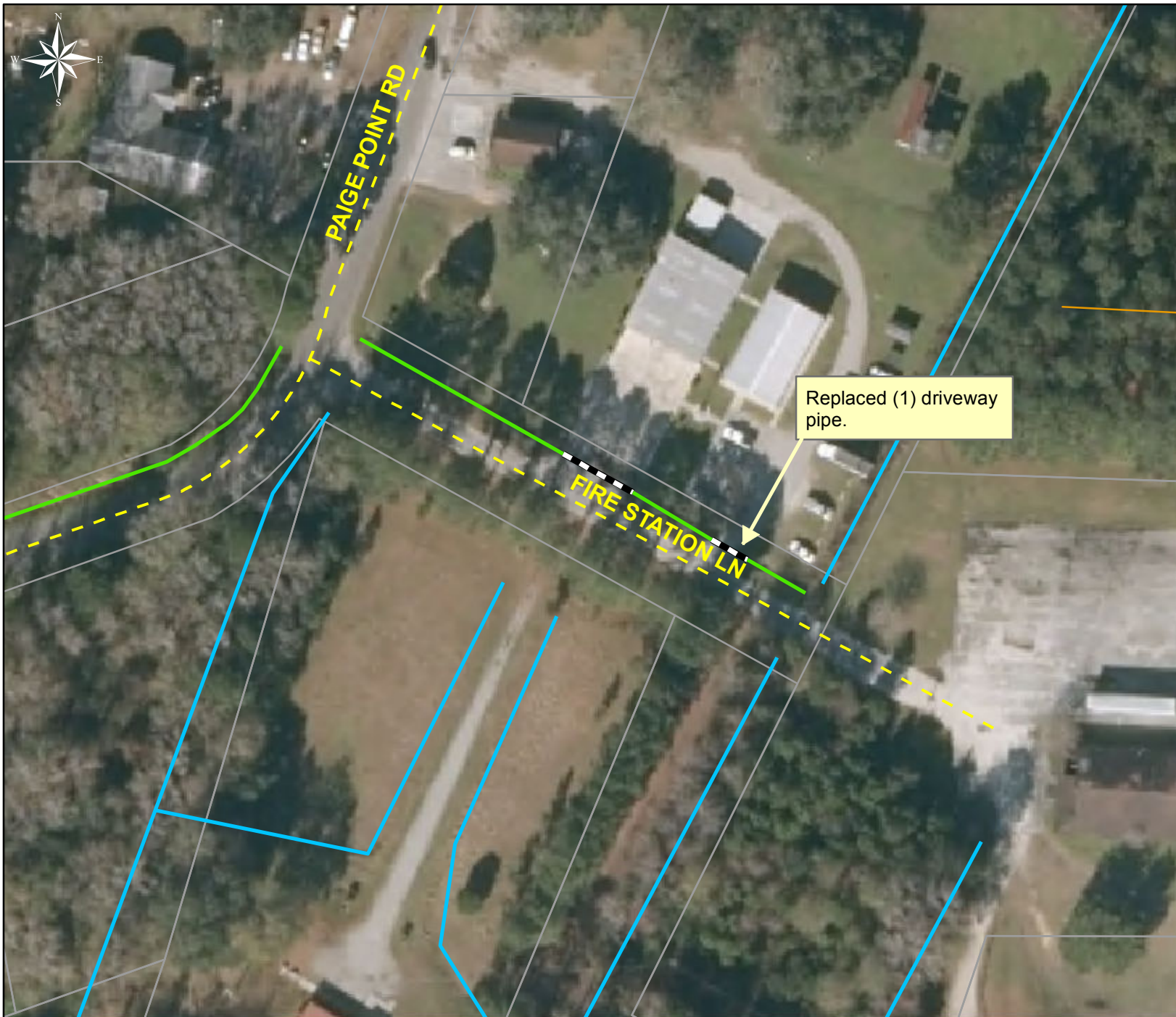
During



After







Project: Fire Station Lane

Activity: Routine/ Preventive Maintenance

Project #: 2017-508

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:09/28/16  
File:C:\project summaries map\Fire Station Lane\_2017-508





**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** St Helena Island Vacuum Truck - Shiney Road, Ragweed Circle,  
Simmons Road and Mosse Road

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Jetted (2) driveway pipes and (3) crossline pipes.

**Duration:** 1/19/16 - 6/8/16

2016-309A / St Helena Island Vacuum Truck	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AUDIT / Audit Project	1.0	\$23.49	\$0.00	\$0.00	\$0.00	\$13.23	\$36.72
CLPJT / Crossline Pipe - Jetted	30.0	\$698.60	\$130.20	\$63.57	\$0.00	\$457.40	\$1,349.77
DPJT / Driveway Pipe - Jetted	34.0	\$781.58	\$147.56	\$53.62	\$0.00	\$508.47	\$1,491.23
ONJV / Onsite Job Visit	7.0	\$262.10	\$24.90	\$18.40	\$0.00	\$190.27	\$495.67
SVCREQ / Service Request	2.0	\$91.20	\$7.24	\$1.84	\$0.00	\$67.92	\$168.20
<b>2016-309A / St Helena Island Vacuum Truck 2 Sub Total</b>	<b>74.0</b>	<b>\$1,856.97</b>	<b>\$309.90</b>	<b>\$137.43</b>	<b>\$0.00</b>	<b>\$1,237.29</b>	<b>\$3,541.59</b>
 <b>Grand Total</b>	 <b>74.0</b>	 <b>\$1,856.97</b>	 <b>\$309.90</b>	 <b>\$137.43</b>	 <b>\$0.00</b>	 <b>\$1,237.29</b>	 <b>\$3,541.59</b>

Before



During



After







Project: St. Helena  
Island Vacuum  
Truck- Shiny Road  
Map #1

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2016-309A

Township/SW Dist:  
St. Helena Island/8

Completed:  
June 2016

**Legend**

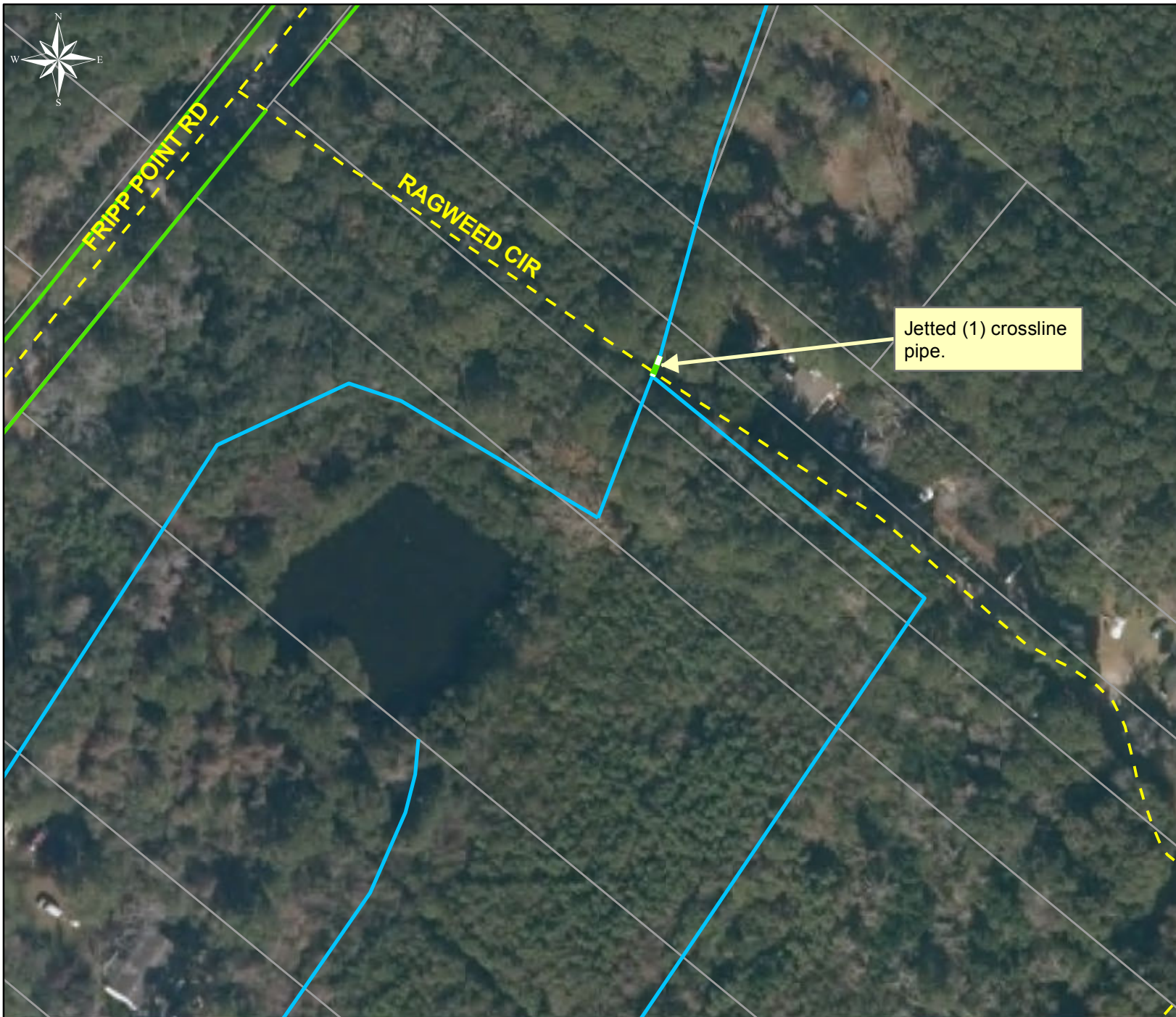
**Drainage Type**

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



1 inch = 420 feet





Project: St. Helena  
Island Vacuum  
Truck- Ragweed  
Circle  
Map #2

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2016-309A

Township/SW Dist:  
St.Helena Island/8

Completed:  
June 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:09/27/16

File:C:\project summaries map/St. Heena Island Vacuum Truck-Ragweed Circle Map#2\_2016-309A





Project: St. Helena  
Island Vacuum  
Truck- Simmons  
Road  
Map #3

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2016-309A

Township/SW Dist:  
St. Helena Island/8

Completed:  
June 2016

Jetted (1) driveway  
pipe.



### 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: 09/27/2016

File: C:\project summaries map\St. Helena Island Vac Truck- Simmons Road Map3\_2016-309A





Project: St. Helena  
Island Vacuum  
Truck- Mosse  
Road  
Map #4

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2016-309A

Township/SW Dist:  
St.Helena Island/8

Completed:  
June 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:09/27/16

File:C:\project summaries map/St. Heena Island Vacuum Truck-Mosse Road Map#4\_2016-309A





**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Pin Oak Street

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Cleaned out (2) catch basins. Jetted 220 L.F. of roadside pipe.

**Duration:** 3/28/16 - 3/29/16

<b>2016-609 / Pin Oak Street</b>	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
CBCO / Catch basin - clean out	20.0	\$457.60	\$86.80	\$40.67	\$0.00	\$297.00	\$882.07
DEBREM / Debris Removal - Jobsite	30.0	\$680.39	\$0.00	\$0.00	\$0.00	\$398.60	\$1,078.99
ONJV / Onsite Job Visit	2.0	\$91.20	\$7.24	\$4.26	\$0.00	\$67.92	\$170.62
PCAM / Pole Camera System	10.0	\$228.80	\$82.60	\$10.57	\$0.00	\$148.50	\$470.47
TC / Traffic Control - Jobsite	20.0	\$445.49	\$17.70	\$28.40	\$0.00	\$265.45	\$757.04
<b>2016-609 / Pin Oak Street Sub Total</b>	<b>82.5</b>	<b>\$1,915.23</b>	<b>\$194.34</b>	<b>\$83.90</b>	<b>\$0.00</b>	<b>\$1,184.08</b>	<b>\$3,377.55</b>
 <b>Grand Total</b>	<b>82.5</b>	<b>\$1,915.23</b>	<b>\$194.34</b>	<b>\$83.90</b>	<b>\$0.00</b>	<b>\$1,184.08</b>	<b>\$3,377.55</b>

Before



During







Project: Pin Oak Street

Activity: Routine/  
Preventive  
Maintenance














Project #:  
2016-609

Township/SW Dist:  
Town of Bluffton/4

Completed:  
March 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: 9/6/2016

File: C:\project summaries map\Pin Oak Street\_2016-609





**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Alljoy Area

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Project improved 623 L.F. of drainage system. Cleaned out 623 L.F. of roadside ditch.

**Duration:** 6/13/16 - 7/7/16

<b>2015-553A / Alljoy Area</b>	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
HAUL / Hauling	10.0	\$222.80	\$79.90	\$68.40	\$0.00	\$144.20	\$515.30
PP / Project Preparation	12.0	\$277.14	\$21.24	\$20.79	\$0.00	\$184.32	\$503.49
PRRECON / Project Reconnaissance	12.0	\$272.43	\$10.62	\$9.00	\$0.00	\$169.11	\$461.16
RSDCL / Roadside Ditch - Cleanout	27.0	\$612.36	\$527.80	\$24.19	\$0.00	\$358.74	\$1,523.09
<b>2015-553A / Alljoy Area</b>	<b>61.5</b>	<b>\$1,396.48</b>	<b>\$639.56</b>	<b>\$122.38</b>	<b>\$0.00</b>	<b>\$862.99</b>	<b>\$3,021.40</b>
<b>Sub Total</b>							
 <b>Grand Total</b>	 <b>61.5</b>	 <b>\$1,396.48</b>	 <b>\$639.56</b>	 <b>\$122.38</b>	 <b>\$0.00</b>	 <b>\$862.99</b>	 <b>\$3,021.40</b>

Before



During



After





Project: Alljoy Area

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2015-553A

Township/SW Dist:  
Bluffton/9

Completed:  
July 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: 09/28/16  
File: C:\project summaries map\Alljoy Area\_2015-553A





**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Port Royal Island Vacuum Truck - Shell Point Recreation Park, Campbell Road,  
Grays Hill Road, Moultrie Circle, Wintergreen Drive, Paukie Island Road and Tabby Road

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Cleaned out (9) catch basins. Jetted (5) crossline pipes and (4) driveway pipes.

**Duration:** 1/9/16 - 5/16/16

<b>2016-306A / PRI Vacuum Truck</b>	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
CBCO / Catch basin - clean out	20.0	\$457.60	\$633.64	\$35.15	\$0.00	\$297.00	\$1,423.39
DPJT / Driveway Pipe - Jetted	16.0	\$369.72	\$78.12	\$40.72	\$0.00	\$240.84	\$729.40
PRRECON / Project Reconnaissance	2.0	\$45.76	\$8.68	\$9.90	\$0.00	\$29.70	\$94.04
SD / Soft Digging	12.0	\$279.44	\$52.08	\$48.45	\$0.00	\$182.96	\$562.93
<b>2016-306A / PRI Vacuum Truck Sub Total</b>	<b>50.5</b>	<b>\$1,164.27</b>	<b>\$772.52</b>	<b>\$134.22</b>	<b>\$0.00</b>	<b>\$757.12</b>	<b>\$2,828.12</b>
 <b>Grand Total</b>	<b>50.5</b>	<b>\$1,164.27</b>	<b>\$772.52</b>	<b>\$134.22</b>	<b>\$0.00</b>	<b>\$757.12</b>	<b>\$2,828.12</b>

Before



After







**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Bluebell Lane

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Installed (1) driveway pipe.

**Duration:** 7/25/16 - 7/26/16

**2017-506 / Bluebell Lane**

	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
DPINS / Driveway Pipe - Installed	20.0	\$440.75	\$67.83	\$260.60	\$0.00	\$281.85	\$1,051.03
HAUL / Hauling	7.0	\$155.89	\$65.94	\$63.71	\$0.00	\$100.94	\$386.48
STAGING / Staging Materials/Equipment	9.0	\$190.32	\$30.43	\$10.80	\$0.00	\$119.70	\$351.25
<b>2017-506 / Bluebell Lane</b>	<b>36.5</b>	<b>\$798.71</b>	<b>\$164.20</b>	<b>\$335.11</b>	<b>\$0.00</b>	<b>\$509.10</b>	<b>\$1,807.12</b>
<b>Sub Total</b>							

<b>Grand Total</b>	<b>36.5</b>	<b>\$798.71</b>	<b>\$164.20</b>	<b>\$335.11</b>	<b>\$0.00</b>	<b>\$509.10</b>	<b>\$1,807.12</b>
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Before



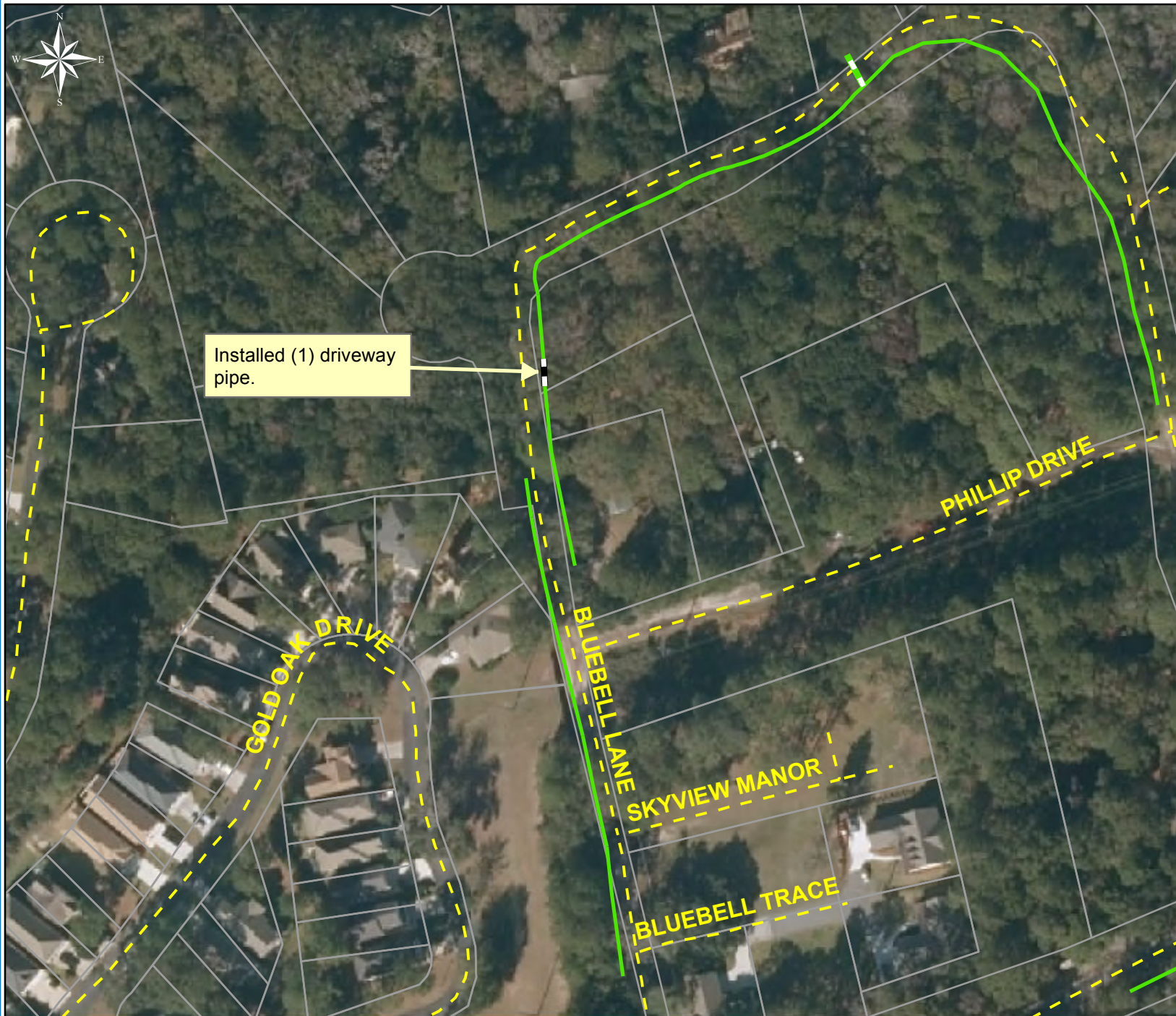
During



After







Project: Bluebell Lane

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2017-506

Township/SW Dist:  
Town of HHI/3

Completed:  
July 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: 09/28/16

File: C:\project summaries map\Bluebell Lane\_2017-506





**Beaufort County**  
**Public Works**  
***Stormwater Infrastructure***  
*Project Summary*

**Project Summary:** Rice Road

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

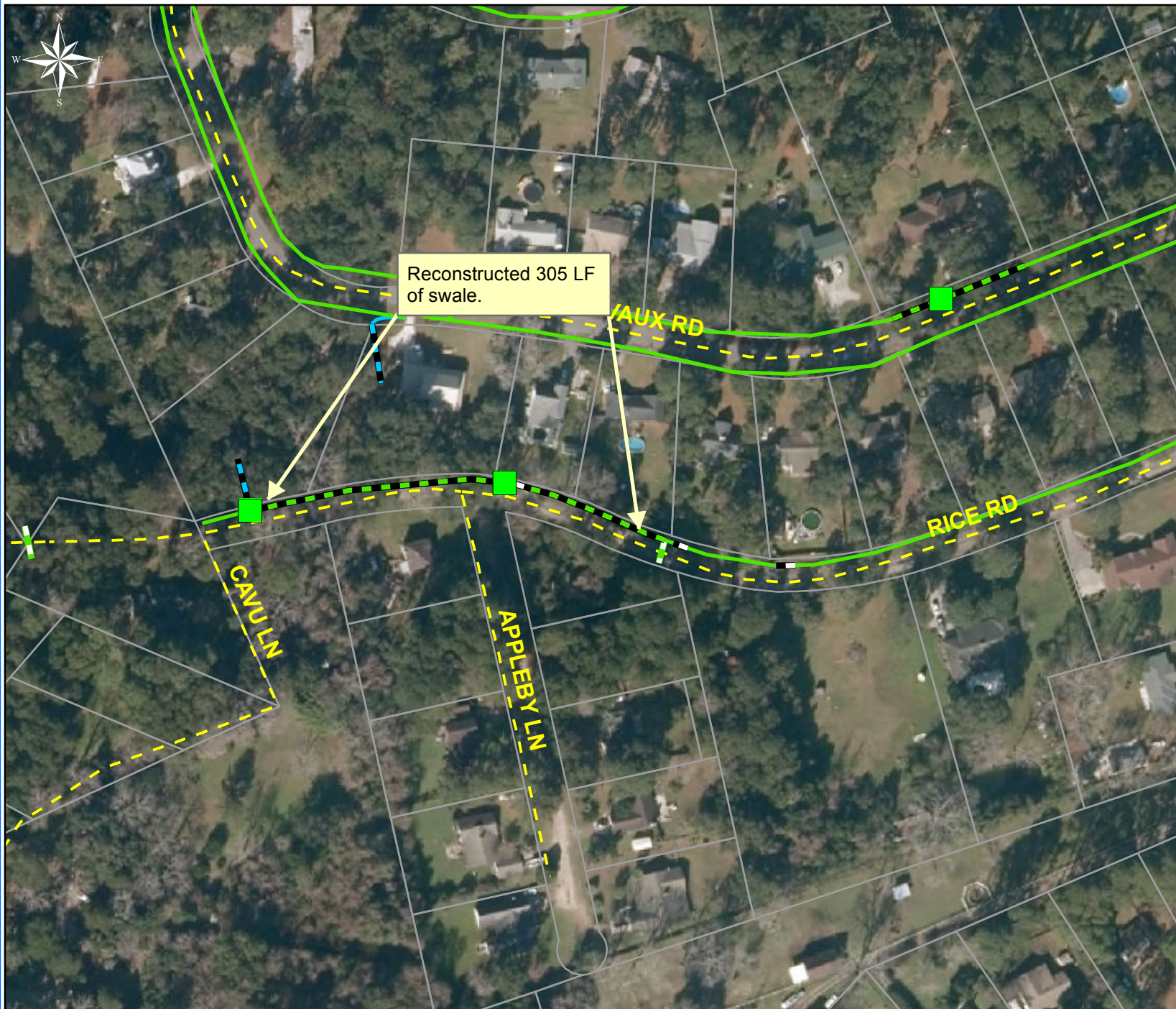
**Duration:** 8/24/16

Project improved 305 L.F. of drainage system. Reconstructed 305 L.F. of swale.

