



BEAUFORT COUNTY  
STORMWATER MANAGEMENT UTILITY BOARD AGENDA  
Wednesday, June 12, 2019  
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 – May 8, 2019 ([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, P.E. ([backup](#))
5. UNFINISHED BUSINESS
6. NEW BUSINESS
7. PUBLIC COMMENT
8. NEXT MEETING AGENDA
  - A. July 10, 2019 ([backup](#))
9. ADJOURNMENT

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

May 8, 2019 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 5/13/2019

### **Board Members**

#### **Present**

William Bruggeman  
Marc Feinberg  
James Fargher  
James Clark  
Patrick Mitchell  
Allyn Schneider  
Steven Andrews

#### **Absent**

### **Ex-Officio Members**

#### **Present**

Neil Desai  
Kim Jones  
Scott Liggett

#### **Absent**

Van Willis

### **Beaufort County Staff**

Ashley Jacobs  
Eric Larson  
David Wilhelm  
Melissa Allen  
Carolyn Wallace  
Katie Herrera  
Daniel Rybak  
Thomas Keaveny  
Brittany Ward

### **Visitors**

Alice Howard, County Council District 4  
Denise Parsick, Beaufort Conservation District  
Dr. Denise Sanger, SCDNR  
Alan Warren, USCB

#### **1. Meeting called to order – William Bruggeman**

Mr. William Bruggeman welcomed the new Beaufort County Administrator, Ashley Jacobs and newest board member, Steve Andrews.

A. Agenda – Approved.

B. April 10, 2019 Minutes – Approved.

#### **2. Introductions – Completed.**

#### **3. Public Comment(s) – None.**

#### **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:**

<https://www.beaufortcountysc.gov/stormwater-management-utility-board/agendas/2019/050819.pdf>

#### **A. Utility Update – Eric Larson**

In reference to item #4, the Town of Hilton Head is preparing their concurrence letter. The site visit is on hold (item #5), as the County will be meeting on Thursday and Friday with the



military installations about stormwater fees in hopes to make progress. An update to item #6, the first reading of the budget is scheduled for May 28<sup>th</sup>.

**B. Monitoring Update – Eric Larson**

Mr. Larson pointed out [in reference to the quarterly monitoring report] that Okatie West is performing great for bacteria removal. The ponds for HWY 278 (Barrel Landing), one is working well and one is not, so maintenance crews are scheduled to do some rehab on the pond and fix the outfall structure. Mr. Larson noted there are some high counts on the outfalls near Habersham, the Beaufort County Administration building and Bay Street.

**C. Stormwater Implementation Committee (SWIC) Report – Eric Larson**

Please reference the report, no additional updates.

**D. Stormwater Related Projects – Eric Larson**

In reference to item #3, the County is working on grant applications; one for the acquisitions of homes and one for a watershed study. They are to be submitted by the end of the month. In response to a question, Mr. Larson introduced Dan Rybak and explained that he is working with Pamela and Angel in Disaster Recovery to put together study estimates and a scope of work. Item #9 is a new topic, the Lady's Island land use plan had two recommendations to consider: a sea level rise ordinance and no fill ordinance (impact that fill has on salt marsh, wetland, and sandy soil). Mr. Larson is sitting on that committee.

**E. Professional Contracts Report – Eric Larson**

Please reference the report, no additional updates.

**F. Regional Coordination – Eric Larson**

Item #6 is a new item; Mr. Larson was approached by a rep from Nature Conservancy, which prompted a conversation about regionalization and rate structure. They are very interested in being a part of the discussion when public comments are made on the draft.

**G. Municipal Reports – Eric Larson**

Ms. Kim Jones thanked Katie Herrera for participating in the May River Clean-Up. There were approximately 370 participants.

Mr. Neil Desai shared that the City of Beaufort has a public meeting coming up for the Mossy Oaks project. The M&R permit was received from OCRM and the City has met with school reps from Mossy Oaks.

Ms. Jones suggested special presentation topic ideas such as microplastics and tire tread. Ms. Jones attended the Center for Watershed Protection annual conference. Sea level rise approach and flooding were discussed and there was a combination of perspectives from engineering to public outreach and education present. She expressed that people were willing to share information.

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

In reference to #9, OCRM is doing a general permit for M&R. Mr. Larson is working with SWIC members to respond, the comments are due May 12<sup>th</sup>.

## **I. Maintenance Projects Report – David Wilhelm**

Mr. David Wilhelm informed the Board that all projects are coming in on budget. He pointed out the Bellinger Bluff Road project, which was a large ditch to reconstruct, some areas were more than 12 feet deep. Between the three major projects about 57,000 yards of reusable material was collected to be reused on other projects. For roadside ditch clean out, the goal is to stay between \$3.00 and \$5.00 per linear foot.

Mr. Wilhelm mentioned the County is always trying to find ways to increase efficiency and shared that Matt Rausch, Superintendent, took the initiative to explore alternative fuel heavy equipment. He went to Caterpillar dealer to look at new electric assist motor equipment, which could provide a 75% reduction in fuel costs. Public Works plan to see how they work [perform] and get feedback on the new technology to see if it is worthwhile.

Earth Day was a regional clean-up day, Beaufort County coordinated with Jasper, Hampton and Colleton Counties. Beaufort County picked up about 25,000 pounds of trash and the other three counties collected a combined amount of about 20,000 pounds. The plan is to expand the program even more next year, as it is the 50<sup>th</sup> Anniversary of Earth Day, and grow the initiative Statewide.

## **5. Unfinished Business**

**A. Delinquent Accounts Brief – Thomas Keaveny** – Mr. Tom Keaveny, Counsel for Beaufort County brought Ms. Brittany Ward along to assist in briefing the Board on delinquent accounts [stormwater fees]. He shared that Ms. Ward has been working with the County for about six months as a paralegal and as of today she is a lawyer in their office.

Mr. Keaveny explained that the Legal department was asked to evaluate the possibility of taking action to collect unpaid stormwater fees. From 1999 to present there are \$7.3 million in fees outstanding from Federal agencies and \$33,000 outstanding from the State.