<b>2017-514 / Rice Road</b>	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
HAUL / Hauling	10.0	\$222.70	\$94.20	\$23.40	\$0.00	\$144.20	\$484.50
SREC / Swale - Reconstructed	28.0	\$615.23	\$274.72	\$18.00	\$0.00	\$385.98	\$1,293.93
<b>2017-514 / Rice Road Sub Total</b>	<b>38.5</b>	<b>\$849.68</b>	<b>\$368.92</b>	<b>\$41.40</b>	<b>\$0.00</b>	<b>\$536.80</b>	<b>\$1,796.79</b>
<b>Grand Total</b>	<b>38.5</b>	<b>\$849.68</b>	<b>\$368.92</b>	<b>\$41.40</b>	<b>\$0.00</b>	<b>\$536.80</b>	<b>\$1,796.79</b>

(Pictures Not Available)





Project: Rice Road

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2017-514

Township/SW Dist:  
Port Royal Island/6

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



1 inch = 170 feet





**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Port Royal Island Tree Removal - Chisholm Hill Road and Donaldson Drive

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Removed fallen trees from workshelf and roadside ditch.

**Duration:** 4/12/16 - 6/15/16

<b>2016-506 / Port Royal Island Tree Removal</b>	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
HAUL / Hauling	8.0	\$178.16	\$63.92	\$54.05	\$0.00	\$115.36	\$411.49
RMTR / Remove trees-roads	4.0	\$94.84	\$43.64	\$7.21	\$0.00	\$58.58	\$204.27
RMTRW / Remove trees - Workshelf	25.0	\$535.85	\$48.11	\$39.38	\$0.00	\$331.60	\$954.94
<b>2016-506 / Port Royal Island Tree Removal Sub Total</b>	<b>37.5</b>	<b>\$820.60</b>	<b>\$155.67</b>	<b>\$100.64</b>	<b>\$0.00</b>	<b>\$512.15</b>	<b>\$1,589.06</b>
<b>Grand Total</b>	<b>37.5</b>	<b>\$820.60</b>	<b>\$155.67</b>	<b>\$100.64</b>	<b>\$0.00</b>	<b>\$512.15</b>	<b>\$1,589.06</b>

Before



During



After







Project: Port Royal  
Island Tree  
Removal-  
Chisholm Hill  
Road  
Map #1

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2016-506

Township/SW Dist:  
Port Royal Island/6

Completed:  
June 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



1 inch = 210 feet





Project: Port Royal  
Island Tree  
Removal-  
Donaldson Drive  
Map #2

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2016-506

Township/SW Dist:  
Port Royal Island/6

Completed:  
June 2016

DONALDSON DR

Removed fallen tree  
from roadside.

ARNOLD LN

PINE GROVE RD

### 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:09/28/16

File:C:\project summaries map\PRI Tree Removal-Donaldson Drive Map 2\_2016-506





**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Branford Circle

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Repaired crossline pipe.

**Duration:** 8/1/16

<b>2017-511 / Branford Circle</b>	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
CLPJT / Crossline Pipe - Jetted	6.0	\$148.20	\$52.08	\$74.00	\$0.00	\$98.82	\$373.10
CPREP / Crossline Pipe - Repaired	18.0	\$417.00	\$71.14	\$37.01	\$0.00	\$264.96	\$790.11
HAUL / Hauling	6.0	\$148.20	\$56.52	\$39.60	\$0.00	\$86.52	\$330.84
<b>2017-511 / Branford Circle Sub Total</b>	<b>30.5</b>	<b>\$725.15</b>	<b>\$179.74</b>	<b>\$150.61</b>	<b>\$0.00</b>	<b>\$456.91</b>	<b>\$1,512.41</b>
 <b>Grand Total</b>	 <b>30.5</b>	 <b>\$725.15</b>	 <b>\$179.74</b>	 <b>\$150.61</b>	 <b>\$0.00</b>	 <b>\$456.91</b>	 <b>\$1,512.41</b>

Before



During



After







Project: Branford Circle

Activity: Routine/  
Preventive  
Maintenance














Project #:  
2017-511

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:09/28/16  
File:C:\project summaries map\Branford Circle\_2017-511





**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Port Royal Island Washout Repairs - Lonesome Court and Taylor Street

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Repaired washouts.

**Duration:** 7/20/16 - 9/22/16

<b>2016-503 / Port Royal Island Washout Repairs</b>	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
HAUL / Hauling	5.0	\$111.35	\$39.95	\$2.66	\$0.00	\$72.10	\$226.06
ONJV / Onsite Job Visit	4.0	\$126.43	\$10.62	\$0.00	\$0.00	\$79.16	\$216.21
RPWO / Repaired Washout	24.0	\$537.82	\$37.87	\$71.73	\$0.00	\$334.98	\$982.39
<b>2016-503 / Port Royal Island Washout Repairs Sub Total</b>	<b>33.5</b>	<b>\$787.34</b>	<b>\$88.44</b>	<b>\$74.39</b>	<b>\$0.00</b>	<b>\$492.85</b>	<b>\$1,443.02</b>
<b>Grand Total</b>	<b>33.5</b>	<b>\$787.34</b>	<b>\$88.44</b>	<b>\$74.39</b>	<b>\$0.00</b>	<b>\$492.85</b>	<b>\$1,443.02</b>

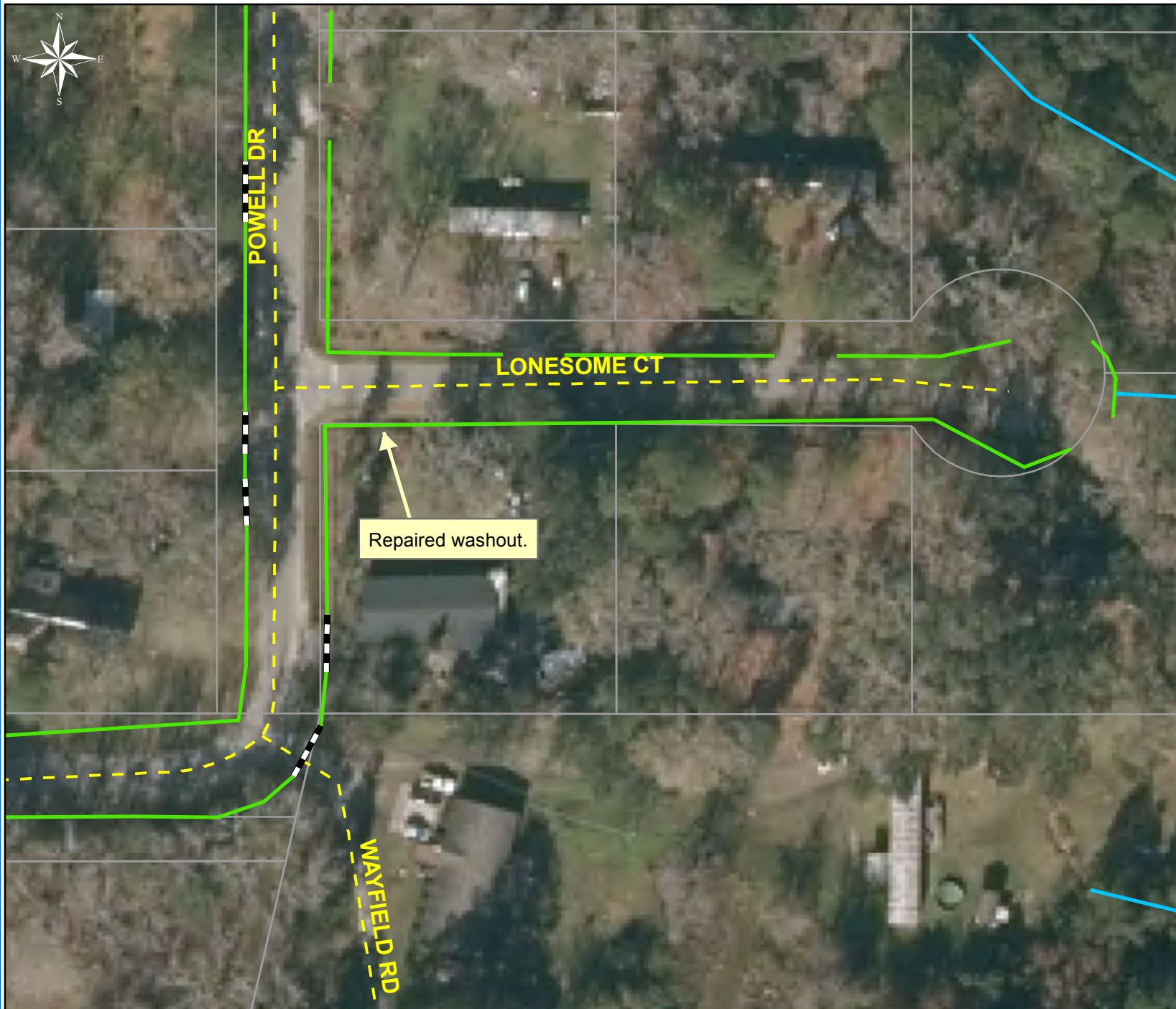
Before



After







Project: Port Royal  
Island Washout  
Repairs- Lonesome  
Court Map #1

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2016-503

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



1 inch = 67 feet





Project: Port Royal  
Island Washout  
Repairs- Taylor  
Street Map #2

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2016-503

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



1 inch = 67 feet





# Beaufort County Public Works Stormwater Infrastructure Project Summary

**Project Summary:** Sheldon Valley Drains

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Project improved 9,336 L.F. of drainage system. Cleaned out 9,336 L.F. of valley drains. This project consisted of the following areas: Prescott Road (6,136 L.F.) and Solomon White Lane (3,200 L.F.)

**Duration:** 1/19/16 - 1/27/16

2016-314 / Sheldon Valley Drains	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
COVD / Cleaned Out Valley Drains	20.0	\$409.20	\$181.64	\$21.16	\$0.00	\$254.40	\$866.40
HAUL / Hauling	3.0	\$66.81	\$23.97	\$21.45	\$0.00	\$43.26	\$155.49
LM / Loading Materials	4.0	\$81.84	\$49.48	\$16.09	\$0.00	\$50.88	\$198.29
ONJV / Onsite Job Visit	1.0	\$34.18	\$3.54	\$3.04	\$0.00	\$24.47	\$65.23
<b>2016-314 / Sheldon Valley Drains Sub Total</b>	<b>28.5</b>	<b>\$603.78</b>	<b>\$258.63</b>	<b>\$61.74</b>	<b>\$0.00</b>	<b>\$379.62</b>	<b>\$1,303.77</b>
 <b>Grand Total</b>	<b>28.5</b>	<b>\$603.78</b>	<b>\$258.63</b>	<b>\$61.74</b>	<b>\$0.00</b>	<b>\$379.62</b>	<b>\$1,303.77</b>

Before



During



After







Project: Sheldon Valley Drains Map1

Activity: Routine/ Preventive Maintenance

Project #: 2016-314

Township/SW Dist: Sheldon/5

Completed: January 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



1 inch = 420 feet





Project: Sheldon Valley Drains  
Map 2

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2016-314

Township/SW Dist:  
Sheldon/5

Completed:  
January 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





**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Floyd Road

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Replaced (1) separated joint.

**Duration:** 8/2/16

**2017-510 / Floyd Road**

	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
DPRPL / Driveway Pipe - Replaced	12.0	\$278.00	\$63.23	\$98.72	\$0.00	\$176.64	\$616.59
HAUL / Hauling	4.0	\$98.80	\$37.68	\$35.81	\$0.00	\$57.68	\$229.97
<b>2017-510 / Floyd Road Sub Total</b>	<b>16.5</b>	<b>\$388.55</b>	<b>\$100.91</b>	<b>\$134.53</b>	<b>\$0.00</b>	<b>\$240.94</b>	<b>\$864.92</b>

<b>Grand Total</b>	<b>16.5</b>	<b>\$388.55</b>	<b>\$100.91</b>	<b>\$134.53</b>	<b>\$0.00</b>	<b>\$240.94</b>	<b>\$864.92</b>
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Before



During



After







Project: Floyd Road

Activity: Routine/  
Preventive  
Maintenance














Project #:  
2017-510

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 50 100 200 300 400  
Feet

1 inch = 210 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 09/28/16  
File: C:\project summaries map\Floyd Road\_2017-510





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



November 9, 2016

**Stormwater Manager's Report for the Stormwater Utility Board Meeting**

**Utility Update**

1. Tax Run for Tax Year 2016 (TY16) – Billing was delayed due to Hurricane Matthew. The current schedule is unknown.
2. Intergovernmental Agreements (IGAs) and Memorandums of Agreements (MOAs) for Fiscal Year 2017 (FY17) – The City of Beaufort agreements are still pending. Final drafts ready for signature have been sent to the City staff.
3. Fee inquiries – We have a complex SWU fee inquiry from the SC Port Authority related to the Port Royal Port. Hurricane response and recovery has delayed staff review.
4. Eric Larson, along with staff from our consultant Raftelis, spoke at the Annual Fall Conference of SESWA in Birmingham, AL about our recent Utility Rate Study. The session received the highest ratings of all the sessions by the attendees. The audience seemed very interested in the topic and had numerous questions that led to an impromptu breakout session in the hallway.
5. Hurricane Matthew Response and Recovery – During a declared emergency such as this, most of the Public Works, Grounds, Facilities, and Stormwater Department staff are reassigned to the Disaster Recovery Team. Recovery starts with deploying crews and equipment at various shelters in place locations so that we can respond and begin removing debris from the roads even before the contractors arrive on site. Our crews worked continuously for over a week without a break or even the ability to go home and check their own property and belongings. We are very proud of our performance during those first critical days. Gary Kubic also came out to the shop and visited the crews to express his appreciation.
6. Stormwater staff attended the bi-annual Charleston Pond Conference on November 3, conducted by the Ashley Cooper Consortium through Carolina Clear.

**Monitoring Update**

1. Lab Update (From Dr. Alan Warren and Lab Manager Danielle Mickel)
  - a) Since the last USCB WQL update, the WQL has been working towards the additional certifications for the laboratory pure water requirements. These additional certifications include HPC (Heterotrophic



Plate Count), SpC (Specific Conductance), and TRC (Total Residual Chlorine) for drinking water. SCDHEC was scheduled to visit the lab for an on-site evaluation on October 17, but due to Hurricane Matthew this on-site evaluation was rescheduled to November 15, 2016.

- b) An investigation of a suspected illicit discharge on Coosaw Island requested by Beaufort County Stormwater Department was performed by the WQL. This entailed Dr. Alan Warren meeting with Rebecca Baker to discuss specific details of an investigation prior to the WQL going into the field to investigate and collect/analyze suspected water samples.
  - c) Dr. Alan Warren has also provided to Rebecca Baker statistical and graphical analysis of BC weekly fecal data and wet weather BECY fecal data from a period 1/15 to present for fecal weekly and 10/15 to present for wet weather BECY fecal data.
  - d) USCB WQL has also collected and analyzed samples for the Town of Port Royal cypress wetland area on two occasions in September, one wet and one dry event.
2. Monitoring Plan Development – The County staff has discontinued participation in a monitoring sub-committee and is working to develop our monitoring plan with input from the USCB WQL. We are working with ToB to create a MOA that will formalize data sharing and sampling duties in the May, New, and Okatie watersheds.

#### Stormwater Implementation Committee (SWIC) Report

1. The SWIC committee met November 2, 2016. [See attached meeting minutes](#). The main topic of discussion was the Management Plan update. See report under Professional Contracts. The SWIC also discussed the purpose, goal, and frequency of future meetings. An update on Public Education was presented by Ellen Comeau with Carolina Clear. Ellen provided a copy of the new Lowcountry Stormwater Partners email newsletter that contains a status report of current efforts. [See attached](#).

#### Stormwater Related Projects

1. US 278 Retrofit Ponds (\$356,000 Budget) – The 4<sup>th</sup> and final pond began clearing. Work has been delayed due to Hurricane Recovery.
2. Okatie West / SC 170 Widening Retrofit (Design and Construction = \$915,000 Budget) – The geotechnical report is complete. Design is ongoing. Staff is considering the use of the excavated material at the Animal Services facility project on SC 170, that has a need for foundation fill dirt.
3. SC 170 Widening Pond #8 project (Design and Construction = \$630,840) – Nothing new to report.
4. Easements – Staff is working on numerous easement requests. Significant locations are Salem Dr. East, Young Circle, Gadwell Dr. East and several on St. Helena Island. The County attorney has sent a notice of condemnation to one property owner on Salem Dr. East. A condemnation on Gadwell Dr. East is needed and the Engineering



department is pursuing this with the County Attorney's office.

5. Complaints and Hurricane Recovery – The storm created approx. 27 individual complaints within the first week after the storm. More complaints are continuing to be received daily. See the MS4 report below. Staff has begun inspecting our system looking for downed trees, clogged ditches and pipes, etc. for needed debris removal and damage. Staff is also pursuing grant funding options to help with the cost in addition to our plans to submit to FEMA for public assistance.

#### Professional Contracts Report

1. Stormwater Management Plan (Master Plan) Update – (\$475,000 Budget; \$239,542 County portion) – During the November SWIC meeting, ATM presented the results of the land use analysis and selection of the 7 priority watersheds for analysis. The group accepted the recommendations. [See the attached presentation.](#)
2. Mint Farm Basin B Modification – (\$8,000 Budget) – Nothing new to report. Project is ready for construction. Materials on order. Work has been delayed due to Hurricane Recovery.
3. SC 170 Widening Drainage – (\$17,500 Budget with 50% of funding from the Stormwater Department. Change order for additional \$4,500 approved in October) – The 3<sup>rd</sup> party review report is complete and submitted to the County on November 1. Review and action on the report has been delayed due to Hurricane Recovery.

#### Regional Coordination

1. Factory Creek Watershed Regional Detention Basin “Phase I” & Academy Park Subdivision (cost is pending) – Nothing new to report.
2. Factory Creek Watershed Regional Detention Basin “Phase II” (Design Cost = \$63,390, Tree Mitigation Cost is pending, Construction Cost by the Developer) – Nothing new to report. Excavation continues as material is sold by the Developer.
3. Horne Development at Okatie Center in Jasper County (\$1,500) – ATM has been given a Task Order to review Jasper County and City of Hardeeville stormwater standards and compare to our own. Work has begun. Results are pending.
4. Hilton Head National Redevelopment – The applicant has asked for a postponement until the December 2016 Planning Commission meeting.
5. FEMA CRS five year update – Staff has been assisting to prepare the five year review application for the Community Rating System. We have responded to review comments from FEMA.
6. County Dirt Road Paving Contract #50 – Dave Wilhelm and Eric Larson have been participating in the design team for a grouping of County Roads scheduled to be paved. Our involvement is a new effort to provide input into the design to make a better constructed road and minimize any post construction issues. Of note is the need to understand the drainage of the road – where does it go? Is the outfall in good condition? Do we have easements for the drainage offsite? Engineering and Stormwater will work together to define the drainage and easement needs and acquire



- easements and/or make ditch repairs during design and construction.
7. Central Drive causeway failure – A significant event from the Hurricane was the wash out of the pipe under Central Drive at the causeway to Red Bluff in northern Lady's Island. High tide and high velocity flow washed out the bedding around the pipe causing a road collapse and water line break. Stormwater crews responded and worked overnight and all weekend long to temporarily repair the causeway by removing the pipe and damming the marsh. Engineering has entered into an emergency repair design build contract with Andrews Engineering, J.H. Heirs, and O-Quinn Marine to repair the pipe and road.

## Municipal Reports

1. Town of Hilton Head Island (From Bates Rambow, SW Data Analyst)
  - i. No information was available at the time of this report.
2. Town of Bluffton (From Kim Jones, Watershed Management Division Director)
  - i. No information was available at the time of 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) – Work continues. The City requested a time extension, which was granted by DHEC, due to the loss of time due to Hurricane Matthew.
  - ii. No further information was available at the time of this report.
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 summary – 13 Plans Reviewed.

Name	Date	Type	Results
Palmetto Medical Group	10/26/2016	Final	Deferred
USCB 2016 Student Housing 63 Bed	10/26/2016	Conceptual	Deferred
Ernest Mine Drive	10/20/2016	Final	Approved with conditions.
Daufuskie Island	10/12/2016	Final	Approved
USCB Campus Center	10/26/2016	Final	Deferred
Lipmans Produce	10/26/2016	Conceptual	Deferred
Southern Fence	10/12/2016	Conceptual	Approved

1. Inspection summary for October 12, 2016 to November 1, 2016
  - Number of active permits = 26
  - Number of inspections performed = 25



Number of drainage related complaints investigated = 24

2. BMP Manual - The Stormwater Ordinance received a favorable third and final reading on October 24, 2016. The new ordinance is now in effect.
3. Public Education - There was a strategic planning meeting held on September 29th from 9:00 to 12:00 at the Port Royal Sound Maritime Center. Ellen Comeau, the new Water Quality Agent for Clemson Extension in Beaufort County, will be working on summarizing the results of the meetings and presenting the strategic plan at a future Board meeting. [See attached email report.](#)
4. Annual reporting and the SWMP – Rebecca Baker is working on revisions to our Management Plan as part of the submittal for the annual report to DHEC. The reporting period ends on December 1, 2016 and the report is due in April.



## Larson, Eric

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**From:** Larson, Eric  
**Sent:** Wednesday, November 2, 2016 4:32 PM  
**To:** Baker, Rebecca (rbaker@bcgov.net); 'Polk, Daniel (dpolk@bcgov.net)'; Wallace, Carolyn; bates Rambow; jeff Buckalew; Baugher, William; Kim Jones (kjones@townofbluffton.com); Neil Desai; (LTaylor@cityofbeaufort.org); Van Willis (vwillis@portroyal.org); Anthony C. Maglione (TMaglione@appliedtm.com)  
**Cc:** Mina, Joseph; Ellen Virginia Comeau (ecomeau@clemson.edu)  
**Subject:** SWIC Mtg. 11/2/16 minutes

### DRAFT Minutes

#### SWIC

November 2, 2016, 1:30 pm at BJWSA Community Room, Okatie, SC

Attendees:	Eric Larson, Bill Baugher, Bates Rambow, Van Willis, Ellen Comeau, & Joe Mina. Absent: Neil Desai
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1. 1:30 pm meeting - call to order
2. Public Education - Ellen Comeau
  - a. Email Newsletter - Quarterly or Monthly. Consensus was quarterly.
  - b. BMP training for contractors - Ellen explained purpose of the program. Pilot class in Columbia at Sandhill. There is a grant program where landowners can apply for funds to get BMPs installed using the certified contractors in this program. She is looking to get the program into this area in the future.
  - c. Strategic plan - draft being reviewed internally. Should be released to the SWIC 11/9/16. Finalized by December 1, 2016.
  - d. Working on Lowcountry Stormwater Partners logo and website.
3. Master Plan - Land use evaluation and selection of priority watersheds. Joe Mina presented a second draft of the land use analysis. New 2016 land use data has been received and compared with the 2002 data used in the 2006 Management Plan. Joe noted need for additional data from each jurisdiction. He stated that the study will include a recommendation of water quality sampling locations and type of sampling needed at each location. Joe concluded with a summary of the remaining schedule. Larson asked that since the ToB has been doing quite a bit of analysis in the May River watershed, is it possible to do a eighth watershed without increasing the cost. The answer is no because the two work products are different and level of analysis is different. Larson asked if there will be preliminary capital projects by early spring in time for budgeting? He noted that ATM committed to the ToHHI elected officials to try to meet this deadline. The answer is yes but only draft form. Probably by January 2017. They will be compiling a list of projects from 2006 not done and update. Larson recommended the 7 watersheds as presented by ATM.  
Next Steps:  
Obtain 2002 GIS data  
Get BMP coverage information for HHI, BC, or CoB.  
Everyone send any data on outfalls to make sure they get studied.  
Joe will email out PPT.



4. Monitoring - Data share with ToB written agreement. - Larson and Baugher agree to draft a MOA to share sampling locations and what is tested for, and allowing the USCB lab to share each others data.
5. MS4 year 1 implementation delay request - Bates sent copy of a letter to DHEC to extend a few sections of the permit due to the Hurricane. Focused on staff training. Asked for 90 days. DHEC says no extensions in permit but will consider reasonable requests and "work with us". After seeing the ToHHI request, ToB called for clarification and got a similar request. ToB and BC will not be asking for extension.
6. Utility Cloud software - Baugher described this cloud based asset management software. ToB bought the service. Uses smart phones. Collects data for sampling, has forms, etc. Also does asset management by pre-loading infrastructure and allowing for inspection and generate work orders. Set up for the ToB was about \$8000 and a \$5000 annual service fee. BC and ToHHI already have something. ToHHI had interviewed approx. 5 firms last year to find something.
7. NRCS / USDA assisting ToHHI - Emergency watershed protection program. Assistance in removing debris, repairing erosion, clogged road crossings, etc. from after the storm. They met with them last week and today. 75% grant. FEMA will not provide grant funding in PA if NRSC won't qualify the work. Contact is Stephen Henry, EWP coordinator for SC.
8. DHEC's Shakhlan Garane coming down to audit ToB EPSC program next Wednesday. ToB requested it. They did this in response to a complaint from D R Horton and claim that the Town not doing the program correctly.
9. SWIC - The future direction of the group - Eric Larson noted that, as he understood the purpose of the SWIC as defined in the IGA, is to serve as a body of staff to collaborate on stormwater related items. Most significantly, the utility billing and approval of the annual management budget. However, the IGA also gave the SWIC duties to find cost sharing partnerships on stormwater task, including a special emphasis on the MS4 permit program. While the SWIC has been able to achieve much success with the Public Education effort and cost sharing on the Management Plan update, Utility rate study, to a limited degree monitoring, and the occasional capital project, Larson feels as if the "vision and spirit" of the IGA and SWIC is not being met. There are numerous examples of lost opportunities to partner on program development related to MS4. Subcommittee meetings set up to facilitate sharing of ideas and development of uniform standards, procedures, and policies have begun more of a presentation of the end product of individual efforts and an offer to share what was prepared independently. Additionally, attendance has been poor in recent months and the value of meeting together has been diminished. As a result, the County is recommending a suspension of regularly scheduled meetings. The 2017 schedule can remain intact if desired with meetings held only when needed to address milestones such as the annual budget, the Management Plan project, and/or public education. It may be possible to even do some of the meetings via conference call or email.

Regardless of the decision made by the group today, the County staff will not be participating in any further sub-committees and plans on focusing on development of our program needs independently of input from the SWIC.

Bill Baugher - Disagreed. Noted he has to do things a certain way to address their management's desire. He sees value in continuing to meet to share things that are happening, but not necessarily to develop common policy documents.

Ellen suggested quarterly with focused topics each time.

Bates agrees with Larson but thinks the SWIC is established by ordinance and can't be dissolved. Larson noted the SWIC formation is only in the IGA to the best of his knowledge.

**SWIC agreed to adopt the 2017 schedule. Further, all sub-committees are ended. The December meeting is canceled. January 2017 meeting will to be determined later. A meeting in February is probably needed to review the annual Utility Management Fee Proposal for FY 18.**

10. Next Meeting? - Larson emailed the 2017 schedule and has reserved the BJWSA community room if needed.
11. Adjourn.



**Larson, Eric**

---

**From:** Lowcountry Stormwater Partners <ecomeau=clemson.edu@mail214.atl171.mcdlv.net>  
on behalf of Lowcountry Stormwater Partners <ecomeau@clemson.edu>  
**Sent:** Friday, October 28, 2016 1:13 PM  
**To:** Larson, Eric  
**Subject:** Lowcountry Stormwater Partners Newsletter

[View this email in your browser](#)

## LOWCOUNTRY STORMWATER PARTNERS



### HAPPY FALL!

With the weather starting to cool off, winter residents returning home, and the beginning of another tourist season, the lowcountry is bustling with activity! The Lowcountry Stormwater Partners are just as busy gearing up for the colder months and that means it's time for an update!

---

### STRATEGIC EDUCATION PLAN UPDATE

As it stands now, Ellen will finish the rough draft on Friday, 10/28. She will then give it to Katie Buckley and Amy Scaroni for review on Monday, 10/31. After that, all three will meet to discuss and edit the plan. The first draft will



then be circulated for feedback no later than Wednesday, 11/9. Once Ellen receives feedback, she will make the necessary changes and have it ready for submission BEFORE DHEC's deadline of 12/1.

---



### **LOGO COMING SOON!**

Amy Manucy, of [Amy Manucy Design Creative](#), is currently working on a Lowcountry Stormwater Partners logo! We expect to receive her rough designs within the next few weeks. Once received, it will be distributed to everyone and open for feedback. Ellen will gather the feedback into one document and send it to Amy who will create another draft. This process will repeat until the logo is finalized. Afterwards, Ellen will begin build the LSP

### **WHERE'S THE WEBSITE?**

It's almost here! Clemson University is in the process of migrating its website and affiliated pages to a new format. This change is causing a delay in creating the Lowcountry Stormwater Partners' webpage. However, we should have the webpage up within 2-3 weeks!

### **EXTENSION AGENT UPDATE**

Besides developing the education plan, Ellen has been doing:

#### *Research*

In order to write a comprehensive and effective education plan, she has read every lowcountry watershed plan, BMP design manual, SWMP, MS4 permit, and previous MS4 education report as well as the Blueprint for Clean Water. She has also read all of the Carolina Clear stormwater consortiums' strategic education plans and discussed them



brand by creating a Lowcountry Stormwater Partners Facebook page and developing giveaways and merchandise.



with her fellow agents.

### *Partner Meetings*

Over the past month Ellen met with many existing partners and several NEW organizations to discuss their needs and partnership opportunities. By having these meetings, she was able to brainstorm several unique programs and projects that will be included in the education plan! She will continue to attend similar meetings.

### *Programs*

Ellen is auditing the Carolina Yards and Master Pond Manager courses to better understand the materials. She plan to promote and host these programs in Beaufort County as soon as possible. In fact, if all goes well, Beaufort County may be the host site for the Spring 2017 Master Pond Manager course!

---

## **MARK YOUR CALENDARS!**

### ***Pond Manager Conference (Nov. 3)***

The 2016 Charleston Area Stormwater Pond Management Conference will



provide a forum to give the latest information, resources, and tools on stormwater pond management for the Lowcountry community. 8:30am-4:00pm at Trident Technical College in Charleston. For more information, click [here](#).

***Port Royal Sound Foundation's Birthday Celebration (Nov. 12)***

The Maritime Center is celebrating its second year with a day full of FREE fun activities and special guests. LCP and Clemson Extension will be there providing enviroscapae demonstrations, so come by and say hi! 10:00am-3:00pm at the Maritime Center in Okatie. For more information, click [here](#).

***Residential Stormwater BMPs: A Training for Contractors (Nov.15)***

This workshop is intended for contractors and landscape professionals who want to learn how to install stormwater best management practices. This training will include a classroom portion followed by a hands-on installation. 9:00am-3:00pm at the Sandhill REC in Columbia. For more information, click [here](#).

***Clemson Extension Tree Giveaway (Dec. 4)***

On Arbor Day, the Clemson Extension office will be handing out 500 native tree seedlings from 9:00am-2:00pm. More information will be forthcoming.

*Questions, Comments, or Requests?*

*Contact your Water Resources Extension Agent:*

***Ellen Comeau***

*ecomeau@clemson.edu*

(843)-255-6060 ext 115

Lowcountry Stormwater Partners

102 Industrial Village Rd

Bldg 1

Beaufort, SC 29906

[Add us to your address book](#)



Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer.

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You are receiving this email because you requested to be notified about current events, projects, and volunteer opportunities with Lowcountry Stormwater Partners, the Beaufort County stormwater consortium.

Want to change how you receive these emails?

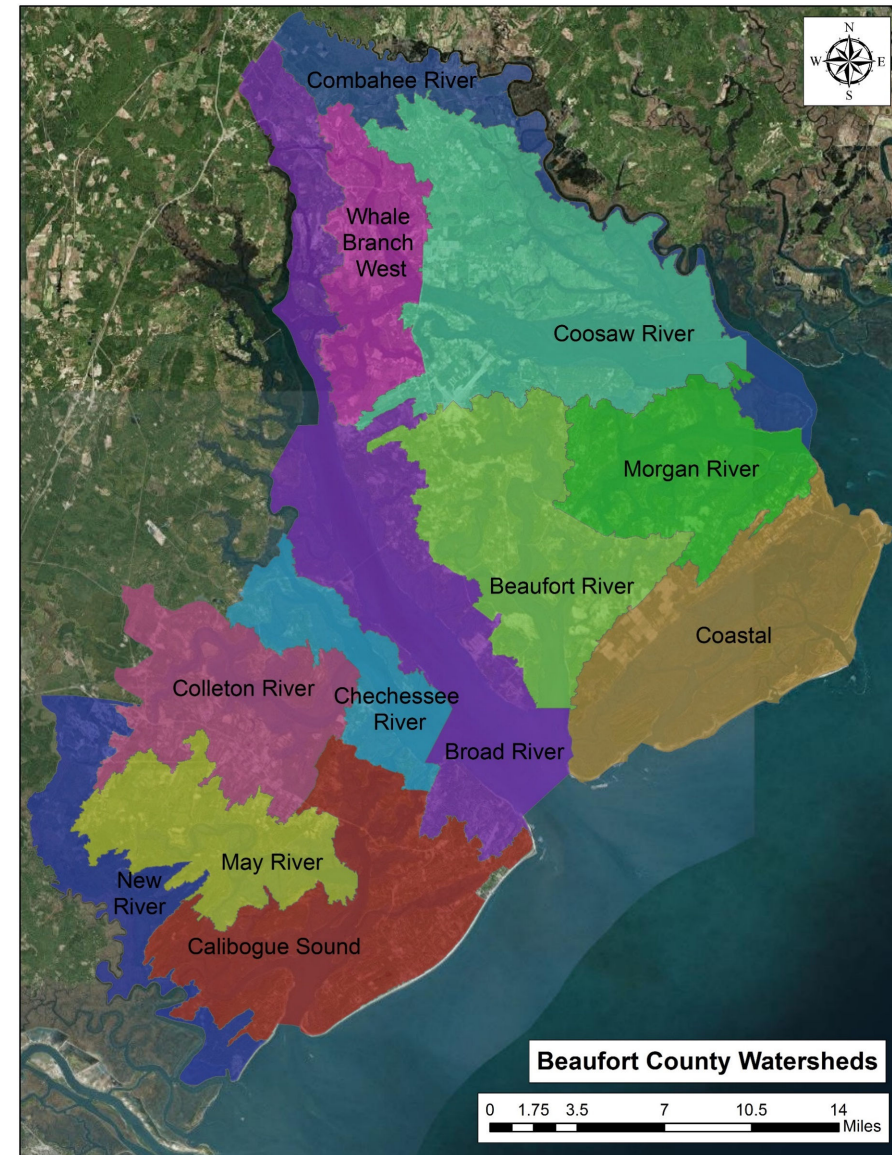
You can [update your preferences](#) or [unsubscribe from this list](#)

The MailChimp logo is displayed within a grey rectangular box. The text "MailChimp" is written in a white, cursive script font.



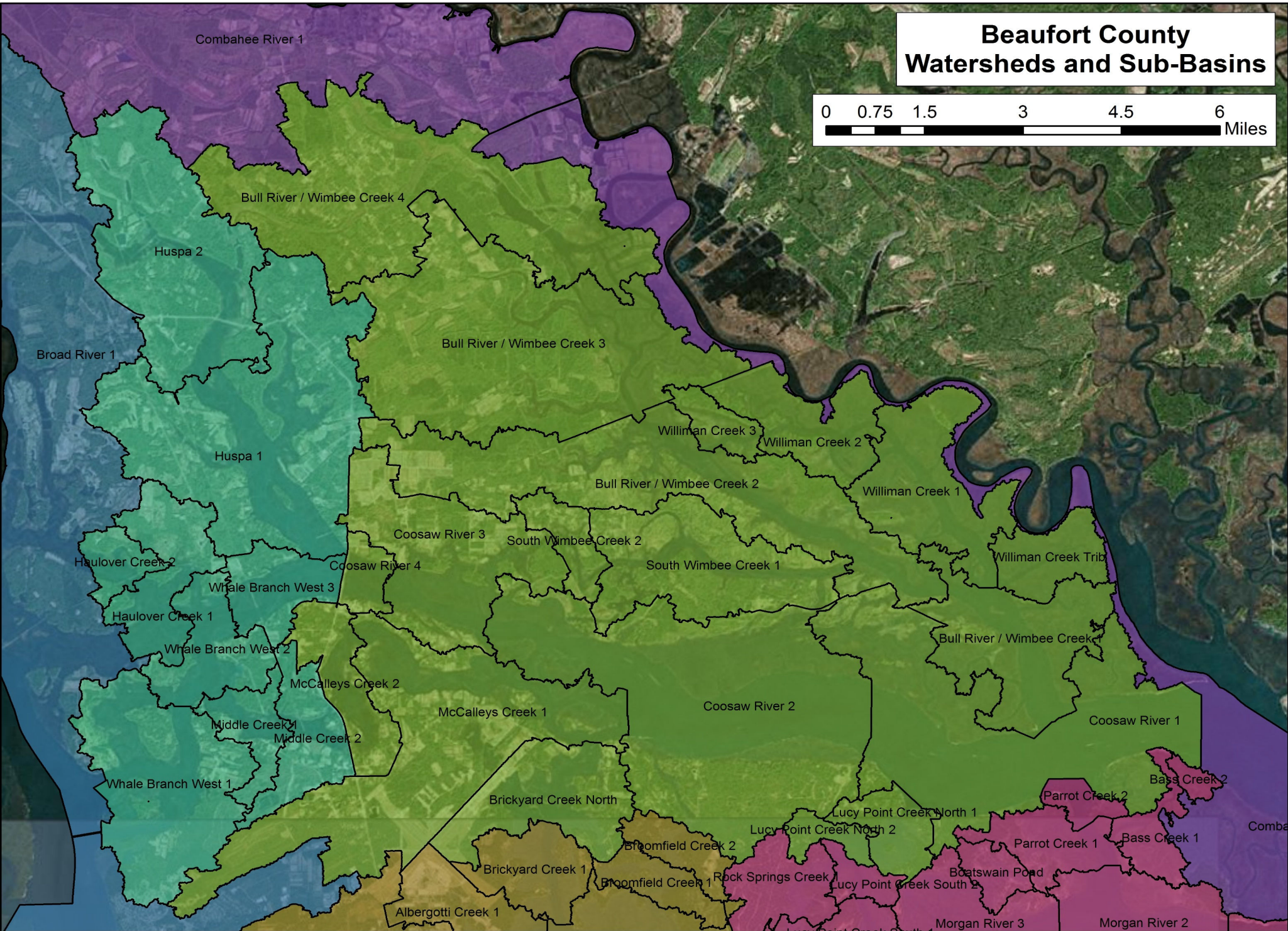
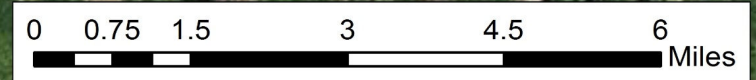
**Based on Updated LULC from 2016 Aerials**