Mr. Keaveny explained that there is a state case, involving Charleston, that ruled there is an obligation to pay stormwater fees, the basis for informing State agencies they owe these fees. He mentioned that SC Department of Parks and Rec have recently paid their fees in response to the letter sent out by their office. Mr. Keaveny and Ms. Ward indicated that Legal sent out letters for delinquent state accounts on April 8<sup>th</sup>, identifying the case law and gave them 45 days to respond or pay.

Mr. Keaveny thanked Mrs. Carolyn Wallace for working closely with Ms. Ward to help to identify federal fees that are owed. He explained the Clean Water Act is the basis for asking the federal government to pay their stormwater fees. The federal government “shall be subject to, and comply with, all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution in the same manner, and to the same extent as any nongovernmental entity including the payment of reasonable service charges.”

In 2011, a Stormwater amendment was added to the Clean Water Act. It defines a reasonable service charge is “any reasonable nondiscriminatory fee, charge, or assessment that is— (A) based on some fair approximation of the proportionate contribution of the property or facility to stormwater pollution (in terms of quantities of pollutants, or volume or rate of stormwater discharge or runoff from the property or facility); and (B) used to pay or reimburse the costs associated with any stormwater management program (whether associated with a separate storm sewer system or a sewer system that manages a combination of stormwater and sanitary waste), including the full range of programmatic and structural costs attributable to collecting stormwater, reducing pollutants in stormwater, and reducing the volume and rate of stormwater discharge, regardless of whether that reasonable fee, charge, or assessment is denominated a tax.”

Mr. Keaveny has responded to several responses from lawyers indicating they don't owe the fees. He explained that County Administration in the past has not pursued the fees, but recently Administration and Council have become aware of the magnitude of the fees, the needs of the County and the unfairness of other fee payers having to absorb the costs for those not paying.

Legal is prepared to send letters out. The County is trying to resolve without getting into litigation, as it is expensive. The other perspective is that the County likes the military presence in our County and want to approach the pursuit of delinquent fees in a rational way. Mr. Keaveny has reached out to and has appointments to speak with lawyers for the local bases.

In response to a question about similar cases over stormwater fees, Mr. Keaveny commented there is a pending case that Ms. Ward has reviewed. She commented that the City of Wilmington (Delaware) has a hearing scheduled for 2020, and it is equivalent to the County's situation. It is a military institution they are suing for about \$3.1 million. She mentioned that most similar situations she found were settled through negotiations.

Mr. Keaveny explained there are law firms around the country that handle this type of case. The County has scouted out three firms that they are prepared to talk to if necessary; one of which has someone who manages their South Carolina client's clean water act's issues.

Brief conversation took place following a question about not pushing the issue for them to pay all these years (why now) and who makes the decision to go to litigation.

## **6. New Business –**

**A. Living Shorelines –** Dr. Denise Sanger with SCDOT presented on behalf of Peter Kingsley-Smith, who has been doing research primarily related to oysters. The ecological importance of shorelines is for water quality, nursery habitat and nutrient cycling/greenhouse gases. They serve as a natural breakwater, improve water quality, provide habitat and food, support fisheries, and protect shorelines. Threats to the shorelines are coastal development and erosion.

South Carolina Oyster Restoration and Enhancement (SCORE) Program is where volunteers bag oyster shells and use them to form oyster reefs. The goal of the program was stewardship and to create habitat. The program began in 2001 and has created 294 reefs at 107 sites and has made over 4.8 acres of new reef habitat. They create living shorelines in places where they know where they will be successful. The program does bagged shell, loose shell, crab traps (coated in concrete) and oyster castles.

Dr. Sanger shared images of successful oyster reefs over time, showing the marsh filling in behind the reefs. She shared a slide about maintaining land-water connection with examples along the Eastern Coast. SC is big into bag oyster shells, NC uses rock, MD uses rock breakwater, DE used coir log made of coconut fiber, GA utilizes metal bags filled with oyster shells and laying on the edge instead of using rip rap to prevent upland bank erosion.

Dr. Sanger shared slides on salt marsh migration and coastal squeeze, as well as living shorelines and coastal structure examples. There are research papers following a storm and oyster reefs can outpace sea-level rise.

Dr. Sanger shared the 2015-2019 NSC Goals. Living shoreline project components: analyze existing data, created 16 new sites and had 1-2 years to monitor, evaluation of historical sites and conducted a small case study. SCDNR Living Shorelines sites map and location of the 16 sites (13 sites created in Year 1 and 3 in Year 2). Dr. Sanger shared images of different projects. The Curlex (aspen bark in a sock material) was tested, but eroded away overtime. Coir

log was tested and reassessed after Hurricane Matthew, and sediment was captured behind the coir log. Some sites had grass planted a year after the system stabilized.

They use a diversity of approaches to collect data using RTKs (GPS and elevation accuracy) and low level aerial flights. They look at elevation of the living shoreline site compared to the control sites.

In reference to the Outright Failure Rate slide, Dr. Sanger explains that failures mean that the material moved offsite or disintegrated. She shared the next steps of the program.

Questions arose about the following topics:

- OCRM Permitting Process – It will be a lengthy process, but is currently done under general consideration.
- Army Corps of Engineering - You have to have a permit with them as well.
- Permit Audience - The ultimate goal is that private homeowners will ask for permit to install a living shoreline adjacent to their property.
- Criteria for placement of oyster bag in relation to marsh edge - It is based on elevation and slope.
- Source of Oysters – DNR has the oyster recycling program and that is where the shells came from.