Comparison to 2002	% impervious 2016	Compiled WQ data for Fecal	Recommendation for modeling
1 May	1 Beaufort	1 May	1 May
2 New	2 Colleton	2 Beaufort	2 Beaufort
3 Colleton	3 Calibogue	3 Colleton	3 Colleton
4 Calibogue	4 May	4 Morgan	4 Morgan
5 Morgan	5 New	5 Calibogue	5 Calibogue
6 Beaufort	6 Broad	6 Coosaw	6 New
7 Coastal	7 Morgan	7 Broad	7 Coosaw
8 Broad	8 WBW	8 New	8 Broad
9 Chechessee	9 Coosaw	9 WBW	9 Coastal
10 WBW	10 Chechessee	10 Chechessee	10 WBW
11 Coosaw	11 Coastal	11 Costal	11 Chechessee
12 Combahee	12 Combahee	12	12 Combahee

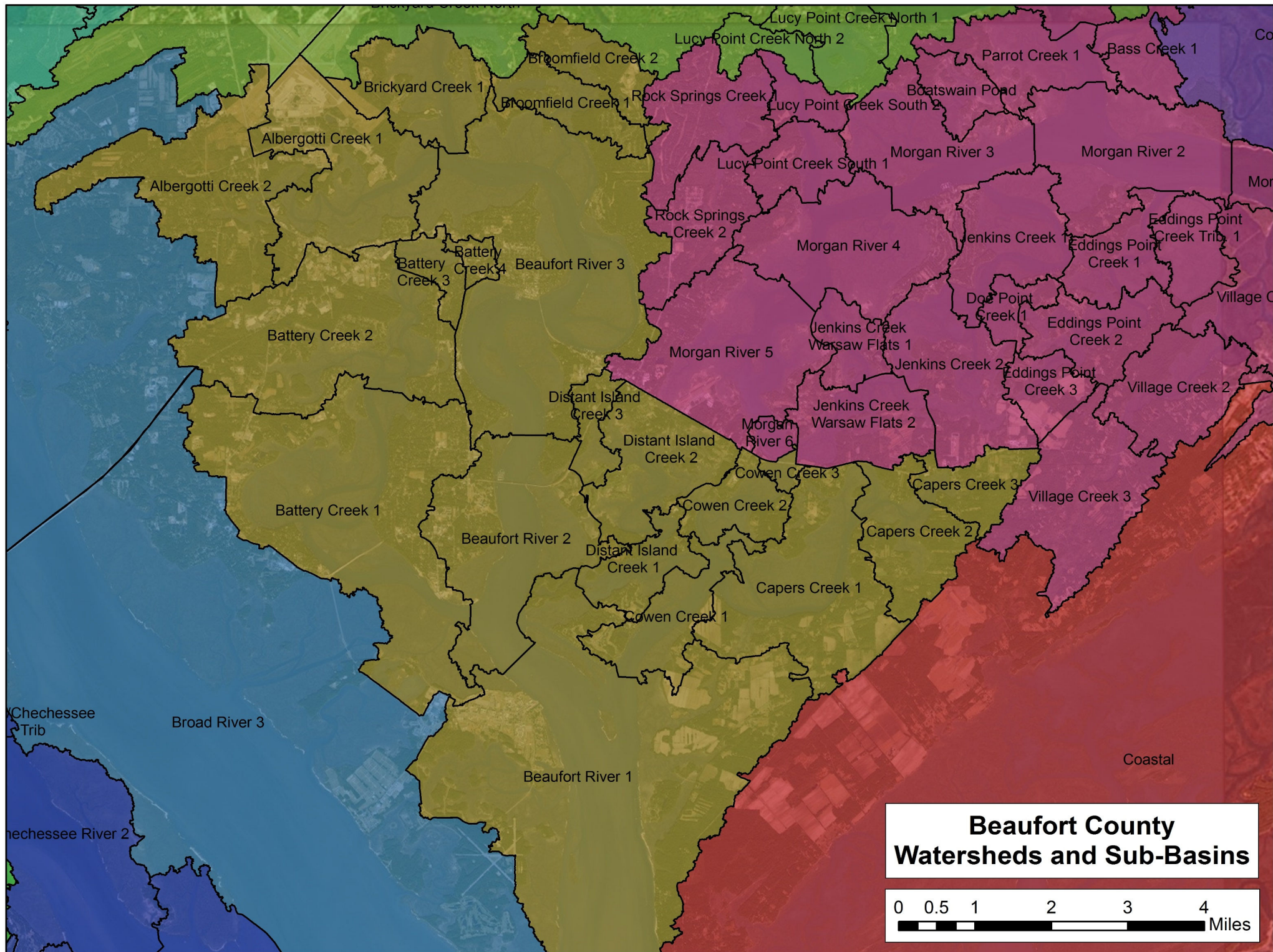




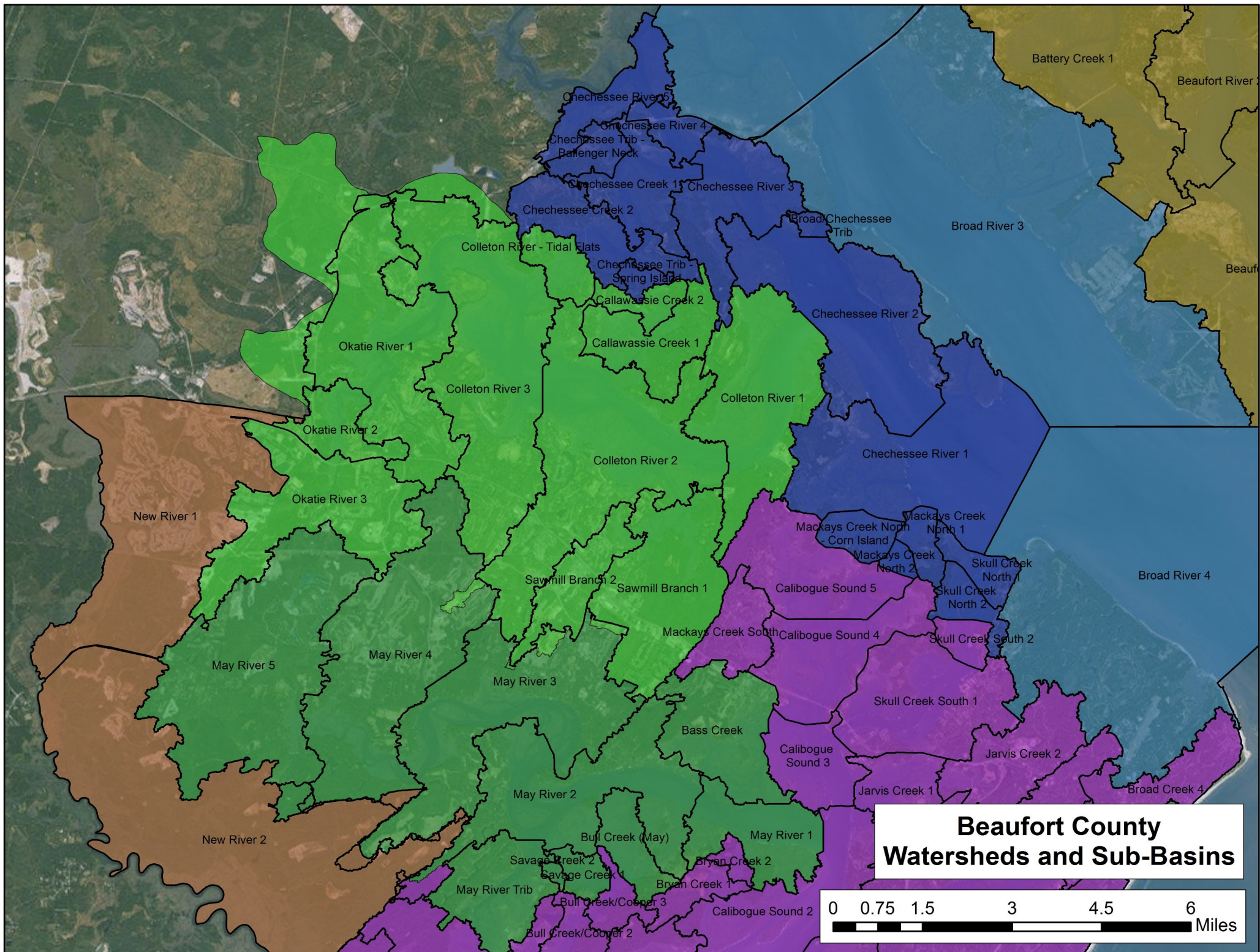
# Beaufort County Watersheds and Sub-Basins



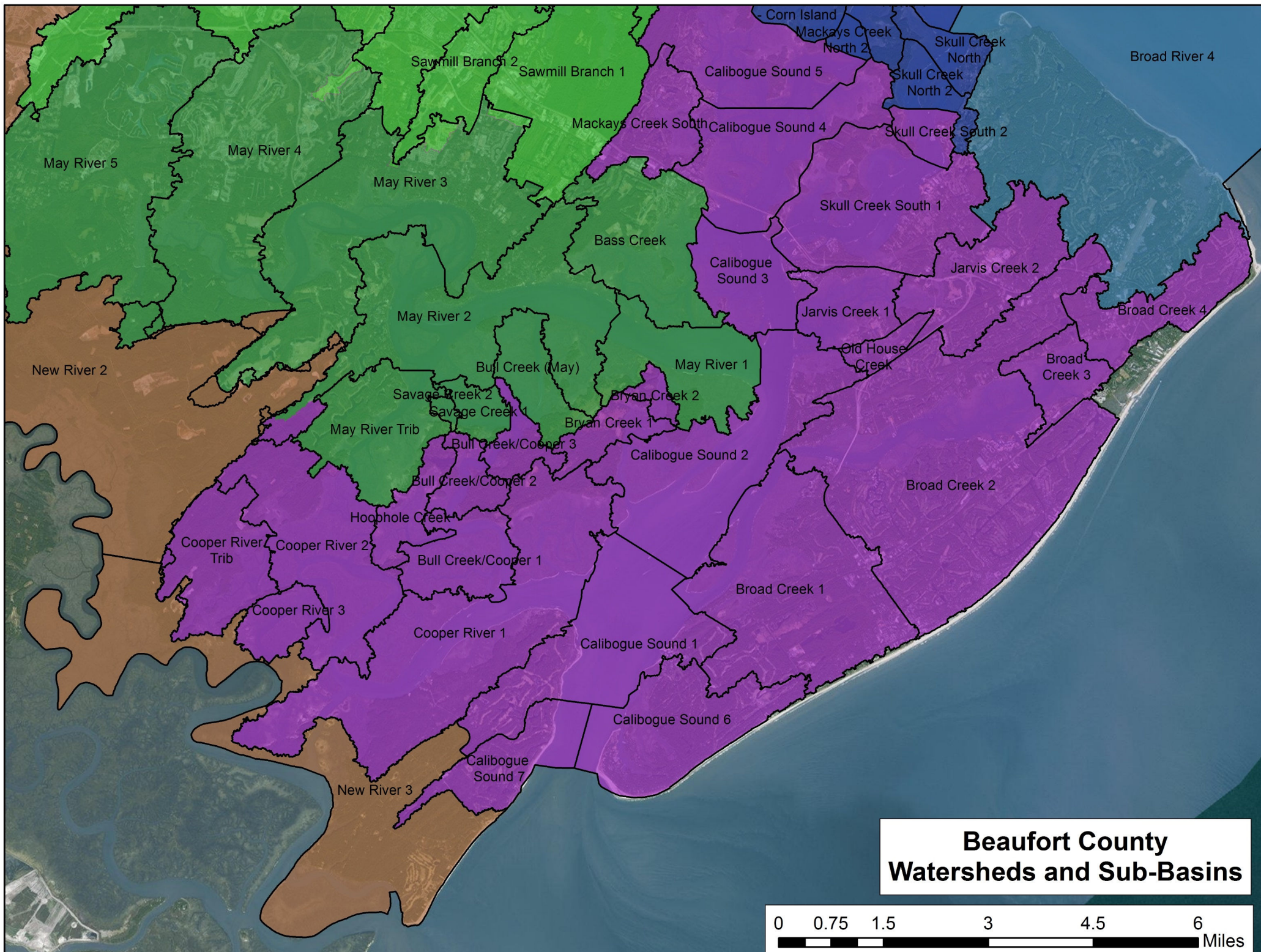






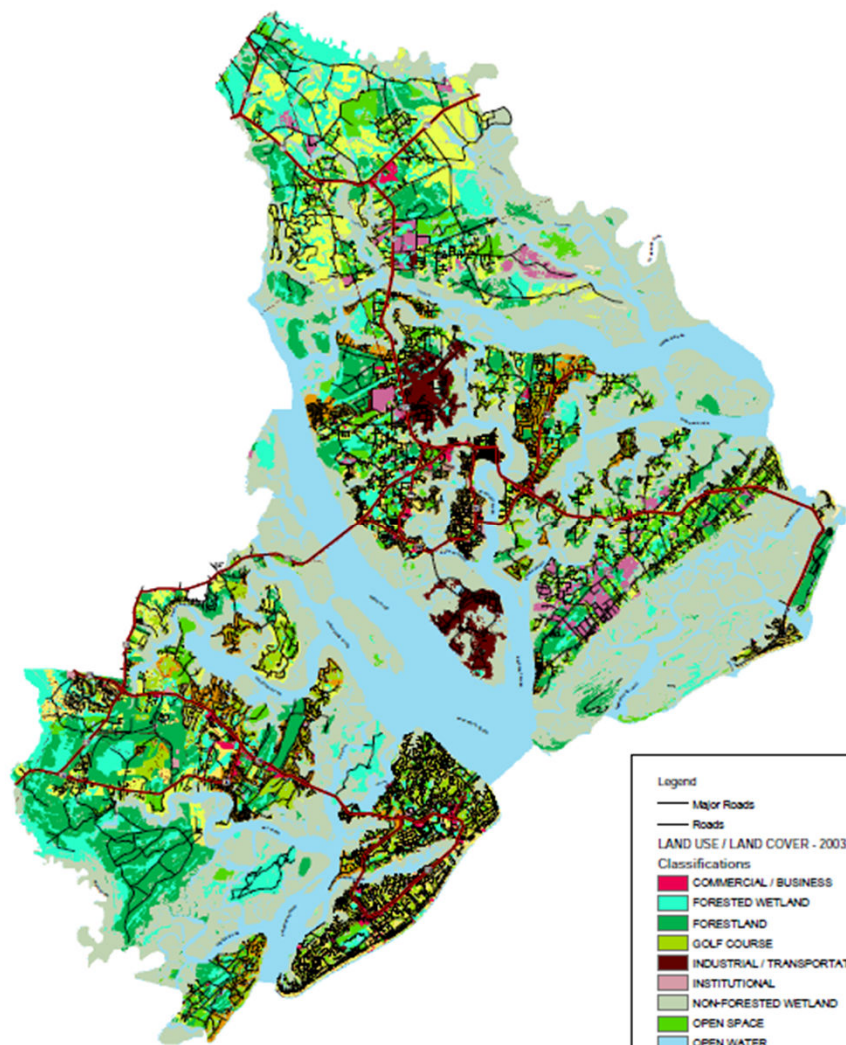




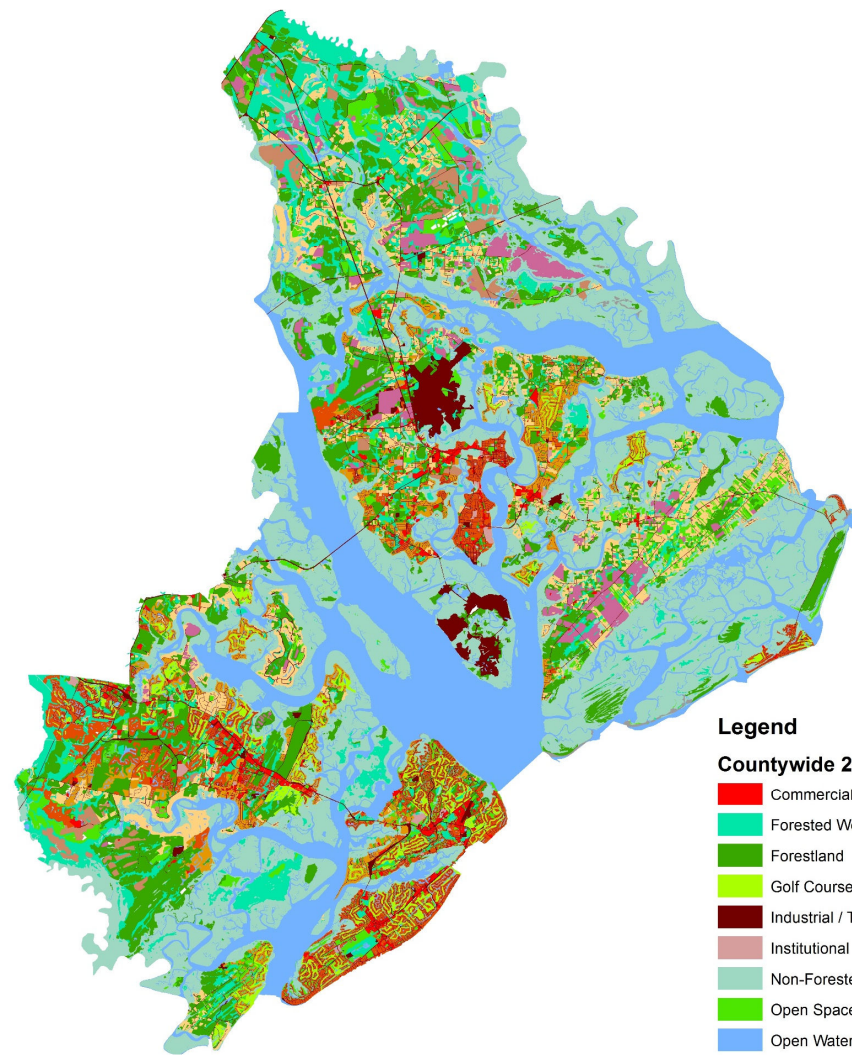




# Beaufort County Existing Land Use / Land Cover



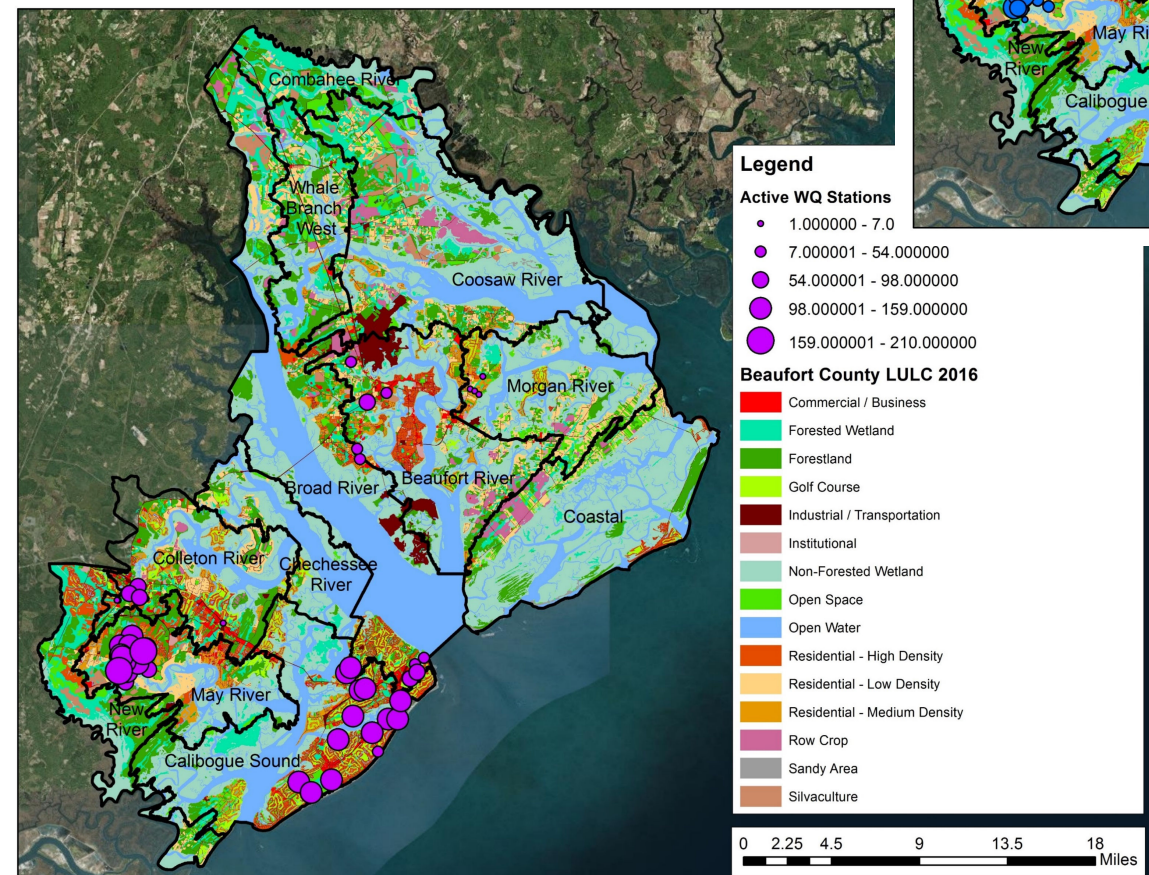
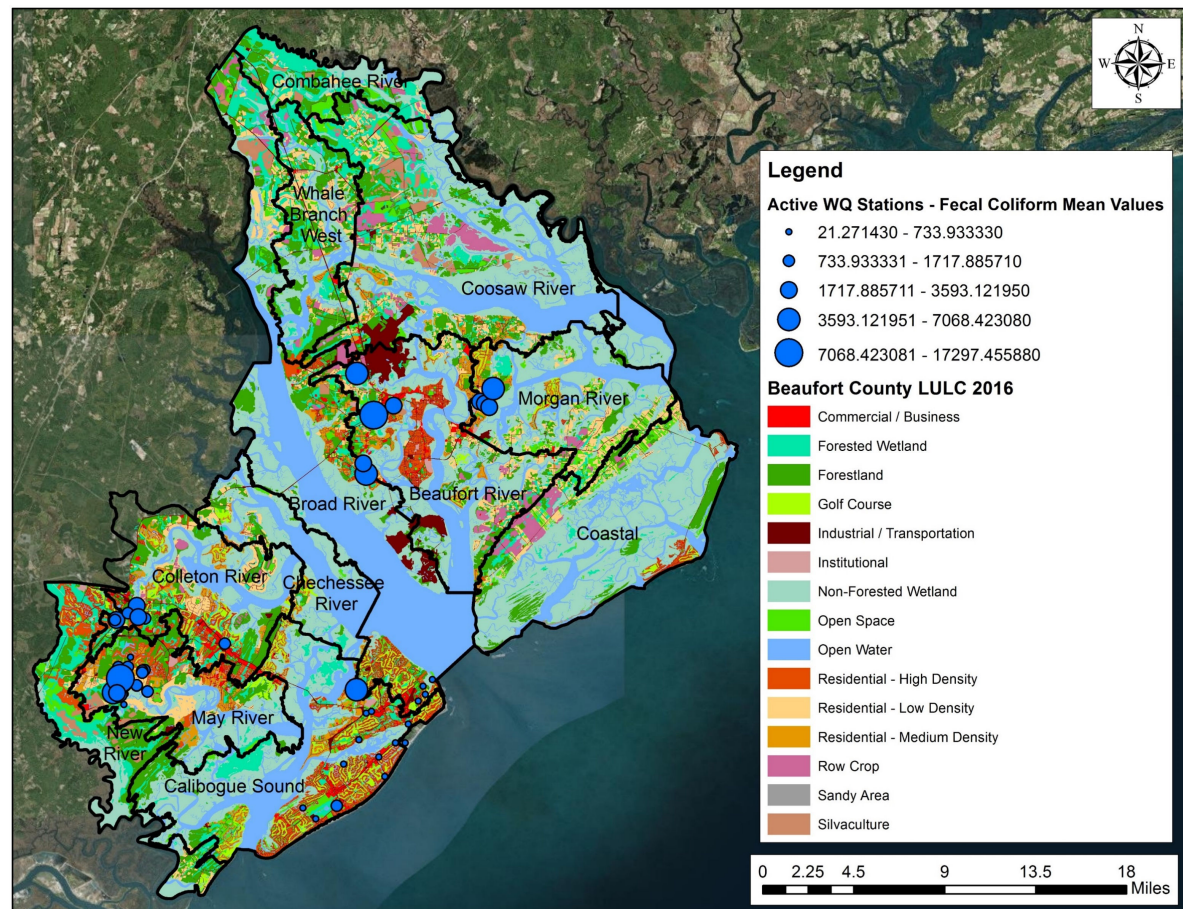
0 10,000 20,000  
Feet  
1 inch equals 20,000 feet



0 2.25 4.5 9 13.5 18  
Miles



WS	area	imp	% imp
Beaufort	46234	6757	14.61%
Colleton	31953	4224	13.22%
Calibogue	50585	6389	12.63%
May	27893	3153	11.30%
New	22795	1865	8.18%
Broad	69774	5101	7.31%
Morgan	32586	1709	5.25%
Whale Branch West	24376	1240	5.09%
Coosaw	69391	2998	4.32%
Chechessee	19672	457	2.32%
Coastal	50650	1126	2.22%
Combahee	22537	347	1.54%





2002

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	1348	591	0	7	1921	28	136	1906	0	307	0	509
Commercial	915	401	991	4	34	546	11	270	150	161	5	185
Forest/Rural Open	2491	4246	2851	900	4043	5558	1299	6583	8243	2454	7522	3586
Golf Course	363	965	2529	754	191	2426	0	64	1221	342	322	0
High Density Residential	3692	3333	4441	108	742	1095	0	14	669	24	1327	13
Industrial	5189	3497	2403	283	553	1570	287	3124	648	843	445	778
Institutional	586	190	154	13	6	102	0	97	139	111	73	23
Low Density Residential	2896	3375	76	882	1953	3193	3208	8503	2736	2986	451	5022
Medium Density Residential	1036	511	1786	376	90	2566	0	1263	779	1614	256	952
Open Water/Tidal	23017	43789	25700	15608	37391	11682	11941	36985	9381	19465	5635	8567
Silviculture	164	0	0	0	0	1067	0	0	0	0	4	0
Urban Open	2967	2524	2955	331	1965	2403	1024	4596	939	3146	914	1496
Wetland/Water	1631	5674	4225	514	1759	2465	4631	5969	2750	1134	5860	3248
TOTAL	46292	69095	48111	19780	50647	34701	22538	69375	27655	32586	22814	24379
Urban Imperviousness	7204	5146	5389	468	1099	3256	561	3820	1554	1563	1213	1529

2016

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	1580	1418	0	0	2021	499	238	3854	8	394	27	746
Commercial	1325	729	1264	16	51	1098	13	130	442	149	71	134
Forest/Rural Open	4516	6724	2843	1211	4295	5634	2785	8304	5176	2510	4924	6131
Golf Course	367	964	3062	491	198	1657	0	59	537	511	472	0
High Density Residential	2302	2746	5505	16	752	2320	0	51	2431	95	2591	202
Industrial	4639	3338	2593	274	548	1678	280	2596	830	835	471	774
Institutional	467	109	221	13	6	57	0	92	178	134	77	14
Low Density Residential	3473	2306	115	928	2105	2813	924	4364	2835	3854	572	3094
Medium Density Residential	2162	1261	2054	479	67	2146	0	1355	2158	1765	22	296
Open Water/Tidal	22913	43347	26246	15479	37395	11450	11771	35976	10151	18993	5722	8275
Silviculture	254	1365	0	0	0	0	342	3298	864	0	925	233
Urban Open	705	1255	2678	340	1772	619	823	2748	811	2232	1396	802
Wetland/Water	1531	4212	4005	425	1441	1984	5360	6564	1472	1115	5524	3675
TOTAL	46234	69774	50585	19672	50650	31953	22537	69391	27893	32586	22795	24376
Urban Imperviousness	6757	5101	6389	457	1126	4224	347	2998	3153	1709	1865	1240



### 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



## NEXT STEPS

1. Choose which 7 Watersheds to Model.
  - a. Are more than 7 desired/needed?
2. Provide additional information to ATM so ATM can proceed with modeling.



# ADDITIONAL INFORMATION AND DATA NEEDED TO CONTINUE WITH MODELING

➤ **Need 2006 GIS or shapes used to create land use data.**

- We do not have LULC from 2002 digitally. Data so far was taken from tables in pdf of 2006 SWMP.

➤ **BMP coverage**

- We have this for Port Royal and Bluffton only.
- Need location of BMPs and Areas treated.
- Private and Publicly owned/maintained.

➤ **Updated Pipe/Drainage Structure inventory.**

- We have this in parts but need additional info.
- Data for upstream and downstream ends
  - Elevation, coordinates, slopes, flow direction.

➤ **Additional coordinates for monitoring stations.**

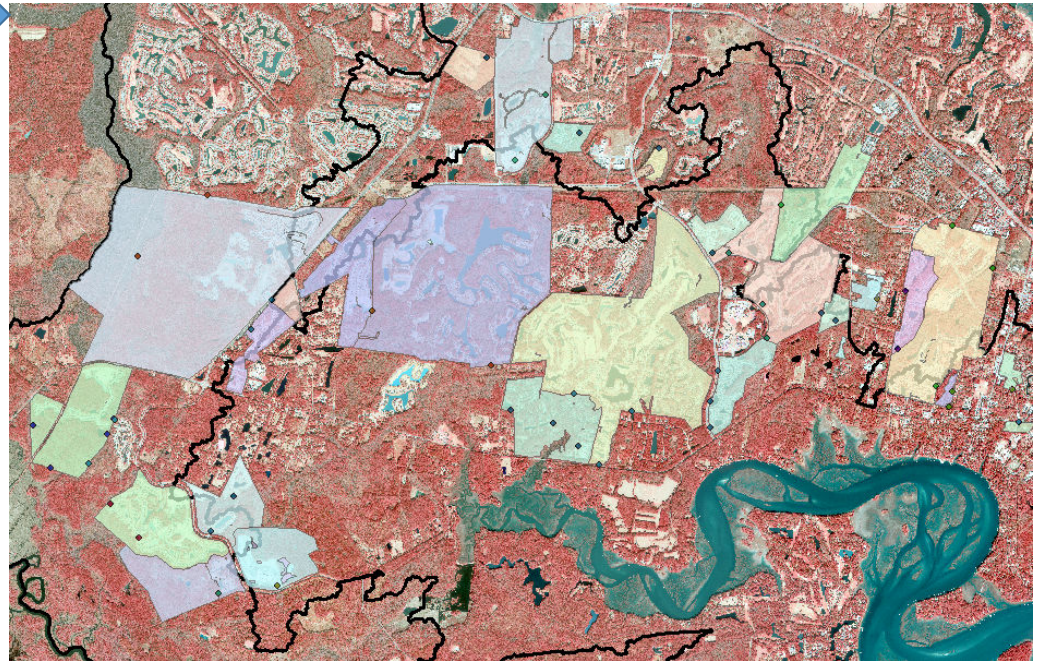
- RDCP4
- BECY.17a
- BECY.1a
- BECY.4a
- BECY.11
- BECY.10
- BECY.5
- BECY.4
- BECY.6r

➤ **Verification of some sub-basin boundaries in GIS.**

- Mostly in unincorporated county areas. Need to coord with GIS and/or Rebecca.

➤ **WQ Sampling locations to be determined as we model the watersheds**

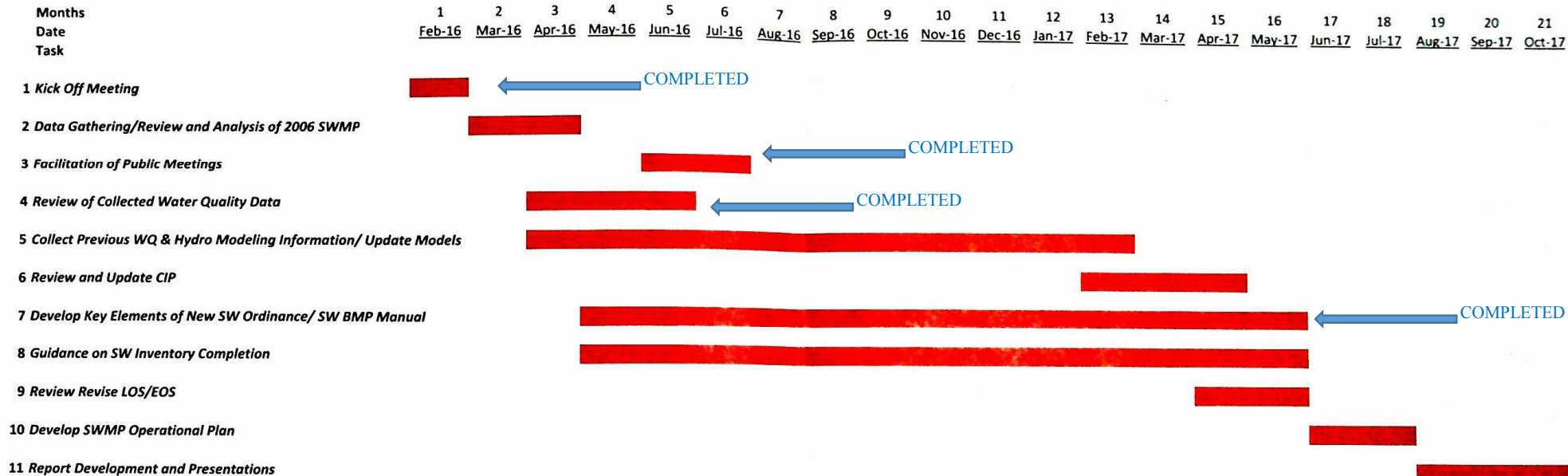
- Locations to be determined based on data and models in addition to locations where they are most feasible.
- Major outfalls.
- Methodology and timing will be recommended. (Dry flow, storm intensity to sample, grab or continuous, etc.)
- We don't have details yet, since we have not yet completed modeling other than initial calibrations and test runs and some hot spot items as part of task 4. We





# UPCOMING MILESTONES/SCHEDULE

## ❖ Original Schedule



## ❖ Anticipated Milestones

1. Current work product is approximately at 50-60%.
2. Draft of Modeling results available Mid January. Will meet with staff and review prior to presenting to SWIC. (at about 80% level)
3. Present final results of Modelling to SWIC in February 2017.
4. During modelling, and after (through June 2017) will work on SW Inventory and LOS/EOS task.
5. Anticipate presentation of updates to SWMP in final format in Fall 2017.



**Larson, Eric**

---

**From:** Carolina Clear <ecomeau@clemson.edu@mail254.suw18.rsgsv.net> on behalf of Carolina Clear <ecomeau@clemson.edu>  
**Sent:** Tuesday, October 25, 2016 10:51 AM  
**To:** Larson, Eric  
**Subject:** Strategic Plan Meeting Minutes



### **Strategic Stormwater Outreach Planning Meeting Minutes**

I hope that everyone made it through the storm unscathed! First of all, thank you to everyone who could attend the beginning of this important regional effort! Your input will be crucial to Carolina Clear as we develop the strategic education plan for the lowcountry. Below are the meeting minutes from Sept. 29th's planning session.





### **MS4 Presentations**

Our objective was to identify the top three pollutants of concern.

*Erik Larson (Beaufort County)*

- Adopted volume control to meet TMDLs
- Sample for fecal coliform due to shellfish
- Okatie River: Fecal coliform TMDL (303d)
- Battery Creek: Impaired with bacteria
- Beaufort River: TMDL for DO

*Neil Desai (City of Beaufort)*

- Retrofitting detention pond with 319 funds

*Kim Jones (Town of Bluffton)*

- New River: Enterococcus TMDL, increasing BOD, and pH (303d)
- May River: Fecal coliform TMDL (303d)
- Monitoring program used to help inform/defend development requirements and to determine the efficacy of BMPs

### **Local Perspectives Surveys**

Our objectives were to ID behaviors that contribute to stormwater pollution as well as audiences that need more info about stormwater pollution prevention. The bonus objectives were to ID the where and how for education, involvement opportunities, and potential hurdles.

Residents were given a survey in 2015 and this combined with a Carolina Clear survey found the following:

- Over 700 respondents (nearly 50% in gated communities)
- 73% recognized that stormwater is not treated
- There was some confusion between wastewater and stormwater
- When asked who was at fault, there was lots of finger pointing



*Bates Rambo (Town of Hilton Head Island)*

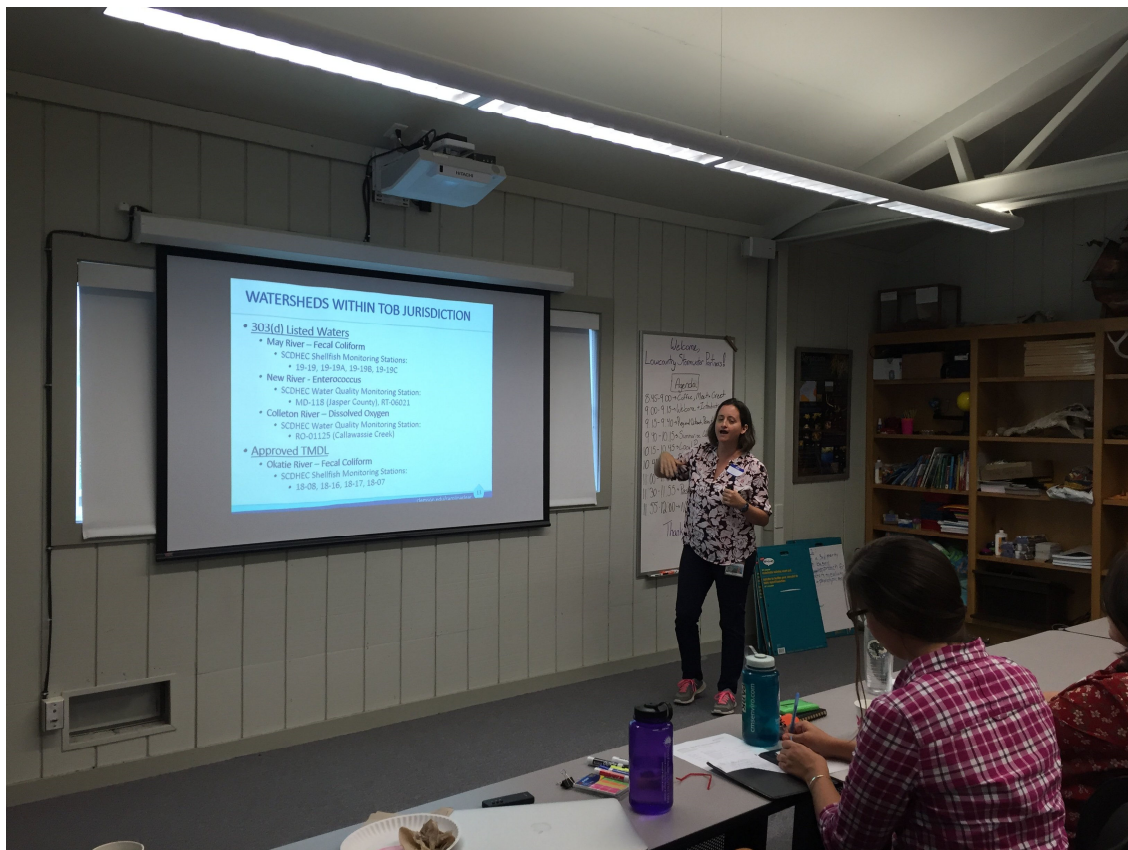
- One beach monitoring station added to 303d list for enterococcus
- Monitoring samples for E. coli in freshwater, fecal coliform in saltwater, and for nutrients (TN, TP, Total Cu)

*Tony Maglione (Town of Port Royal)*

- No current TMDLs
- Cypress wetlands rehabbed into stormwater system

A survey was also given to area staff and found the following:

- Target priority audiences are: developers, landscapers, contractors, landscapers, designers, HOA board members, and homeowners
- Target pollutant priorities are: bacteria, sediment from construction sites, DO, contaminants, trash
- 47% of staff witness an illegal discharge at least three times a year



**Pollutant of Concern Audience Brainstorming Results**



<b>POC/BEHAVIOR</b>	<b>SPECIFICS</b>	<b>TOTAL VOTES</b>	<b># OF MS4 VOTES</b>
Post-Construction Maintenance	Ponds	15	9
Runoff Volume	Dilution of saltwater	14	6
Littering	Plastics, Microplastics	13	1
Bacteria	All sources, Fecal vs Entero	13	8
Fertilizer (Nutrients)	Timing, Directions, Everyone	10	5
Septic Tanks	Installation/Maintenance	7	5
Construction Runoff	All, Sediment	7	4
Failing Infrastructure	Maintenance, Knowing When to Call, Public vs Private	6	3
Linking Land Use Change to Natural Resources	Quality of Community	6	2
Illegal Dumping	Contractor and Residential, Disposal Practices	4	2
Lawn Debris	Grass Clippings	3	1
Infiltration	Site-Specific BMPs, Impervious Cover	2	0
Pesticides	Land	2	1
Sanitary Sewer Overflows	User Disposal Practices	2	1
Irrigation Practices	Timing	1	0
Copper	Pond Applications, Roads, Pesticides	1	1
Commercial Grease Trap	Maintenance	1	1
Boat/Dock/Marina Maintenance		1	0
Gas Stations	Maintenance and Runoff	0	0
Commercial Car Washes	Polluted runoff; Pop-up and Charity Car Washes	0	0
Pharmaceuticals	Improperly Disposal	0	0
Pool Discharge		0	0
Irrigation Source	Municipal Water vs Harvested Rainwater	0	0
Large Item Dumping	Not Going to Landfill	0	0

### **Small Group Discussions**





### **Post-Construction Maintenance**

- *Problem:* Maintenance contracts on stormwater ponds and BMPs are not being fulfilled, leading to the BMP's failure and local governments having to acquire/maintain the BMP
- *Target Audiences:* HOA mgmt, property mgmt, golf course mgmt, commercial property mgmt, county/municipal staff, developers, elected officials, waterfront residents, pond mgmt and landscape companies
- *Messages:* the purpose of BMPs and their function, long-term/regular maintenance is required for BMP function, recognition of ownership and responsibilities (public vs private), what the stormwater fee is used for, benefits of maintenance
- *Resources and Partners:* Lagoon committees, Marsh Association, pond

### **Runoff Volume**

- *Problem:* Large amount of freshwater runoff is harming local ecosystem and shellfish harvests
- *Target Audiences:* court representatives (to set up comp plan for development impacts), developers and engineers (designing with LIDs), HOAs, residents (landscaping choices)
- *Messages:* Freshwater as a conveyance for other pollutants, grassroots approach to drive political will, importance of local seafood, saltwater vs freshwater
- *Program Ideas:* Programs to incentivize and facilitate BMP installation,
- *Resources and Partners:* Eco-tours, DNR, Lowcountry Institute, local communities, Experience Green, Savannah River Keeper, native plant nurseries, existing presentations to HOA groups, existing LID presentations, Rain barrel giveaways,



mgmt companies, DNR, PRSF,  
State/MS4 design manuals

### **Bacteria (Septic Tanks)**

- *Problem:* Lack of maintenance, infrastructure/design, water conservation, lack of knowledge, renters, driving on/using drain fields, garbage disposal behaviors, pipes leading straight to marshes
- *Program Ideas:* Flyers/pamphlets, Coast-A-Syst, NRCS soil tunnel program, website, BJWA handing out educational materials, installer education, newspaper articles, community block grants
- *Resources and Partners:* DHEC EQC, NRCS, Rural Development Conservation District, USCB (Dr. Warner), DNR, NERR, Installers, DHEC based providers

County credit program

### **Litter**

- *Problem:* Dumpster maintenance, marine debris, unsecured trash in vehicles, illegal dumping, tourist trash (chairs, flip-flops)
- *Target Audiences:* tourists, boating community, motorists
- *Messages:* prevent litter in the first place instead of picking it up all the time
- *Program Ideas:* incentivize proper disposal (tarp giveaways at distribution centers), information at marinas, boating stores (Bulter Marine, WalMart boating section), rental agencies, and community drop-off centers
- *Resources and Partners:* Palmetto Pride, Keep Beaufort County Beautiful, NOAA Marine Debris, Adopt-A-Highway, DOT environmental crime unit + app, Sea Grant Clean Marine program

*Questions, Comments, or Requests?*

*Contact your Water Resources Extension Agent:*

***Ellen Comeau***

*ecomeau@clemson.edu*

(843)-255-6060 ext 115

Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer.