**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) 255-2805 Facsimile (843) 255-9436**



June 12, 2019

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

**Utility Update**

1. Southern Lowcountry Regional Board (SoLoCo)
  - a) Nothing new to report.
2. Regionalization
  - a) Regional Stormwater Design Standard and Model Ordinance Project – Nothing new to report. Work continues. Contract extension beyond the Fiscal year is pending.
  - b) Regionalization of programs – Nothing new to report.
3. Annual Financial report from the Municipalities – Per the Intergovernmental Agreements for the Utility, each year on September 30<sup>th</sup>, the City and Towns are required to submit a summary of revenue and expenditures for the previous fiscal year.
  - a) Beaufort County – Received.
  - b) Town of Hilton Head Island – Received.
  - c) Town of Bluffton – Received.
  - d) Town of Port Royal – No response.
  - e) City of Beaufort – Received.
4. FY 2020 Management fee concurrence letters from the Municipalities – Per the Intergovernmental Agreements for the Utility, each year on April 1st, the City and Towns are required to submit a letter stating their approval of the SWU management fee of the upcoming fiscal year.
  - a) Beaufort County – Received.
  - b) Town of Hilton Head Island – No response.
  - c) Town of Bluffton – Received.
  - d) Town of Port Royal – No response.
  - e) City of Beaufort – Received.
5. Special presentations – Staff has begun research on the various topics provided by the Board for future meetings:
  - a) Military Site's Stormwater management – A site to the Naval Hospital is still pending.
  - b) The following were suggested as possible topics during the May 8<sup>th</sup> meeting: microplastics and tire tread.
6. FY 2020 Budget – The proposed budget was presented to County Council's Finance

Committee on May 28, 2019. It included the proposed rate increase from \$87 to \$100. First reading of the budget will be at the County Council meeting on June 10, 2019; second reading at a special called meeting on June 17, 2019; Third/Final reading on June 24, 2019.

7. Military installation and other State and Federal properties SWU fees – See “Delinquent Accounts” below.
8. Delinquent accounts - County legal prepared letters and sent them out to multiple state agencies. Some state agencies have remitted payment. County legal has prepared letters on the federal accounts and the letters and documentation is being reviewed by all appropriate departments. Once the review is complete, legal plans to send the letters soon.

(State and Federal accounts make up approx. 97%-98% of the delinquent account value of approx. \$7 million on our ledger)

9. TY 2019 tax run – The Town of Bluffton has adopted the Option E rate structure (3 components including an administrative fee, gross area charge, and impervious area charge) and now the County and all four of the Municipalities are using the same rate structure. The town’s rate remains the same. Stormwater and GIS staff are working on the transition. Staff continues to work on reviewing account data for the next tax run.

#### Monitoring Update

1. Lab Update (From Dr. Alan Warren and Lab Manager Danielle Mickel)
  - i. No information was available at the time of this report.

#### Stormwater Implementation Committee (SWIC) Report

1. The SWIC has not met in the last month.

#### Stormwater Related Projects

1. Easements – Staff is working on numerous easement requests and meets monthly to review status. Several condemnations are still being pursued using outside legal counsel.
2. Complaints – Staff continually works numerous drainage related complaints each month.
  - a) Staff met with representative of the Horse Island Community. The neighborhood has requested assistance with roadside drainage conveyance improvements, road overtopping and pond outfall upgrades. The County is preparing a scope of work for the consultant and will receive a quote for design services to improve drainage and conveyance in the area.
3. Alljoy subwatershed flooding – Release of the RFQ and funding are still pending. Public Meeting was held on May 9, 2019 to discuss the FEMA grant acquisition process and

proposed flood mitigation project concept/objectives. Only one property owner expressed interest to participate. As a result, grant application is now focused on drainage study and design/construction solution to reduce the risk of flood in area. Met with SC Emergency Management office for assistance with FEMA grant application submittal that was due on May 31, 2019. Hazard Mitigation Grant funding application submitted to South Carolina Emergency Management Division on May 31, 2019.

4. Factory Creek Watershed Regional Detention Basin “Phase I” & Academy Park Subdivision (Design Cost \$49,873, Tree Mitigation Cost \$18,200 & \$18,200, Construction Cost by the Developer) – No additional update at this time.
5. Factory Creek Watershed Regional Detention Basin “Phase II” (Design Cost = \$63,390, Tree Mitigation Cost is pending, Construction Cost by the Developer) – No additional update at this time.
6. Graves Property / Pepper Hall Public / private partnership – No additional update at this time.
7. Whitehall property purchase – No additional update at this time.
8. US 278 “super street” widening on Jenkins Island (Windmill Harbor area) – No update at this time.
9. Lady’s Island Plan, Sea Level Rise, and “no-fill” ordinance – The Community Development Department recently completed a comprehensive land use study of the Lady’s Island area, which involved much citizen input. Two of the recommendations were to consider the future effects of Sea Level Rise and the possibility of a no-fill ordinance to prevent marsh and wetland loss. Staff will be participating in a committee to address these two concept in the upcoming months.

#### Professional Contracts Report

1. CIP FY 18 Grouping Stormwater Projects – (Design - Ward Edwards \$202,000, Andrews Engineering \$560,490, Const. est. \$5,512,900) – All projects are in early design phase.
  - a) Salt Creek and Shanklin Road – Reviewed Consultants preliminary design memorandum and provided comment/direction for 30% design development drawings.
  - b) Brewer Memorial – Reviewed Consultants preliminary design memorandum and provided comment/direction for 30% design development drawings.
2. Evergreen Regional Pond 319 grant project – (Design=\$89,286, Construction=\$590,000. Grant=\$229,124) – Reviewed Consultants preliminary design memorandum and provided comment/direction for 30% design development drawings.

## Regional Coordination

1. Town of Bluffton and Beaufort County Joint meetings on Sanitary Sewer in the May River watershed – No additional update at this time.
2. Mossy Oaks Task Force – (Design \$20,404, Construction \$205,000; County portions only). See Municipal Reports.
3. Charleston Area MS4 managers group – This group did not meet this month.
4. Bluffton Ditch Task Force – This group did not meet this month.
5. May River watershed modeling – See municipal reports for more information.
6. The Nature Conservancy – No additional update at this time.