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



December 14, 2016

**Stormwater Manager's Report for the Stormwater Utility Board Meeting**

Utility Update

1. Tax Run for Tax Year 2016 (TY16) – Bills were released mid-November. The staff is handling a small number of inquiries about billing.
2. Intergovernmental Agreements (IGAs) and Memorandums of Agreements (MOAs) for Fiscal Year 2017 (FY17) – All agreements for FY 17 are now signed and effective.
3. Fee inquiries – We continue to work on the SWU fee inquiry from the SC Port Authority related to the Port Royal Port.
4. Mr. Larson was elected 2017 President of the South Carolina Association of Stormwater Managers (SCASM) at their November meeting. Larson will be traveling to Columbia on December 15<sup>th</sup> for the Board's 2017 planning session.
5. Hurricane Matthew Response and Recovery – Crews and our contractor continue to inventory and clear debris from drainage easements.
6. Mr. Larson spoke at the Governors' South Atlantic Alliance (NC, SC, GA, FL) "Strategies and Tools to Protect and Restore Coastal Water Quality" conference on December 8. Beaufort County's Volume Control requirements and a related case study were presented.
7. Staff presented the Utility and County Stormwater Department mission and activities to new County Council members during new council orientation.
8. County infrastructure within municipal boundaries – Recently the Town of Williamston, in Anderson County, SC, received an opinion from the South Carolina Attorney General's office. The subject was related to the ownership and maintenance responsibilities of "roads" within the Town's jurisdictional limits. The opinion concluded the Town was responsible for the roads within their jurisdiction regardless of historical ownership and maintenance efforts. [A copy of the opinion is attached to this report.](#) As our staff reviewed this document, we noted the cites related to "powers, duties, and functions...for public works..." and questioned whether or not this ruling is also applicable to other county maintained infrastructure besides "roads", such as ditches and pipes which typically serve the road as a means to convey runoff away from the right of way. We are seeking clarification. This could have a huge impact on County, Town, and City services as well as Utility funding. As you will recall, the Countywide Infrastructure (CWI) fee was created specifically to address the cost of County services within a municipal area. We will report on this again at a future date once we have more information.



9. County Council Finance Committee 5-year outlook – Staff was recently asked to present our projected 5 year needs to the Natural Resources Committee in response to the Finance Committee’s request for review of all department’s long term needs. This is part of the annual budgeting process. Eric Larson presented the 5 year plan created in 2015 as part of the rate study. The committee accepted the report and will be using it as a basis for planning during the retreat.

## Monitoring Update

1. Lab Update (From Dr. Alan Warren and Lab Manager Danielle Mickel)
  - a) Since the last USCB WQL update, the USCB WQ Lab passed their on-site evaluation from SCDHEC for their additional certifications; HPC (Heterotrophic Plate Count), SpC (Specific Conductance) and TRC (Total Residual Chlorine) for drinking water. They are now certified for those additional parameters. In the future, TOC (Total Organic Carbon) is another certification that the WQ Lab would like to attain for the laboratory’s pure water requirement.
  - b) An investigation of a suspected illicit discharge on Coosaw Island requested by Beaufort County Stormwater Department was performed by the WQL. The WQL has also collected and analyzed water samples post clean-up. Dr. Alan Warren has discussed results with Rebecca Baker.
  - c) The Lab has just finished the quarterly sampling for the BECY sites, in which the new quarter will begin in January.
2. Monitoring Plan Development – The County staff has completed our monitoring plan with input from the USCB WQL. It was added to the BMP Manual. We are working with ToB to create a MOA that will formalize data sharing and sampling duties in the May, New, and Okatie watersheds.

## Stormwater Implementation Committee (SWIC) Report

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

## Stormwater Related Projects

1. US 278 Retrofit Ponds (\$356,000 Budget) – The 4<sup>th</sup> and final pond is 90% complete with excavation. The largest pond off of Barrel Landing Road was damaged by the Hurricane and needs to be repaired.
2. Okatie West / SC 170 Widening Retrofit (Design and Construction = \$915,000 Budget) – No update to report. Design is ongoing. The annual report on the grant was submitted and accepted by DHEC in November.
3. SC 170 Widening Pond #8 project (Design and Construction = \$630,840) – Project is on hold until results of the 2016 Management Plan are complete. This project is currently not funded. (This will be removed from future reports)
4. Easements – Staff is working on numerous easement requests. Significant locations



are Salem Dr. East and several on St. Helena Island. Gadwell Dr. East easement needs have been resolved.

5. Complaints and Hurricane Recovery – Staff continues to inspect our system looking for downed trees, clogged ditches and pipes, etc. for needed debris removal and damage. Staff is also pursuing grant funding options to help with the cost in addition to our plans to submit to FEMA for public assistance.
6. Operations and Maintenance Workload – Dave Wilhelm and Chad Stanley are working on a scheduling procedure to identify project needs and rank them on completion. We are working a large backlog of projects that have been previously identified but never scheduled in addition to newer projects that are needed in response to the Hurricane. The department is currently 8 months behind, but that is better than we were in November 2015 when the process of project review started.

#### 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. In November, ATM delivered the recommendations to the County on the unincorporated area monitoring needs for inclusion in the County's monitoring plan.
2. Mint Farm Basin B Modification – (\$8,000 Budget) – Nothing new to report.
3. SC 170 Widening Drainage – (\$17,500 Budget with 50% of funding from the Stormwater Department. Change order for additional \$4,500 approved in October) – The 3<sup>rd</sup> party review report contained two recommendations that the Staff is acting upon. The first is construction of a roadside ditch that was not completed per the roadway plans. The second involves communicating a need to fulfill a USACE permitting requirement on Pulte Realty (Sun City) as part of their construction. We communicated with Sun City maintenance and they have forwarded the request to Pulte.

#### Regional Coordination

1. Factory Creek Watershed Regional Detention Basin “Phase I” & Academy Park Subdivision (cost is pending) – Nothing new to report.
2. Factory Creek Watershed Regional Detention Basin “Phase II” (Design Cost = \$63,390, Tree Mitigation Cost is pending, Construction Cost by the Developer) – Nothing new to report. Excavation continues as material is sold by the Developer.
3. Horne Development at Okatie Center in Jasper County (\$1,500) – ATM has been given a Task Order to review Jasper County and City of Hardeeville stormwater standards and compare to our own. Results are pending.
4. Hilton Head National Redevelopment – The Planning Commission approved the zone change at the December meeting. Many citizens commented on the need for strong environmental controls during design and construction. Eric Larson was in attendance. The applicant is aware of our stormwater design requirements and has commented they will have numerous water quality BMPs in the design.



## Municipal Reports

1. Town of Hilton Head Island (From Bates Rambow, SW Data Analyst)
  - i. No information was available at the time of this report.
2. Town of Bluffton (From Kim Jones, Watershed Management Division Director)
  - i. **WATERSHED MANAGEMENT**
    - a. **Stoney Creek Wetlands Restoration: Data Collection & Analysis Phase**
      - Final Summary Memo including conceptual design options are complete.
      - Conceptual designs have been forwarded to the property owners for initial review prior to on-site meeting.
      - Staff and the design consultant met with a property owner to review the conceptual designs on 11/23/16.
      - **Next Steps:**
        - Staff is coordinating with the design consultant to execute a contract for the design phase of the project.
        - Staff will present conceptual designs to additional property owner stakeholders on 1/13/17.
    - b. **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 ponds in the Pine Ridge Community.
      - The grant amendment was approved by SCDHEC and the amended contract has been executed.
      - Contractor will complete final inspection punch list items by the first week of December.
      - **Next Steps:**
        - Obtain easement for installation and maintenance of bacteria removal filter socks.
        - Purchase and install engineered bacteria removal filter socks.
        - Design and install littoral shelf plantings as needed.
    - c. **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.

**d. 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.

**ii. DIVISION/STAFF UPDATES**

**a. Watershed Management**

- In support of the Development Review process staff performed:
  - 23 Development Plan Reviews
  - 8 Development Surety Reviews
  - 7 Certificate of Construction Compliance Inspections
  - 5 Pre-Construction Meetings
  - 4 Pre-Clearing Inspections
  - 1 Post-Construction BMP
- **November Data Collection –**
  - Collected data from five (5) monitoring stations at Stoney Crest Property.
  - Eight (8) in-stream flow/velocity measurements collected at our sampling locations in the headwaters of the May River.
  - Watershed Management staff sampled multiple parameters at four (4) locations associated with the May River Preserve 319 Grant Project.
- Jones received SCDHEC Certified Erosion Prevention & Sediment Control Inspector certification.
- Carey completed Clemson University's Master Pond Manager training.
- Jones and Lewis presented "*Management Decision Implications based on Evaluation of a Stormwater Best Management Practice's Downstream Impact*" to the quarterly meeting of the SC Association of Stormwater Managers in Columbia, SC
- Jones was the invited Keynote Address at the 18<sup>th</sup> International Conference on Shellfish Restoration in Charleston, SC to speak on the Town's efforts to restore shellfish harvesting in the May River.
- Staff collected water, soil and oyster samples for microbial source tracking (MST) of bacterial sources from five (5) locations in the headwaters of the



May River, including coordinating sample collection with SCDHEC at Shellfish Station 19-19.

- Staff participated in the SC Sea Grant-sponsored South Atlantic Shellfish Initiative Planning Workshop in Charleston, SC.
- Staff attended the Toolkit of Available EPA Green Infrastructure Modeling Software Webinar on October 26, 2016.
- Staff attended Find Your Bacteria Sources - Microbial Source Tracking Webinar on October 31, 2016.
- Staff attended the Keep Beaufort County Beautiful Board meeting on November 3, 2016.

**iii. Public Works**

**a. Ditch/Drainage Maintenance –**

- Performed weekly street-sweeping on Calhoun Street, Highway 46, Simmonsville Road, and Buck Island Road curbs and medians.
- Continue to cut and pile up storm debris on Hampton Pkwy, May River road Heyward Street, Simmonsville road, Goethe road and Buck Island 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 500 pounds of vegetative storm debris from the Brown property ditch culvert inlet.

**b. 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) – All major earthwork is complete including rough and final grading of pond. Installation of pond outfall structure complete. Installation of water quality device awaiting additional parts, anticipate installation before mid-December. Project is on track to be finished prior to the first of January.

**c. 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 summary

<b>Name</b>	<b>Date</b>	<b>Type</b>	<b>Results</b>
St. James Pritchardville Dollar General	11/2/2016	Conceptual	Deferred
USCB Campus Center	11/2/2016	Final	Approved
St. James Pritchardville S/D	11/2/2016	Conceptual	Approved
Eddings Point	11/9/2016	Discussion	Approved
Grayco Bluffton Amendment	11/9/2016	Amendment	Plat approved
Fripp Island Lot 1B Tarpon Blvd.	11/9/2016	Buffer Waiver and bridge	Deferred
Lipmans Produce	11/16/2016	Conceptual	Approved

### 2. Inspection summary for November 2, 2016 to December 2, 2016

Number of active permits = 25

Number of inspections performed = 13

Number of drainage related complaints investigated = 8

3. BMP Manual – Additions were placed in the Appendix C and G to comply with the MS4 permit Year 1 deadline of December 1. The Monitoring Plan, IDDE Plan, SWMP Plan, and Public Education Plan, all internal procedures documents, were added.
4. Annual reporting and the SWMP – Rebecca Baker completed the revisions to our Management Plan as part of the submittal for the annual report to DHEC (see #3 above). The reporting period ended on December 1, 2016 and the report is due in February.
5. Stormwater Permitting – The new MS4 local stormwater permit became effective December 1, 2016. Stormwater and Planning staff have been trained on permit entry and inspection entry. Procedures and forms are located within the BMP Manual.
6. Bluffton Gateway Project – This project was presented as a special report at the November 2016 meeting of the Board. The project is nearing completion. As it was one of the first major projects to design for volume control, as well as the first major project subject to proactive inspection by the County Stormwater department, we held a joint pre-final inspection walk through to create a punch list. We are pleased to report the project was substantially built according to plan with little issues. The size and complexity of the project is not fully realized until you walk the site.





ALAN WILSON  
ATTORNEY GENERAL

November 15, 2016

G. Lee Cole, Jr., Esq.  
Town of Williamston Attorney  
PO Box 315  
Williamston, SC 29697

Dear Mr. Cole:

Our Office has received your opinion request regarding whether a county may require a municipality to be responsible for maintenance and repair of county roads located inside the corporate limits of a municipality. Specifically, you state the following:

[a] South Carolina municipality has, within its corporate limits, state maintained roads, roads that have been historically maintained by the county, and very few roads that have been built and maintained by the municipality. The municipality has never formally nor informally accepted the responsibility to repair or maintain any roads that have been historically maintained by the county, and the municipality considers these roads to be county roads. The municipality's position is that the maintenance and repair of said roads are the county's responsibility pursuant to S.C. Code Ann. Sec. 57-17-10, *et seq.* The county's position is that the repair and maintenance of said roads are the municipality's responsibility pursuant to S.C. Code Ann. Sec. 5-27-120.

Our understanding of your question is that the roads that you refer to as "county roads" were built and until recently, maintained by the county. The Town of Williamston has never repaired these "county roads." We will answer your question accordingly.

#### LAW/ANALYSIS:

We will begin our analysis by reviewing the language of sections 5-27-120 and 57-17-10 of the South Carolina Code and other related statutes. Section 5-27-120 addresses the repair of streets in municipalities which have a population of greater than 1,000<sup>1</sup> and it states:

[t]he city or town council of any city or town of over one thousand inhabitants shall keep in good repair all the streets, ways and bridges within the limits of the city or town and for such purpose it is invested

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<sup>1</sup> According to its website, the Town of Williamston has a population of 3992. See <http://www.williamstonsc.us/about/>



with all the powers, rights and privileges within the limits of such city or town that are given to the governing bodies of the several counties of this State as to the public roads.

S.C. Code Ann. § 5-27-120 (1976 Code, as amended).

Section 5-27-10 is pertinent because it grants municipal councils the power to establish and improve roads. It states:

[w]henever the mayor and aldermen of any city or the intendant and wardens of any town in this State shall think it expedient to widen, open, lay out, extend or establish any street, alley, road, court or lane, they may purchase the lot, lots or parts of lots of land necessary for such street, alley, road, court or lane, and the fee simple of such land shall be vested in such city or town for the use of the public from the day of delivery of the deed of sale.

S.C. Code Ann. § 5-27-10 (1976 Code, as amended).

Section 57-17-10 grants county councils control over public roads, which includes the repair of the roads. It provides:

[a]ll roads, highways and ferries that have been laid out or appointed by virtue of an act of the General Assembly, an order of court or an order of the governing body of any county are declared to be public roads and ferries, and the county supervisor and the governing body of the county shall have the control and supervision thereof. The county supervisor and governing body of the county may order the laying out and repairing of public roads where necessary, designate where bridges, ferries or fords shall be made, discontinue such roads, bridges and ferries as shall be found useless and alter roads so as to make them more useful.

S.C. Code Ann. § 57-17-10 (1976 Code, as amended).

Additionally, county councils are required by statute to repair the roads in the county. Section 57-17-10 states:

[t]he governing body of each county shall take charge of and superintend the repair of the highways in the county. The bridges shall be repaired under its supervision, and the expense thereof shall be paid out of the money in the county treasury raised and appropriated for this purpose.

S.C. Code Ann. § 57-17-70 (1976 Code, as amended).

The language of section 5-27-120 is plain and clear that municipal councils in municipalities having a population greater than 1000 shall repair the streets within the municipal limits.<sup>2</sup> The court in Vaughan v.

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<sup>2</sup> In a prior opinion, we discussed some principles of statutory construction:



Town of Lyman, 370 S.C. 436, 635 S.E.2d 631 (2006), agrees with this conclusion, stating that “section 5-27-120 “clearly defines the duty to the general public of a municipality to maintain its streets.” The issue appears to be whether county councils can also be responsible for repairing roads which are located within the limits of a municipality.

In a February 25, 1988 opinion, our Office discussed how “it is settled law that counties and municipal corporations have only such powers as are granted to them by legislative enactment.” Op. S.C. Atty. Gen., February 25, 1988 (1988 WL 383501 ) (quoting Williams, et al. v. Wylie, et al., 217 S.C. 247, 60 S.E.2d 586 (1950); 56 Am.Jur.2d, Municipal Corporations, etc., Section 193)). The South Carolina Constitution requires the Legislature to equip counties with certain powers, duties, and functions and it provides:

[t]he General Assembly shall provide by general law for the structure, organization, powers, duties, functions, and the responsibilities of counties, including the power to tax different areas at different rates of taxation related to the nature and level of governmental services provided.

S.C. Const. art. VIII, § 7.

In response to the State Constitution, the Legislature enacted section 4-9-30, which grants county councils certain powers, including the right to “make appropriations for functions and operations of the county, including, but not limited to, appropriations for general public works, including roads. . . .” S.C. Code Ann. § 4-9-30(5)(a)(1976 Code, as amended).

Similarly, the State Constitution requires the Legislature to provide municipalities with powers, duties, and functions. S.C. Const. art. VIII, § 9 states that “[t]he structure and organization, powers, duties,

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“[t]he cardinal rule of statutory construction is to ascertain and effectuate the intent of the legislature.” Hodges v. Rainey, 341 S.C. 79, 86, 533 S.E.2d 578, 581 (2000). “[Courts] will give words their plain and ordinary meaning, and will not resort to a subtle or forced construction that would limit or expand the statute's operation.” Harris v. Anderson County Sheriffs Office, 381 S.C. 357, 362, 673 S.E.2d 423, 425 (2009). “If a statute's language is plain, unambiguous, and conveys a clear meaning, then the rules of statutory interpretation are not needed and a court has no right to impose another meaning.” Strickland v. Strickland, 375 S.C. 76, 85, 650 S.E.2d 465, 472 (2007). “[S]tatutes must be read as a whole, and sections which are part of the same general statutory scheme must be construed together and each one given effect, if reasonable.” State v. Thomas, 372 S.C. 466, 468, 642 S.E.2d 724, 725 (2007). “[C]ourts will reject a statutory interpretation that would lead to an absurd result not intended by the legislature or that would defeat plain legislative intention.” State v. Johnson, 396 S.C. 182, 189, 720 S.E.2d 516, 520 (Ct.App. 2011).



functions, and responsibilities of the municipalities shall be established by general law. . . .” The Legislature granted powers to municipalities through section 5-7-30, which provides:

[e]ach municipality of the State, in addition to the powers conferred to its specific form of government, may enact regulations, resolutions, and ordinances, not inconsistent with the Constitution and general law of this State, including the exercise of powers in relation to roads, streets. . . .

S.C. Code Ann. § 5-7-30 (1976 Code, as amended).

In our 1988 opinion, we discussed how sections 4-9-30<sup>3</sup> and 5-7-30 granted police power to both counties and municipalities (although a municipality can only exercise its police power within the territory of the municipality). See Op. S.C. Atty. Gen., February 25, 1988, supra. Specifically discussing section 5-7-30, we determined that county councils can not exercise their police power within the territorial limits of municipalities without the consent of the municipal councils. Our explanation was that:

[t]his express grant of police power to municipalities, coupled with the apparent lack of any express grant of power to counties to regulate matters within municipalities, militates against any notion that a county, without first obtaining the agreement or permission of a municipality situated within geographic boundaries of the county, may extend its police power to reach matters occurring within the territorial limits of the municipality.