## Municipal Reports

1. Town of Hilton Head Island (From Jeff Netzing, Stormwater Manager and Brian Eber, MS4 Coordinator)
  - i. [See attached report.](#)
2. Town of Bluffton (From Kim Jones, Watershed Management Division Director)
  - i. [See attached report.](#)
3. City of Beaufort (From Neil Desai, Asst. Public Works Director)
  - i. [See attached report.](#)
4. Town of Port Royal (From Van Willis, Town Manager and Tony Maglione, consultant)
  - i. No information was available at the time of this report.

## MS4 Report

1. Plan Review – [See the attached chart](#) for Beaufort County Stormwater staff plan review workload for the past 12 months.
2. Stormwater Permits – [See the attached chart](#) for Beaufort County Stormwater permits issued for the past 12 months.
3. Monthly Inspection summary - [See the attached chart](#) for Beaufort County Stormwater staff inspection, complaint, IDDE, and violations summary for the past 12 months.
4. Weather Station Data. [See attached chart.](#)



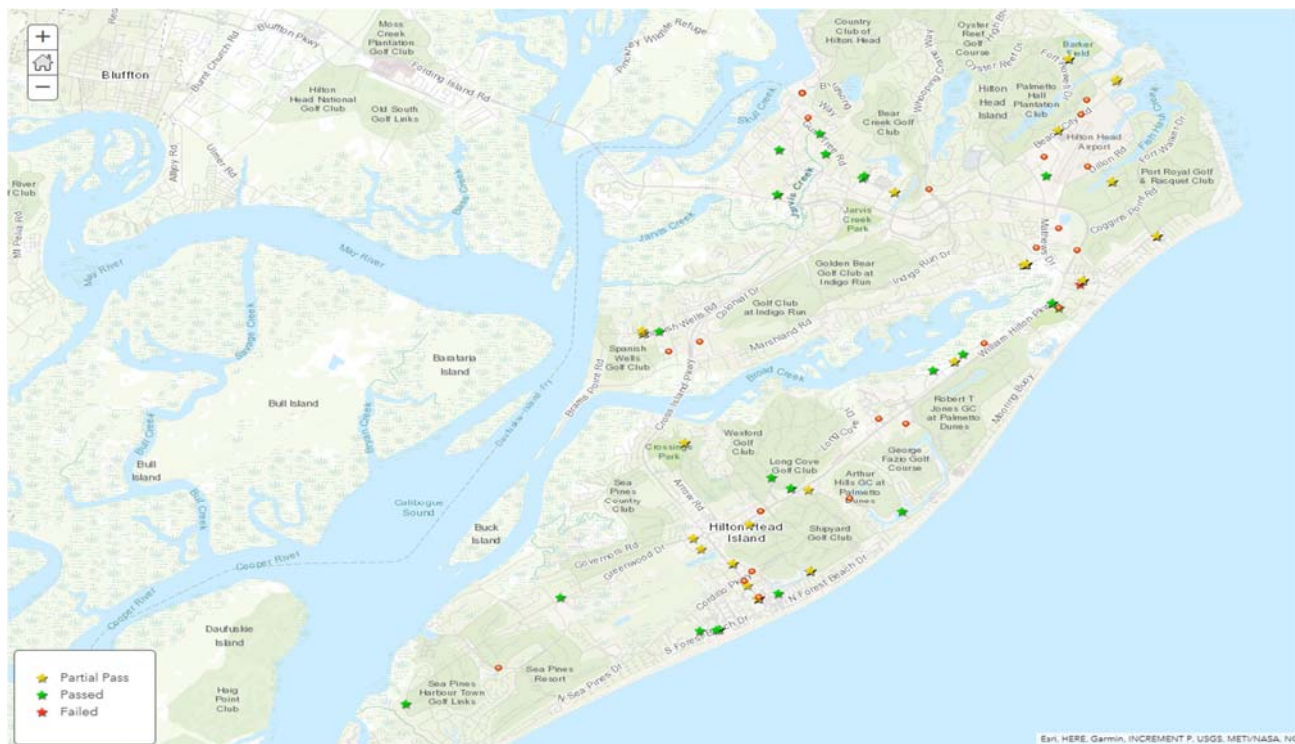
5. Public Education – Lowcountry Stormwater Partners (LSP), via Carolina Clear, continues to work on several initiatives towards public education and outreach. No additional updates are available at this time.
6. Energov permitting software – Stormwater department is finalizing all necessary documentation required by the Energov team. From there Energov will begin developing the work flow based on what has been provided to them.
7. MS4 Statewide General permit – No update at this time.
8. Statewide General permit for Construction – Comments were submitted to DHEC prior to the June 3<sup>rd</sup> deadline.
9. Monitoring Location Maps - [See attached maps.](#)

# Stormwater Utility Board Meeting Hilton Head Island Monthly Report for May 2019

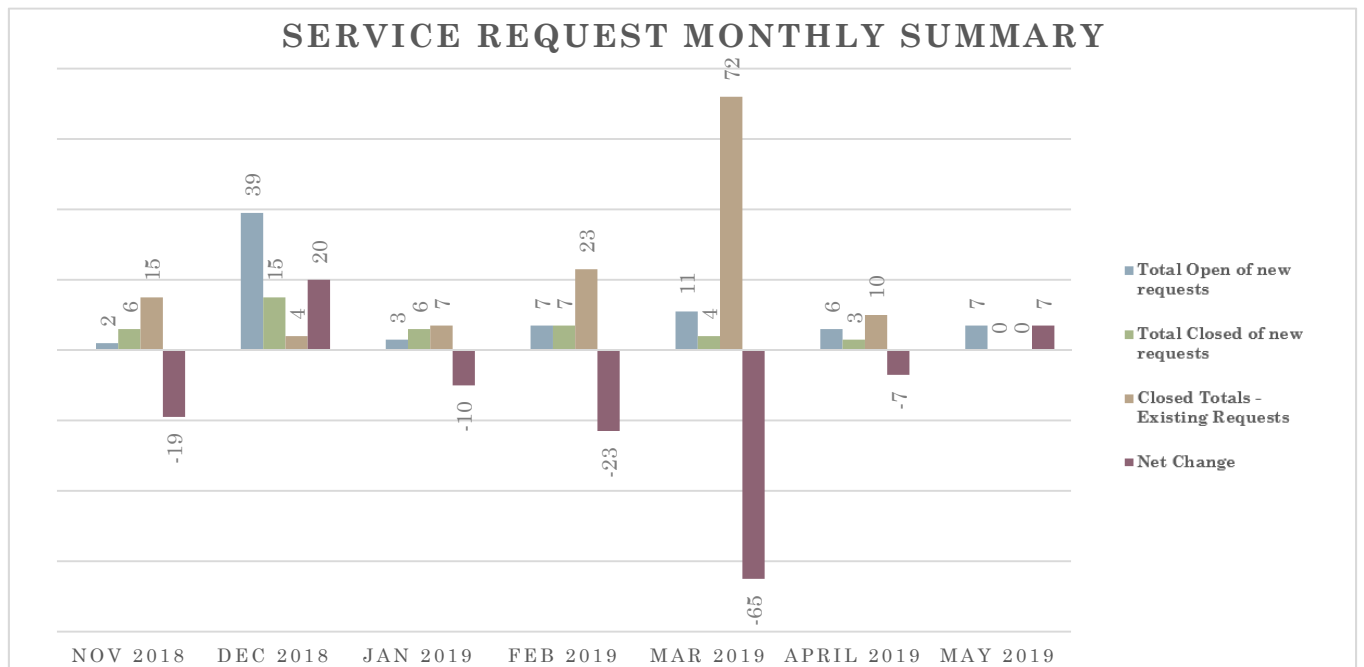
**Reporting Period: April 1, 2019 to May 31, 2019**

## 1. MS4 Update (EBER)

<b>MCM1</b> Public Education & Outreach	<ul style="list-style-type: none"> <li>Completed updates to stormwater page on Town's website pending review.</li> </ul>
<b>MCM2</b> Public Involvement & Participation	<ul style="list-style-type: none"> <li>Met with Sally K. about CY19 agenda.</li> <li>Meeting w/Sea Pines and on outreach activity (classroom lecture / Lagoon Stabilization).</li> </ul>
<b>MCM3</b> Illicit Discharge Detection & Elimination	0 Complaints received via Code Enforcement 3 Investigated 2 Eliminated or resolved
<b>MCM4</b> Construction Site SW Runoff Control	4 Plan reviews w/ corrections required 50 Plan reviews approved 1 New LD Permits issued 18 Active permitted construction sites 34 Inspections completed 3 NOV issued
<b>MCM5</b> Post-Construction SW Management	<ul style="list-style-type: none"> <li>No PCBMP permitted construction completed as of April, 2019.</li> <li>Employed Cartegraph for primary channel inspections (beta test).</li> </ul>
<b>MCM6</b> Pollution Prevention/Good Housekeeping	<ul style="list-style-type: none"> <li>CD PP/GH presentation completed</li> </ul>



## 2. Service Requests (COOK)



New Requests by Month	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019	April 2019	May 2019
Open, Qualifying	0	35	1	6	8	5	6
Closed, Qualifying	3	6	1	3	0	0	0
Open, Referral	2	2	1	1	1	0	1
Closed, Referral	0	0	1	0	0	0	0
Open, Enforcement	0	2	1	0	2	1	0
Closed, Enforcement	0	0	0	0	0	0	0
Closed, Does Not Qualify (DNQ)	3	9	4	4	4	3	0
Total Open of new requests	2	39	3	7	11	6	7
Total Closed of new requests	6	15	6	7	4	3	0
Total New Monthly Requests	8	54	9	14	15	9	7
% Closed	75%	28%	67%	50%	27%	33%	0%
% Open	25%	72%	33%	50%	73%	67%	100%
% DNQ	38%	17%	44%	29%	27%	33%	0%
Existing Requests Closed by Month							
Closed Totals - Existing Requests	15	4	7	23	72	10	0
Net Change	-19	20	-10	-23	-65	-7	7

### Summary Requests for Month End May 2019

Open	Open, Qualifying	Open, Enforcement	Open, Referral	Closed
203	175	7	21	927

### 3. Capital Improvements Update (NETZINGER)

#### A. Jarvis Creek SW Pump Station - Electrical System Upgrades

Planning for major improvements including raising elevation of emergency power cutoff switch boxes, upgrades to electrical distribution, transfer switches, control systems, transducers, floats, and safety improvements. Town is completing scope & fee negotiations with on-call contractor. Work scheduled to begin in July 2019.

#### B. Sea Pines SW Pump Station - Pump Mount Repairs

Reengineering pump wall-mount system. Project is in conceptual design phase. No change in status this month.

#### C. Wexford SW Pump Station – Channel Levee Raising

Mitigation project to raise and reinforce upstream channel levee to repair damage caused by Hurricane's Matthew and Irma. Work scheduled to begin on June 3.

#### D. Main Street Weir - Safety & Operational Improvements

Completed in May of 2019.

### 4. Maintenance, Repair & Rehabilitation Projects (UYESUGI / LADD)

#### A. Completed in April and May (\$377,200)

- Main Street Weir – Structural Modifications - \$68,000
- Channel Maintenance – Old Woodlands, Folly Field, Sparkleberry, Arrow - \$16,000
- Jarvis Creek Pump Station – Electrical System Analysis - \$16,500
- Jarvis Creek Pump Station – FM Outfall Gate Investigation – \$7,200
- Jarvis Creek Pump Station – Pump Repairs - \$70,000
- Jarvis Creek Channel Excavation (CIP to Main Street)- \$106,500
- 12 Canvas Back Road – pipe installation - \$20,000
- 271 Seabrook Drive – CCTV - \$4,000
- 9 Kings Court – Sinkhole Repair - \$3,000
- 82 Myrtle Bank Road – CCTV & clean - \$13,000
- 1 Jingle Shell Lane – CCTV & Clean - \$15,000
- 9 Bobcat Lane – CCTV & Clean - \$5,000
- Long Cove Club – 2 locations – CCTV & Clean - \$5,000
- 4 Sara Court – CCTV - \$3,000
- 3 Cougar Run – CCTV - \$3,000
- Island Rec Center – Ditch Excavation/ Pipe Cleaning - \$8,000
- Whooping Crane Way – CCTV & Clean - \$4,000
- 1 Oyster Reef Drive – Pipe Cleaning - \$7,500
- 12 Black Gum Place – CCTV & Clean - \$7,500