Id.

We further explained in our opinion that:

[t]his Office has, on several occasions, expressed its belief that a county's exercise of police power is restricted to the unincorporated areas of the county. In an opinion dated October 2, 1984, the ‘intent of the General Assembly to recognize the autonomy of a municipality within its borders and likewise recognizes the autonomy of the county within the unincorporated areas of the county’ was discussed. Likewise, in an opinion dated May 21, 1987, we concluded that a Richland County anti-smoking ordinance would be of no effect for facilities of the Richland County Recreation Commission located within a municipality of the county.

Our beliefs are in accordance with the general law on this issue. Counties and cities are viewed as co-equal political subdivisions which are independent of each other politically, geographically, and governmentally. City of Richmond v. Board of Supervisors of Henrico County, 199 Va. 679, 101 S.E.2d 641 (1958); Murray v. City of Roanoke, 194 Va. 321, 64 S.E.2d 804 (1951).

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<sup>3</sup> Section 4-9-30 was referred to in the opinion as section 4-9-10, et seq., Act 283, and the Home Rule Act.



Id.

Furthermore, case law shows that, as a result of sections 5-27-120 and 5-27-10 (and their prior versions), municipal councils are in control of the roads located within their municipal limits and they have the power to regulate and manage such roads. Our State Supreme Court explained in Leonard v. Talbert, 222 S.C. 79, 83–84, 71 S.E.2d 603, 604–05 (1952) that:

[o]rdinarily, county authorities have no power to control streets within municipalities, except where the statute so provides. Martin v. Saye, 147 S.C. 433, 145 S.E. 186. In this State, as in most States, there are statutes vesting such control in the corporate authorities of cities and incorporated towns. The usual effect of such statutes is to transfer from the county authorities to the municipality the power to regulate and control highways located therein. Chapman v. Greenville Chamber of Commerce, 127 S.C. 173, 120 S.E. 584, 587.<sup>4</sup>

Our State Supreme Court opined in Whitlock v. Town of Jonesville, 111 S.C. 391, 98 S.E. 142, 142 (1919), that section 2951 of the Code of 1912 (now section 5-27-120) “gives city councils the same rights in the management of its streets as are given to county boards of commissioners.” The court examined section 1932 of the Code of 1912 (now section 57-17-10), which gave “to the county boards of commissioners the right ‘to discontinue such roads, bridges and ferries as shall be found useless, and to alter roads so as to make them more useful’” and found that a town council had the same right to alter a road as a county council did under then section 1932.

After reviewing the law, our opinion is that the municipality, and not the county, is responsible for the maintenance and repair of the roads located inside its corporate limits. The Legislature granted municipal councils police power over roads and streets located within the municipal limits. As previously stated, section 5-27-120 requires the municipal councils of municipalities of a certain size to repair the streets within their municipal limits<sup>5</sup>. Section 5-27-120 also grants municipal councils the same control and

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<sup>4</sup> When reaching its conclusion, the court in Chapman v. Greenville Chamber of Commerce, *supra* considered section 2951 of the Code of 1912, which was a prior version of section 5-27-120, and which stated that the municipal council was vested “with all the powers, rights and privileges within the limits of said city that are now given, or that may hereafter be given to the county board of commissioners of the several counties of this state as to the public roads.” The court also considered section 2926 of the Code of 1912, which was a prior version of section 5-27-10, and which stated that “the said city council shall have, and is hereby given, the further authority to lay out and open new streets in said city, and to close up, widen, or to otherwise alter those now in use, or those which may hereafter be established, whenever, in their judgment, the same may be necessary for the improvement or convenience of said city.”

<sup>5</sup> As section 5-27-120 specifically directs municipal councils to “repair all the streets, ways and bridges within the limits of the city or town,” we believe it is irrelevant if the municipal streets were laid out or appointed by General Assembly act, court order, or county council order, as provided for in section 57-17-10. See Op. S.C. Atty. Gen., July 11, 2008 (2008 WL 3198122) (quoting Capco of Summerville, Inc. v. J.H. Gayle Constr. Co. Inc., 368 S.C. 137, 142, 628 S.E.2d 38, 41 (2006)) (“[w]here there is one statute addressing an issue in general terms and another statute dealing with the identical issue in a more specific and definite manner, the more specific statute will be considered an exception to, or a qualifier of, the general statute and given such effect”); Op. S.C. Atty. Gen., March 20, 2006 (2006 WL 981695) (quoting Criterion Insurance Company v. Hoffman, 258 S.C. 282, 188 S.E.2d 459 (1972); Op. Atty. Gen. dated August 5, 1986)) (“[i]t is a rule of statutory construction that general and specific



supervision over the city streets as the county councils have over the public roads, and the same rights to lay out, repair, discontinue, and alter the city streets under section 57-17-10.

We believe that county councils are only responsible for repairing roads which are in unincorporated areas of the county. Section 57-17-10 expressly states that county councils are responsible for repairing highways in the county. The Legislature did not grant county councils the ability to exercise any power within the territory of a municipality without the permission of the municipal council. And as we stated in our February 25, 1988 opinion, “[a]s a governmental entity of the state, a county possesses only such powers as are expressly or impliedly conferred upon it by constitutional provisions or legislative enactments; and powers not conferred are just as plainly prohibited as though expressly forbidden.” 20 C.J.S. Counties, Section 49, pp. 802–803. Op. S.C. Atty. Gen., February 25, 1988, supra.

Our conclusion is supported by other provisions of law which recognize the autonomy of municipalities. In our prior opinion, we opined that in section 4-9-40, “the legislature, itself, seems to have, at least, implicitly recognized a limitation on the authority of counties to act within the boundaries of municipal corporations.” See Op. S.C. Atty. Gen., February 25, 1988, supra. Section 4-9-40 grants the county the ability to contract for services within municipalities. It states:

[a]ny county may perform any of its functions, furnish any of its services within the corporate limits of any municipality, situated within the county, by contract with any individual, corporation or municipal governing body, subject always to the general law and the Constitution of this State regarding such matters. *Provided*, however, that where such service is being provided by the municipality or has been budgeted or funds have been applied for that such service may not be rendered without the permission of the municipal governing body.

S.C. Code Ann. § 4-9-40 (1976 Code, as amended).

As shown above, a function of the county is roads. See S.C. Code Ann. § 4-9-30(5)(a), supra. Therefore, a county council would have to contract with a municipal council in order to repair roads within the municipal limits.

Furthermore, the State Constitution allows political subdivisions to jointly administer functions and exercise powers. Article VIII, section 13 of the S.C. Constitution provides:

(A) Any county, incorporated municipality, or other political subdivision may agree with the State or with any other political subdivision for the joint administration of any function and exercise of powers and the sharing of the costs thereof.

(B) Nothing in this Constitution may be construed to prohibit the State or any of its counties, incorporated municipalities, or other political

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statutes should be harmonized if possible. However to the extent of any conflict between the two, the special [sic] statute usually prevails”).



subdivisions from agreeing to share the lawful cost, responsibility, and administration of functions with any one or more governments, whether within or without this State. . . .

S.C. Const. art. VIII, § 13.

In our 1988 opinion, we concluded, regarding Article VIII, section 13, that:

[c]learly, by these provisions, counties and municipal corporations may agree to jointly administer services or exercise powers. By reasonable implication, a county could not exercise power within an incorporated municipality unless such an agreement existed or, in effect, the municipality has assented to the county's exercise of power.

Op. S.C. Atty. Gen., February 25, 1988, *supra*.

#### CONCLUSION

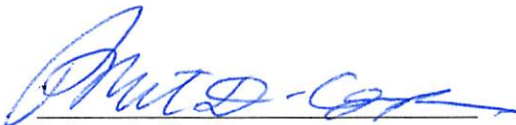
Our opinion is that the municipality, and not the county, is responsible for the maintenance and repair of the roads located inside its corporate limits. We believe that county councils are only responsible for repairing roads which are in unincorporated areas of the county. As section 5-27-120 clearly and specifically directs municipal councils to "repair all the streets, ways and bridges within the limits of the city or town," we believe it is irrelevant what political subdivision built or traditionally maintained the streets.

Sincerely,



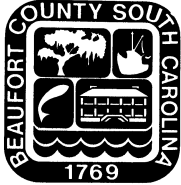
Elinor V. Lister  
Assistant Attorney General

REVIEWED AND APPROVED BY:



Robert D. Cook  
Solicitor General





## MEMORANDUM

Date: December 14, 2016

To: Stormwater Management Utility Board

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

Re: **Maintenance Project Report**

This report will cover four major and seven minor or routine projects. The Project Summary Reports are attached. ([Stormwater Summary Map by District](#))

### **Major Projects – Storm Drainage System Improvements:**

- **Community Bible Church Channel - Town of Port Royal; Stormwater Utility District (SWUD) 2:** This major project consisted of improving 314 feet of drainage system. Work included replacing 177 feet of stormwater pipe, jet cleaning 140 feet of channel pipe, and cleaning one catch basin. The disturbed area was hydroseeded and sodded for erosion control. Work began November 30, 2015 and was completed March 9, 2016. The total cost of the project was **\$84,556.10**.
- **Lady's Island Elementary School Ponds – Lady's Island (SWUD 7):** This project improved 320 feet of drainage system. The major element of this project was dewatering and reconstructing two ponds. Additional work included modifying the outlet weir, cleaning out two catch basins and 120 feet of channel, extending an existing access pipe, installing 40 feet of channel pipe and jetting of various drainage pipes. Work began April 14, 2016 and was completed August 2, 2016. The total cost of the project was **\$39,780.68**. Beaufort County School District is reimbursing the SWUD for this work.
- **Eastern Road - Port Royal Island (SWUD 6):** Work for this project consisted of improving 217 feet of drainage system by installing 217 feet of new 36" ADS stormwater drainage pipe between Eastern Road and Parris Island Gateway. The disturbed area was hydroseeded for erosion control. Work began September 7, 2016 and was completed October 24, 2016. The total cost of the project was **\$32,919.44**.
- **Green Pond - Port Royal Island (SWUD 6):** This project consisted of supplying and operating a large pump for an extended period of time to dewater the pond and maintain the water elevation at an acceptable level. The water was pumped to an existing drainage channel. Work began February 2, 2016 and was completed August 8, 2016. The total cost of the project was **\$15,368.31**.



**Minor or Routine Projects:**

- **Royal Pines Boulevard – Lady’s Island (SWUD 7):** This project improved more than 4,000 feet of drainage system. Work consisted of bush hogging 4,166 feet of channel and cleaning out 3,084 feet of channel. The total cost of the project was **\$12,623.34.**
- **Major Road – St. Helena Island (SWUD 8):** Work for this project included cleaning 2,897 feet of roadside ditch and jetting of various driveway, crossline and access pipes. The total cost of this project was **\$9,735.20.**
- **Fairfax Street – Bluffton (SWUD 4):** This project improved 711 feet of drainage system. 687 feet of roadside ditch was cleaned, one driveway pipe was replaced and one driveway pipe was jet cleaned. The total project cost was **\$8,424.88.**
- **Vineyard Point Road – St. Helena Island (SWUD 8):** This project consisted of installing one driveway pipe. The total cost of this project was **\$4,207.44.**
- **Jesse Chisholm Road – Sheldon (SWUD 5):** Work included replacing one driveway pipe and placing riprap for erosion control. The total cost was **\$2,393.99.**
- **Edward Court – Port Royal Island (SWUD 6):** Work consisted of cleaning out 477 feet of roadside ditch and bush hogging. The total cost was **\$2,080.18.**
- **Davis Road - Bluffton (SWUD 4):** Work included hydroseeding the existing roadside ditch to control erosion. The total cost was **\$633.41.**





# Beaufort County Public Works Stormwater Infrastructure Project Summary

**Project Summary:** Community Bible Church Channel

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

**Duration:** 11/30/15 - 3/9/16

Project improved 314 L.F. drainage system. Cleaned out (1) catch basin. Replaced 177 L.F. of channel pipe. Jetted 140 L.F. of channel pipe. Installed sod and hydroseeded for erosion control.

2016-008 / Community Bible Church	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
APREP / Asphalt Preparation	25.0	\$572.85	\$64.18	\$37.75	\$0.00	\$349.90	\$1,024.68
AUDIT / Audit Project	3.0	\$70.47	\$0.00	\$0.00	\$0.00	\$39.69	\$110.16
BKFILL / Back Fill	35.0	\$788.20	\$174.90	\$25.67	\$0.00	\$496.50	\$1,485.27
CBCO / Catch basin - clean out	12.0	\$274.56	\$52.08	\$30.50	\$0.00	\$178.20	\$535.34
CLJS / Cleaned up jobsite	10.0	\$228.85	\$17.70	\$10.57	\$0.00	\$148.50	\$405.62
CPJ / Channel Pipe - Jetted	20.0	\$457.60	\$86.80	\$84.76	\$0.00	\$297.00	\$926.16
CPRP / Channel Pipe - Replaced	289.0	\$6,687.92	\$2,023.88	\$10,241.49	\$0.00	\$4,236.93	\$23,190.22
HAUL / Hauling	210.5	\$4,765.09	\$1,713.23	\$5,384.73	\$0.00	\$3,068.64	\$14,931.68
HYDR / Hydroseeding	90.0	\$2,024.60	\$162.96	\$309.64	\$0.00	\$1,281.90	\$3,779.10
LM / Loading Materials	56.0	\$1,285.10	\$222.89	\$48.14	\$0.00	\$820.49	\$2,376.62
ONJV / Onsite Job Visit	193.0	\$6,285.04	\$695.84	\$167.56	\$0.00	\$3,984.09	\$11,132.53
PI / Project Inspection	14.0	\$365.77	\$54.18	\$11.63	\$0.00	\$246.12	\$677.70
PL / Project Layout	4.0	\$182.40	\$14.48	\$5.68	\$0.00	\$135.84	\$338.40
PP / Project Preparation	108.0	\$2,533.96	\$311.66	\$91.06	\$0.00	\$1,610.60	\$4,547.28
PROFS / Professional Services	0.0	\$0.00	\$0.00	\$0.00	\$1,972.59	\$0.00	\$1,972.59
PRRECON / Project Reconnaissance	2.0	\$61.50	\$7.08	\$2.84	\$0.00	\$36.46	\$107.88
SD / Soft Digging	12.0	\$274.56	\$52.08	\$25.57	\$0.00	\$178.20	\$530.41
SI / Sod - Installation	161.0	\$3,594.60	\$385.68	\$126.09	\$2,150.00	\$2,225.26	\$8,481.63
SPSWI / Special Project - SWI	7.5	\$167.05	\$21.70	\$37.55	\$0.00	\$107.32	\$333.62
SR / Sinkhole repair	4.0	\$91.53	\$7.08	\$25.15	\$0.00	\$59.40	\$183.16
STAGING / Staging Materials/Equipment	76.0	\$1,751.60	\$345.79	\$138.92	\$0.00	\$1,119.34	\$3,355.65
WSDR / Workshelf - Dressed	99.0	\$2,219.96	\$377.25	\$103.28	\$0.00	\$1,429.92	\$4,130.41
<b>2016-008 / Community Bible Church</b>	<b>1,431.0</b>	<b>\$34,683.20</b>	<b>\$6,791.44</b>	<b>\$16,908.57</b>	<b>\$4,122.59</b>	<b>\$22,050.30</b>	<b>\$84,556.10</b>
<b>Sub Total</b>							
<b>Grand Total</b>	<b>1,431.0</b>	<b>\$34,683.20</b>	<b>\$6,791.44</b>	<b>\$16,908.57</b>	<b>\$4,122.59</b>	<b>\$22,050.30</b>	<b>\$84,556.10</b>

Before



During



After







Project: Community Bible Church Channel

Activity: Routine/ Preventive Maintenance

Project #: 2016-008

Township/SW Dist: Town of Port Royal/ 2

Completed: March 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: 12/05/16

File: C:\project summaries map\Community Bible Church Channel\_2016-008





# Beaufort County Public Works Stormwater Infrastructure Project Summary

**Project Summary:** Ladys Island Elementary School Ponds (Reimbursement)

**Activity:** Pond Maintenance

## Narrative Description of Project:

**Duration:** 4/14/16 - 8/2/2016

Project improved 320 L.F. of drainage system. Bush hogged perimeter of ponds. Dewatered and reconstructed 2 ponds. Lowered weir to correct elevation. Cleaned out (2) catch basins and 120 L.F. of channel. Extended 16 L.F. of access pipe. Installed 40 L.F. of channel pipe, rip rap and hydroseeded for erosion control. Jetted (1) crossline pipe, (1) access pipe and 144 L.F. of channel pipe.

2016-322 / Ladys Island Elementary School Ponds	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
APEX / Access Pipe - Extended	10.0	\$228.64	\$51.65	\$180.05	\$0.00	\$141.58	\$601.92
APJT / Access pipe - jetted	8.0	\$187.92	\$34.72	\$28.90	\$0.00	\$123.56	\$375.10
AUDIT / Audit Project	2.0	\$46.98	\$0.00	\$0.00	\$0.00	\$26.46	\$73.44
CPI / Channel Pipe - Installation	20.0	\$461.90	\$154.15	\$390.20	\$0.00	\$307.20	\$1,313.45
CPJ / Channel Pipe - Jetted	4.0	\$93.96	\$0.00	\$20.20	\$0.00	\$61.78	\$175.94
DWP / Dewatered Pond	22.0	\$509.86	\$529.68	\$99.72	\$0.00	\$340.14	\$1,479.40
HAUL / Hauling	235.5	\$5,464.28	\$2,398.01	\$2,636.59	\$0.00	\$3,526.57	\$14,025.44
HYDR / Hydroseeding	46.0	\$1,032.81	\$173.18	\$1,030.64	\$0.00	\$652.20	\$2,888.84
LM / Loading Materials	100.0	\$2,264.10	\$1,656.12	\$375.72	\$0.00	\$1,489.35	\$5,785.29
ONJV / Onsite Job Visit	30.0	\$933.62	\$106.20	\$48.72	\$0.00	\$656.62	\$1,745.16
PDBH / Ponds - bushhogged	20.0	\$461.90	\$318.21	\$13.44	\$0.00	\$307.20	\$1,100.75
PI / Project Inspection	5.0	\$131.65	\$18.00	\$0.00	\$0.00	\$92.55	\$242.20
PM / Ponds - Maintenance	109.5	\$2,477.29	\$894.79	\$414.86	\$0.00	\$1,628.51	\$5,415.45
PP / Project Preparation	9.0	\$195.15	\$0.00	\$0.00	\$0.00	\$119.58	\$314.73
PRRECON / Project Reconnaissance	20.0	\$513.96	\$24.78	\$6.96	\$0.00	\$318.06	\$863.76
PS / Push up soil	10.0	\$230.95	\$107.32	\$40.68	\$0.00	\$153.60	\$532.55
RRI / Rip Rap - Installed	10.0	\$224.10	\$37.63	\$32.96	\$0.00	\$144.45	\$439.14
SPSWI / Special Project - SWI	10.0	\$214.90	\$21.44	\$10.40	\$0.00	\$130.28	\$377.02
UC / Utility Coordination	4.0	\$140.62	\$7.20	\$3.36	\$0.00	\$94.38	\$245.56
UTLOC / Utility locates	3.0	\$74.10	\$8.04	\$6.72	\$0.00	\$39.69	\$128.55
WEED / Weedeating	28.0	\$646.66	\$49.56	\$18.48	\$0.00	\$430.08	\$1,144.78
WVEHE / Washing Vehicles/Equipment	12.0	\$263.70	\$36.66	\$42.88	\$0.00	\$168.99	\$512.23
<b>2016-322 / Ladys Island Elementary School Ponds Sub Total</b>	<b>718.0</b>	<b>\$16,799.04</b>	<b>\$6,627.33</b>	<b>\$5,401.48</b>	<b>\$0.00</b>	<b>\$10,952.83</b>	<b>\$39,780.68</b>
<b>Grand Total</b>	<b>718.0</b>	<b>\$16,799.04</b>	<b>\$6,627.33</b>	<b>\$5,401.48</b>	<b>\$0.00</b>	<b>\$10,952.83</b>	<b>\$39,780.68</b>

Before



During



After







Project: Ladys  
Island Elementary  
School Ponds  
Map #1  
(Reimbursement)

Activity: Pond  
Maintenance

Project #:  
2016-322

Township/SW Dist:  
Ladys Island/7

Completed:  
August 2016

Prepared By: BC Stormwater Management Utility

Date Print: 09/27/2016

File: C:\project summaries map\Ladys Island Elementary School Ponds Map1Reimbursement \_2016-322





Project: Ladys  
Island Elementary  
School Ponds  
Map #2  
(Reimbursement)

Activity: Pond  
Maintenance

Project #:  
2016-322

Township/SW Dist:  
Ladys Island/7

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 15 30 60 90 120  
Feet

1 inch = 67 feet

Prepared By: BC Stormwater Management Utility

Date Print: 09/27/2016

File: C:\project summaries map\Ladys Island Elementary School Ponds Map2Reimbursement \_2016-322





# Beaufort County Public Works *Stormwater Infrastructure* Project Summary

**Project Summary:** Eastern Road

**Activity:** Drainage Improvement

**Narrative Description of Project:**

Project improved 217 L.F. of drainage system. Installed 217 L.F. of channel pipe. Hydroseeded for erosion control.