#### B. Underway as of May 31 (\$89,500)

- Channel Maintenance, workshelf/vegetation – Gardner - \$8,000
- Wexford Pump Station – Levee Construction - \$75,000
- 271 Seabrook Drive – CIPP - \$5,000
- Galleon Course #8 Tee- Survey - \$1,500

**C. Planned for Summer 2019 (\$1,690,600)**

- Jarvis Creek Pump Station – Electrical System Upgrades - \$1,100,000
- Jarvis Creek Pump Station – Flap Gate Installation - \$75,000
- Jarvis Creek Channel Excavation (Pump Station to Hwy 278) - \$25,000
- Old Woodlands Channel Excavation - \$30,000
- Channel Excavation at Sunningdale Lane, Indigo Run - \$8,000
- Channel Maintenance – Bay Pines, Haig Point, Jarvis Creek Park - \$11,500
- Wexford RV Park/ Powerline Channel – Pipe/Ditch Cleaning - \$8,000
- Hilton Head Plantation – Weir Structure Repairs (2 locations) - \$21,900
- Sea Pines – Weir Structure Repairs (3 location) - \$19,200
- Channel Excavation./Structure Repair – Folly Field/Fiddlers Cove - \$12,000
- 25 Wren Drive Pond - Gate Replacement - \$28,000
- Ruddy Turnstone – Pipe Replacement - \$80,000
- Canvas Back – Pipe Replacement - \$20,000
- 12 Valencia Road- Joint Repair - \$30,000
- 37 Deerfield Road – drainage system improvements - \$22,000
- 20 Ocean Lane – CCTV & Clean/ CIPP - \$12,000
- Old Fort Drive – Outfall Stabilization - \$50,000
- 14 South Beach Lane – Pipe Replacement - \$7,000
- 4 Sara Court – Sinkhole - \$5,000
- 82 Myrtle Bank Road – Structure Repair - \$2,000
- 9 Bobcat Lane – Point Repair - \$7,000
- 12 Black Gum Place – Structure Repair - \$3,000
- 1 Jingle Shell Lane – Drainage Improvements - \$20,000
- S. Sea Pines Drive at 1 South Beach Lane – CCTV - \$3,000
- 19 Shelter Cove Lane – CCTV & Clean - \$3,000
- 13 Harbourside Lane – CCTV & Clean - \$3,000
- 9 Shelter Cove Lane – CIPP - \$40,000
- 15 Mizzenmast Court – Pipe Replacement - \$40,000
- Spotted Sandpiper – CIPP - \$50,000

## **5. Master Planning & Modeling Program (COOK)**

### **A. Palmetto Hall/Mitchelville Inventory & Modeling Project**

Contract with Woolpert executed in December 2018. Public meeting held on January 28 2019. Field inventory work completed in February. Preliminary inventory and calibrated base model completed in April; preliminary model completed in May. Problem areas and potential solutions are currently being assessed by the consultant. Final report due at the end of June.

### **B. Gum Tree and Lower Jarvis Creek Inventory & Modeling Project**

FY19 budgeted project planned for advertisement in Q4 (June, 2019)

### **C. Indigo Run/Gardner/Jonesville Inventory & Modeling Project**

FY19 budgeted project planned for advertisement in Q4 (June, 2019)

## **6. Other Activities / Items of Interest (NETZINGER)**

- **Standardization of PUD Maintenance Agreements** – Coordination process with current agreement partners is on hold. Revisions to boilerplate version completed in April; the revised version is being utilized as the template for offering services to several smaller POAs. Draft agreements were submitted to five POAs for their consideration in May (Spanish Wells, Wells East, Jarvis Creek Club, Yacht Cove and Bermuda Pointe).

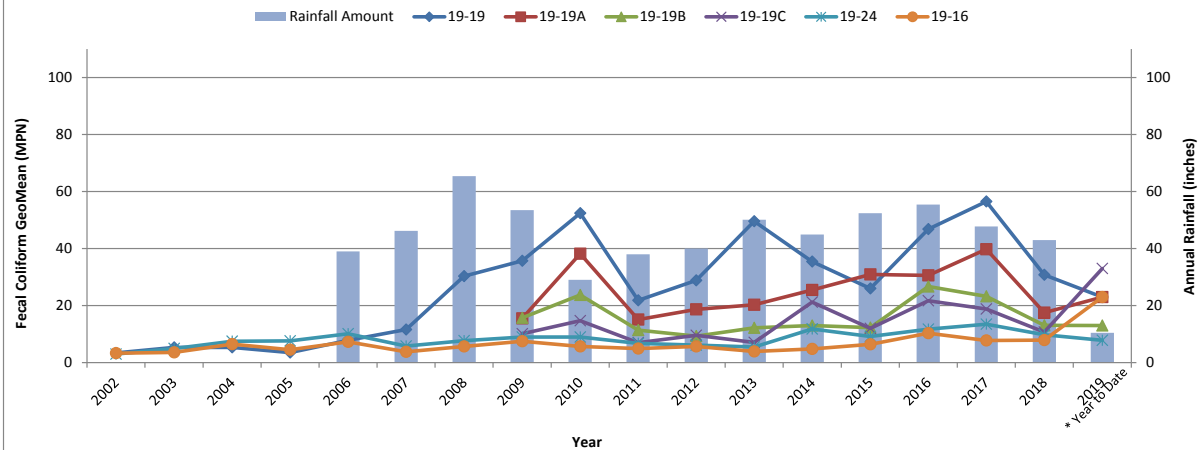
	19-19				19-19A				19-19B				19-19C				19-24				19-16			
	2016	2017	2018	2019	2016	2017	2018	2019	2016	2017	2018	2019	2016	2017	2018	2019	2016	2017	2018	2019	2016	2017	2018	2019
	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)
December	79.0	1600.0	79.0		23.0	920.0	49.0		49.0	540.0	33.0		33.0	240.0	46.0		7.8	220.0	23.0		23.0	49.0	21.0	
November	33.0	49.0	49.0		13.0	33.0	13.0		7.8	7.8	23.0		14.0	31.0	17.0		13.0	2.0	17.0		33.0	2.0	7.8	
October	NS	22.0	79.0		NS	49.0	23.0		NS	33.0	7.8		NS	23.0	7.8		NS	6.8	7.8		NS	2.0	2.0	
September	23.0	17.0	49.0		110.0	7.8	23.0		23.0	11.0	13.0		13.0	4.5	17.0		4.5	2.0	17.0		7.8	1.8	17.0	
August	NS	79.0	70.0		NS	70.0	23.0		NS	21.0	13.0		NS	33.0	4.5		NS	33.0	7.8		NS	33.0	17.0	
July	79.0	350.0	23.0		17.0	110.0	33.0		22.0	130.0	11.0		17.0	49.0	7.8		49.0	49.0	13.0		13.0	22.0	4.5	
June	79.0	23.0	11.0		130.0	49.0	23.0		70.0	13.0	23.0		110.0	17.0	7.8		33.0	7.8	4.5		23.0	4.5	1.8	
May	70.0	17.0	17.0	7.8	23.0	23.0	33.0	9.2	49.0	7.8	17.0	7.8	49.0	2.0	13.0	2.0	14.0	23.0	23.0	6.8	17.0	4.5	13.0	4.5
April	23.0	7.8	33.0	23.0	23.0	23.0	13.0	13.0	13.0	4.5	17.0	7.8	13.0	7.8	17.0	6.8	7.8	13.0	49.0	23.0	1.8	4.5	17.0	6.8
March	33.0	350.0	22.0	23.0	33.0	11.0	21.0	23.0	33.0	33.0	4.5	6.8	17.0	13.0	11.0	13.0	11.0	13.0	7.8	7.8	7.8	33.0	9.3	4.5
February	23.0	13.0	17.0	64.0	17.0	7.8	7.8	33.0	13.0	13.0	17.0	23.0	11.0	9.3	17.0	31.0	6.8	4.5	2.0	6.8	1.8	1.8	7.8	13.0
January	110.0	95.0	13.0	23.0	33.0	79.0	2.0	23.0	49.0	31.0	4.5	13.0	17.0	49.0	2.0	33.0	7.8	27.0	1.8	7.8	17.0	33.0	4.5	23.0
Additional Samples																								
Additional Samples																								
Average Annual GeoMean	46.8	56.5	30.8	22.7	30.6	39.8	17.5	18.4	26.7	23.3	13.1	10.4	21.7	18.8	10.7	11.3	11.7	13.5	9.8	9.2	10.3	7.7	7.9	8.4
** Truncated GeoMetric Mean	37.0	44.0	42.0	37.0	30.0	36.0	29.0	24.0	16.0	20.0	20.0	16.0	16.0	16.0	15.0	13.0	9.0	10.0	10.0	11.0	6.0	7.0	8.0	7.0
** Truncated 90th Percentile	105.0	203.0	176.0	175.0	89.0	133.0	115.0	98.0	69.0	83.0	71.0	58.0	65.0	57.0	56.0	53.0	29.0	37.0	44.0	44.0	21.0	29.0	30.0	29.0