**Duration:** 9/7/16 - 10/24/16

<b>2017-002 / Eastern Road</b>	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
CPI / Channel Pipe - Installation	157.0	\$3,670.06	\$884.95	\$7,164.32	\$0.00	\$2,156.49	\$13,875.81
CPRE / Channel Pipe - Reinstalled	80.0	\$1,903.50	\$372.07	\$92.84	\$0.00	\$1,100.40	\$3,468.81
HAUL / Hauling	117.0	\$2,620.30	\$1,045.62	\$3,063.06	\$0.00	\$1,687.14	\$8,416.12
HYDR / Hydroseeding	40.0	\$910.70	\$148.04	\$179.36	\$0.00	\$545.30	\$1,783.40
ONJV / Onsite Job Visit	7.0	\$191.14	\$18.00	\$7.52	\$0.00	\$130.62	\$347.28
PI / Project Inspection	5.0	\$123.50	\$47.10	\$7.64	\$0.00	\$72.10	\$250.34
PL / Project Layout	10.0	\$225.20	\$18.00	\$5.95	\$0.00	\$133.35	\$382.49
PROFS / Professional Services	0.0	\$0.00	\$0.00	\$0.00	\$798.71	\$0.00	\$798.71
UC / Utility Coordination	1.0	\$24.70	\$0.00	\$0.00	\$0.00	\$13.23	\$37.93
UTLOC / Utility locates	0.5	\$12.35	\$0.00	\$0.00	\$0.00	\$6.62	\$18.97
WSL / Workshelf - Level	70.0	\$1,750.85	\$592.53	\$199.94	\$0.00	\$977.90	\$3,521.22
<b>2017-002 / Eastern Road Sub Total</b>	<b>488.0</b>	<b>\$11,444.04</b>	<b>\$3,126.31</b>	<b>\$10,720.62</b>	<b>\$798.71</b>	<b>\$6,829.76</b>	<b>\$32,919.44</b>
 <b>Grand Total</b>	 <b>488.0</b>	 <b>\$11,444.04</b>	 <b>\$3,126.31</b>	 <b>\$10,720.62</b>	 <b>\$798.71</b>	 <b>\$6,829.76</b>	 <b>\$32,919.44</b>

During



After







Project: Eastern Road

Activity: Drainage Improvement

Project #: 2017-002

Township/SW Dist: Port Royal Island/6

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 25 50 100 150 200 Feet

1 inch = 120 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 11/29/16  
File: C:\project summaries map\Eastern Road\_2017-002





**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Green Pond

**Activity:** Pond Maintenance

**Narrative Description of Project:**

Dewatered retention pond.

**Duration:** 2/22/16 - 8/18/16

**2016-325 / Green Pond**

	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	1.0	\$23.49	\$0.00	\$0.00	\$0.00	\$13.23	\$36.72
DWP / Dewatered Pond	252.0	\$5,817.06	\$565.28	\$449.80	\$0.00	\$3,605.28	\$10,437.41
FUEL / Fueling Vehicle/Equipment	42.0	\$969.46	\$96.53	\$147.24	\$0.00	\$564.50	\$1,777.73
HAUL / Hauling	9.0	\$197.67	\$10.62	\$5.40	\$0.00	\$120.21	\$333.90
ONJV / Onsite Job Visit	35.0	\$1,241.94	\$113.84	\$57.12	\$0.00	\$860.48	\$2,273.38
PL / Project Layout	2.0	\$91.20	\$7.24	\$3.36	\$0.00	\$67.92	\$169.72
SVCREQ / Service Request	4.0	\$182.40	\$14.48	\$6.72	\$0.00	\$135.84	\$339.44
<b>2016-325 / Green Pond Sub Total</b>	<b>345.0</b>	<b>\$8,523.22</b>	<b>\$807.99</b>	<b>\$669.64</b>	<b>\$0.00</b>	<b>\$5,367.46</b>	<b>\$15,368.31</b>

<b>Grand Total</b>	<b>345.0</b>	<b>\$8,523.22</b>	<b>\$807.99</b>	<b>\$669.64</b>	<b>\$0.00</b>	<b>\$5,367.46</b>	<b>\$15,368.31</b>
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Before



During







Project: Green Pond

Activity: Pond Maintenance

Project #: 2016-325

Township/SW Dist: Port Royal Island/6

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: 08/18/16  
File: C:\project summaries map\Green Pond\_2016-325





# Beaufort County Public Works Stormwater Infrastructure Project Summary

**Project Summary:** Royal Pines Boulevard

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Project improved 4,166 L.F. of drainage system. Bush hogged 4,166 L.F. channel. Cleaned out 3,084 L.F. of channel.

**Duration:** 7/6/16 - 7/18/16

**2017-501 / Royal Pines Blvd**

	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AUDIT / Audit Project	1.0	\$23.49	\$0.00	\$0.00	\$0.00	\$13.23	\$36.72
CBH / Channel- bushhogged	50.0	\$1,089.45	\$861.12	\$205.38	\$0.00	\$698.90	\$2,854.85
CCO / Channel - cleaned out	84.5	\$1,974.21	\$813.38	\$199.44	\$0.00	\$1,246.39	\$4,233.43
HAUL / Hauling	85.0	\$1,931.58	\$962.94	\$456.62	\$0.00	\$1,243.78	\$4,594.92
ONJV / Onsite Job Visit	14.0	\$478.52	\$50.40	\$31.92	\$0.00	\$342.58	\$903.42
<b>2017-501 / Royal Pines Blvd Sub Total</b>	<b>234.5</b>	<b>\$5,497.25</b>	<b>\$2,687.84</b>	<b>\$893.36</b>	<b>\$0.00</b>	<b>\$3,544.88</b>	<b>\$12,623.34</b>

<b>Grand Total</b>	<b>234.5</b>	<b>\$5,497.25</b>	<b>\$2,687.84</b>	<b>\$893.36</b>	<b>\$0.00</b>	<b>\$3,544.88</b>	<b>\$12,623.34</b>
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Before



During



After





Project: Royal  
Pines Boulevard

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2017-501

Township/SW Dist:  
Ladys Island/7

Completed:  
July 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

0 100 200 400 600 800  
Feet

1 inch = 420 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 11/29/16  
File: C:\project summaries map\Royal Pines Boulevard\_2017-501





**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Major Road

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

**Duration:** 7/28/16 - 8/10/16

Project improved 2,971 L.F. of drainage system. Cleaned out (1) catch basin and 2,897 L.F. of roadside ditch. Jetted (1) access pipe, (2) crossline pipes, (7) driveway pipes and 74 L.F. of roadside pipe. Hydroseeded for erosion control.

<b>2017-509 / Major Road</b>	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
CLPJT / Crossline Pipe - Jetted	20.0	\$445.60	\$86.80	\$72.48	\$0.00	\$286.80	\$891.68
HAUL / Hauling	40.0	\$915.40	\$333.90	\$186.62	\$0.00	\$576.80	\$2,012.72
HYDR / Hydroseeding	12.0	\$264.45	\$34.04	\$240.42	\$0.00	\$169.11	\$708.02
RSDCL / Roadside Ditch - Cleanout	140.0	\$3,256.78	\$773.86	\$126.12	\$0.00	\$1,928.70	\$6,085.46
UTLOC / Utility locates	0.5	\$12.35	\$0.00	\$0.00	\$0.00	\$6.62	\$18.97
<b>2017-509 / Major Road Sub Total</b>	<b>213.0</b>	<b>\$4,906.32</b>	<b>\$1,228.60</b>	<b>\$625.64</b>	<b>\$0.00</b>	<b>\$2,974.64</b>	<b>\$9,735.20</b>
 <b>Grand Total</b>	<b>213.0</b>	<b>\$4,906.32</b>	<b>\$1,228.60</b>	<b>\$625.64</b>	<b>\$0.00</b>	<b>\$2,974.64</b>	<b>\$9,735.20</b>

Before



During



After







Project: Major Road  
Map 1

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2017-509

Township/SW Dist:  
St. Helena Island/8

Completed:  
August 2016

### Legend

#### Drainage Type

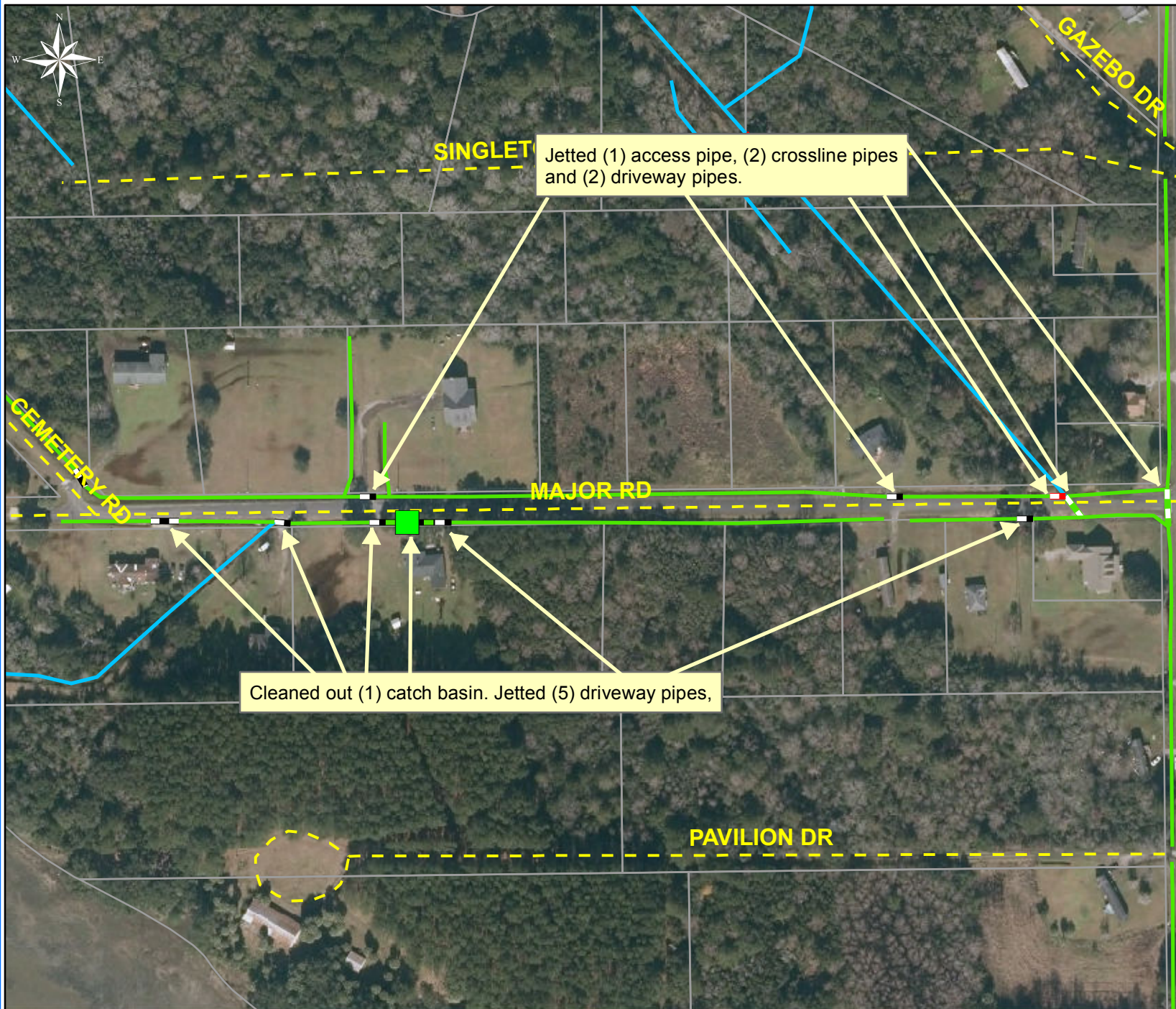
- Access Pipe
- Bleeder Pipe
- Channel Pipe
- Channel
- Stream
- Crossline Pipe
- Driveway Pipe
- Lateral
- Lateral Pipe
- River
- Road Pipe
- Roadside
- Roadside Pipe

0 50 100 200 300 400  
Feet

1 inch = 210 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 12/1/16  
File:C:\project summaries map\Major Road Map1\_2017-509





Project: Major Road Map 2

Activity: Routine/ Preventive Maintenance

Project #: 2017-509

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



1 inch = 210 feet





**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Fairfax Street

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Project improved 711 L.F. of drainage system. Cleaned out 687 L.F. of roadside ditch. Upsized (1) driveway pipe. Jetted (1) driveway pipe.

**Duration:** 5/31/16 - 6/8/16

**2015-552 / Fairfax Street**

	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
DPJT / Driveway Pipe - Jetted	3.0	\$66.84	\$26.04	\$32.72	\$0.00	\$43.26	\$168.86
HAUL / Hauling	45.0	\$1,002.15	\$359.55	\$217.36	\$0.00	\$648.90	\$2,227.96
RSDCL / Roadside Ditch - Cleanout	147.0	\$3,210.66	\$397.71	\$341.90	\$0.00	\$2,021.51	\$5,971.78
UTLOC / Utility locates	1.0	\$24.70	\$0.00	\$0.00	\$0.00	\$13.23	\$37.93
<b>2015-552 / Fairfax Street Sub Total</b>	<b>196.5</b>	<b>\$4,316.10</b>	<b>\$783.30</b>	<b>\$591.97</b>	<b>\$0.00</b>	<b>\$2,733.52</b>	<b>\$8,424.88</b>

<b>Grand Total</b>	<b>196.5</b>	<b>\$4,316.10</b>	<b>\$783.30</b>	<b>\$591.97</b>	<b>\$0.00</b>	<b>\$2,733.52</b>	<b>\$8,424.88</b>
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Before



During



After





Project: Fairfax Street

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2015-552

Township/SW Dist:  
Bluffton/4

Completed:  
June 2016



0 30 60 120 180 240  
Feet

1 inch = 130 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 11/29/16  
File: C:\project summaries map\Fairfax Street\_2015-552





**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Vineyard Point Road

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Installed (1) driveway pipe.

**Duration:** 9/7/16 - 11/16/16

**2017-505 / Vineyard Point Road**

	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
APREP / Asphalt Preparation	12.0	\$268.32	\$34.03	\$13.37	\$0.00	\$172.56	\$488.28
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
DPINS / Driveway Pipe - Installed	20.0	\$484.35	\$64.63	\$300.99	\$0.00	\$277.55	\$1,127.52
DWASPH / Driveway - Asphalt	21.0	\$469.56	\$77.61	\$37.99	\$0.00	\$301.98	\$887.14
HAUL / Hauling	18.0	\$422.73	\$169.56	\$621.29	\$0.00	\$278.01	\$1,491.59
ONJV / Onsite Job Visit	3.0	\$82.14	\$10.80	\$7.52	\$0.00	\$56.16	\$156.62
UTLOC / Utility locates	1.0	\$24.70	\$0.00	\$0.00	\$0.00	\$13.23	\$37.93
<b>2017-505 / Vineyard Point Road Sub Total</b>	<b>75.5</b>	<b>\$1,763.55</b>	<b>\$356.63</b>	<b>\$981.16</b>	<b>\$0.00</b>	<b>\$1,106.10</b>	<b>\$4,207.44</b>

<b>Grand Total</b>	<b>75.5</b>	<b>\$1,763.55</b>	<b>\$356.63</b>	<b>\$981.16</b>	<b>\$0.00</b>	<b>\$1,106.10</b>	<b>\$4,207.44</b>
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Before



During



After







Project: Vineyard Point Road

Activity: Routine/ Preventive Maintenance

Project #: 2017-505

Township/SW Dist: St. Helena Island/8

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 20 40 80 120 160 Feet

1 inch = 83 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 11/30/16  
File: C:\project summaries map\Vineyard Point Road\_2017-505





**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Jesse Chisholm Road

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Upsized (1) driveway pipe and rip rap for erosion control.

**Duration:** 11/3/16

<b>2017-518 / Jesse Chisholm Road</b>	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
DPUP / Driveway Pipe - Upsized	18.0	\$437.34	\$120.09	\$315.38	\$0.00	\$252.42	\$1,125.23
HAUL / Hauling	10.0	\$222.70	\$94.20	\$616.20	\$0.00	\$144.20	\$1,077.30
ONJV / Onsite Job Visit	3.0	\$82.14	\$10.80	\$5.04	\$0.00	\$56.16	\$154.14
UTLOC / Utility locates	0.5	\$12.35	\$0.00	\$0.00	\$0.00	\$6.62	\$18.97
<b>2017-518 / Jesse Chisholm Road Sub Total</b>	<b>32.0</b>	<b>\$766.28</b>	<b>\$225.09</b>	<b>\$936.62</b>	<b>\$0.00</b>	<b>\$466.01</b>	<b>\$2,393.99</b>
 <b>Grand Total</b>	 <b>32.0</b>	 <b>\$766.28</b>	 <b>\$225.09</b>	 <b>\$936.62</b>	 <b>\$0.00</b>	 <b>\$466.01</b>	 <b>\$2,393.99</b>

Before



During



After







Project: Jesse Chisholm Road

Activity: Routine/ Preventive Maintenance














Project #: 2017-518

Township/SW Dist: Sheldon/5

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 20 40 80 120 160 Feet

1 inch = 83 feet

Prepared By: BC Stormwater Management Utility

Date Print: 11/03/16

File:C:\project summaries map/Jesse Chisholm Road\_2017-518





**Beaufort County**  
**Public Works**  
**Stormwater Infrastructure**  
*Project Summary*

**Project Summary:** Edward Court

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Project improved 477 L.F. of drainage system. Bush hogged 214 L.F. of roadside ditch. Cleaned out 477 L.F. of roadside ditch.

**Duration:** 9/19/16 - 9/26/16

<b>2017-516 / Edward Court</b>	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$11.75	\$0.00	\$0.00	\$0.00	\$6.62	\$18.36
CBH / Channel- bushhogged	2.0	\$42.14	\$33.53	\$3.48	\$0.00	\$26.63	\$105.78
HAUL / Hauling	8.0	\$190.31	\$75.36	\$72.00	\$0.00	\$125.61	\$463.28
ONJV / Onsite Job Visit	3.0	\$81.36	\$10.80	\$5.04	\$0.00	\$55.53	\$152.73
RSDCL / Roadside Ditch - Cleanout	30.0	\$721.60	\$150.52	\$19.08	\$0.00	\$410.90	\$1,302.10
UTLOC / Utility locates	1.0	\$24.70	\$0.00	\$0.00	\$0.00	\$13.23	\$37.93
<b>2017-516 / Edward Court</b>	<b>44.5</b>	<b>\$1,071.85</b>	<b>\$270.21</b>	<b>\$99.60</b>	<b>\$0.00</b>	<b>\$638.52</b>	<b>\$2,080.18</b>
<b>Sub Total</b>							
<b>Grand Total</b>	<b>44.5</b>	<b>\$1,071.85</b>	<b>\$270.21</b>	<b>\$99.60</b>	<b>\$0.00</b>	<b>\$638.52</b>	<b>\$2,080.18</b>

Before



After







Project: Edward Court  
Map 1

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2017-516

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



1 inch = 42 feet





Project: Edward Court  
Map 2

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2017-516

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 10 20 40 60 80  
Feet

1 inch = 42 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 11/29/16  
File: C:\project summaries map\Edward Court Map2\_207-516





**Beaufort County**  
**Public Works**  
***Stormwater Infrastructure***  
*Project Summary*

**Project Summary:** Davis Road

**Activity:** Routine/Preventive Maintenance

**Narrative Description of Project:**

Hydroseeded roadside ditch.

**Duration:** 6/23/16

**2016-627 / Davis Road**

	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	2.5	\$58.73	\$0.00	\$0.00	\$0.00	\$33.08	\$91.80
HYDR / Hydroseeding	7.5	\$152.60	\$46.17	\$245.64	\$0.00	\$97.20	\$541.61
<b>2016-627 / Davis Road Sub Total</b>	<b>10.0</b>	<b>\$211.33</b>	<b>\$46.17</b>	<b>\$245.64</b>	<b>\$0.00</b>	<b>\$130.28</b>	<b>\$633.41</b>

<b>Grand Total</b>	<b>10.0</b>	<b>\$211.33</b>	<b>\$46.17</b>	<b>\$245.64</b>	<b>\$0.00</b>	<b>\$130.28</b>	<b>\$633.41</b>
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(Pictures Not Available)





Project: Davis Road

Activity: Routine/ Preventive Maintenance

Project #: 2016-627

Township/SW Dist: Bluffton/4

Completed: June 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: 06/23/16  
File: C:\project summaries map\Davis Road\_2016-627





BEAUFORT COUNTY  
STORMWATER MANAGEMENT UTILITY BOARD AGENDA  
Wednesday, January 18, 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 – December 14, 2016 ([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
5. UNFINISHED BUSINESS
6. NEW BUSINESS
  - A. Special Presentation: TBD
7. PUBLIC COMMENT
8. NEXT MEETING AGENDA
  - A. February 15, 2016 ([backup](#))
9. ADJOURNMENT