NS = No Sample

AS = Additional Samples

\*\* Town staff calculations utilizing DHEC statistics

SC DHEC Shellfish Monitoring Stations Average Annual Fecal Coliform



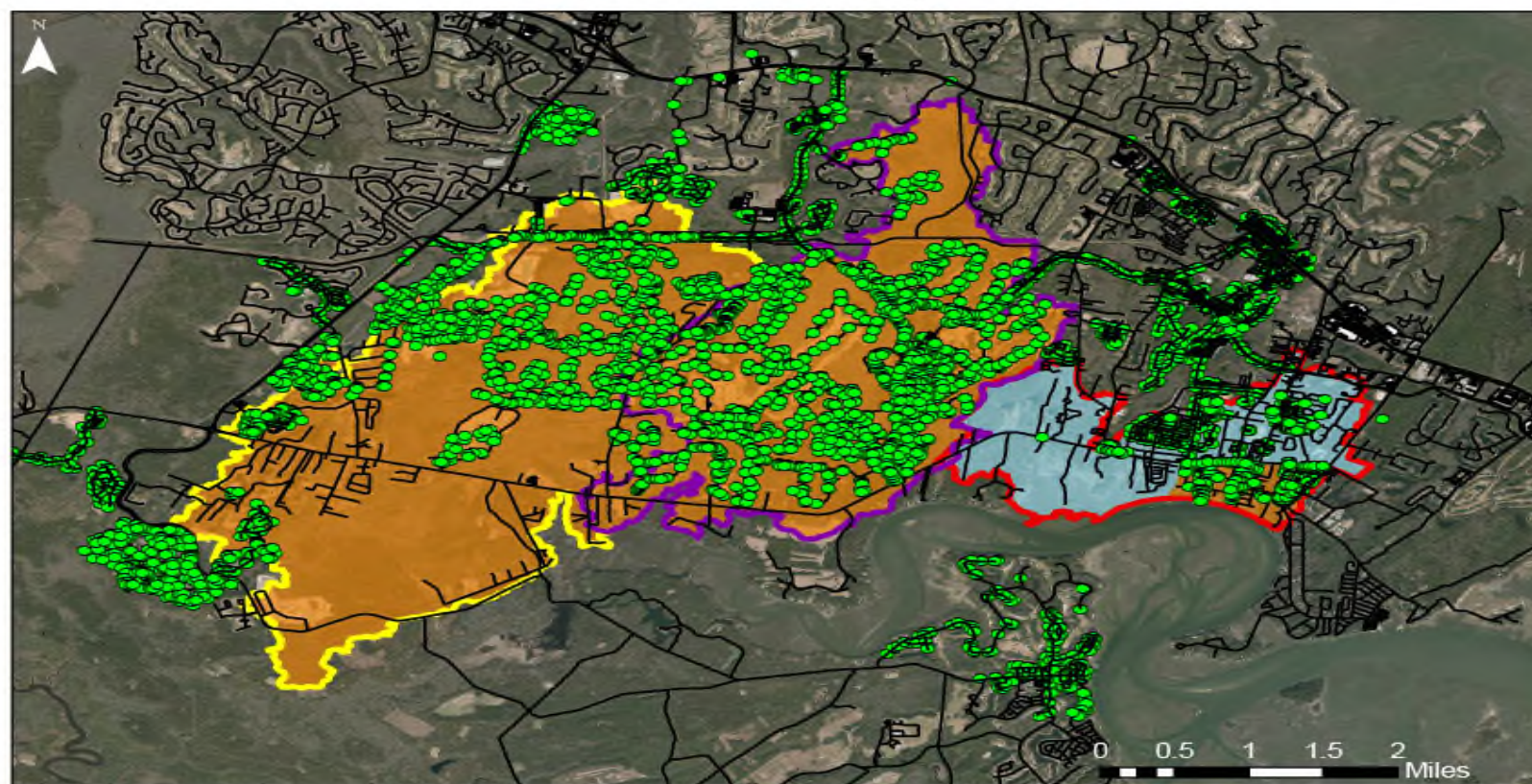
ACTIVITY - POLICY	STATUS
May River Watershed Action Plan Update	Contract to McCormick Taylor to complete MRWAP Update - Water Quality Model, current project assessment, and proposed new projects was approved by Council on 5/14/19. Notice to Proceed anticipated by 6/30/19.
Sewer Connection & Extension Policy	<b>Completed 2018.</b> Council adopted the Sewer Connection & Extension Policy on 9/26/17. Ordinance and Septic to Sewer Conversion Program completed 9/20/18.
ACTIVITY - PROJECTS	STATUS
Sanitary Sewer Extension	<b>Completed Buck Island/Simmons Road (BIS) Phases I, II, III, IV; Toy Fields; and Jason/Able.</b> Six phases of sewer extension are proposed in the 5-year Capital Improvement Program. Current project updates are included in Engineering Consent Agenda under "Sewer & Water."
May River 319 Grant Phase 1 - New Riverside Pond (Grant award of \$483,500 in 2009)	<b>Completed in 2013.</b>
May River 319 Grant Phase 2 - Pine Ridge (Grant award of \$290,000 in 2011)	<b>Completed in 2016.</b>
May River 319 Grant Phase 3 - Town Hall Parking Retrofit (Grant award of \$231,350 in 2016)	<b>Completed 2019.</b> Open House ceremony held 5/29/19.
Stoney Creek Wetlands Restoration: Preliminary Design Phase	Project on hold following Council direction on 5/31/17.
May River Watershed Water Quality Model	Contract awarded to McCormick Taylor with final deliverables anticipated 1/20.
ACTIVITY - FINANCIAL	STATUS
Additional Funding Opportunities	Exploring partnership opportunities with BJWSA for future sewer phases. <b>Council unanimously agreed on 5/14/19 to change the SWU Fee Rate Structure to Option E at \$98 for tax year 2019.</b> Staff submitted a \$307,345.00, 319 grant proposal in support of 37 sewer lateral connections for Posey's Court and Historic District Phases 1 and 2 on 5/22/19. Notification is anticipated by 6/30/19.
ACTIVITY - PROGRAMS	STATUS
Public Outreach/Participation/Involvement (MS4 Minimum Control Measure #1 & 2)	Outreach and involvement efforts continue through county-wide partnership with Carolina Clear as Lowcountry Stormwater Partners - Neighbors for Clean Water, through local cleanups, civic group presentations, and the May River Watershed Action Plan Advisory Committee. <b>Current updates are included in Engineering Consent Agenda and Attachment 3.</b>
Infrastructure Mapping/GIS (MS4 Minimum Control Measure #3)	Data points continue to be collected with new development to meet MS4 requirements & populate water quality model. <b>Current updates are included in Engineering Consent Agenda Attachment 4a.</b>



ACTIVITY - PROGRAMS continued	STATUS continued
Water Quality Monitoring Program (MS4 Minimum Control Measure #3)	1. SCDHEC Shellfish monitoring results 2. Fecal coliform bacteria "hot spot" concentrations 3. Microbial Source Tracking of human sources of bacteria 4. Illicit Discharge investigation and monitoring 5. BMP efficacy monitoring 6. MS4 monitoring <b>Current updates are included in Engineering Consent Agenda Attachments 1, 4b, 4c, and 4d.</b>
Construction Site Stormwater Runoff Control Program (MS4 Minimum Control Measure #4)	Sediment and erosion control inspections with escalating enforcement response. <b>Current updates are included in Engineering Consent Agenda Attachment 5.</b>
Stormwater Plan Review & Related Activity Program (MS4 Minimum Control Measure #5)	SCDHEC delegated plan review-related activities. <b>Current updates are included in Engineering Consent Agenda Attachment 6.</b>
Ditch Inspection/Maintenance Program (MS4 Minimum Control Measure #6)	Continued coordination with SCDOT, Beaufort County and Town Public Works to inspect and maintain ditches within the Town's jurisdiction. <b>Current updates are included in Engineering Consent Agenda Attachment 7 and under "Public Works."</b>
Septic System Maintenance Program	On-going assistance offered to Town residents regardless of financial status through Neighborhood Assistance Program. <b>Current updates, as reported by NAP, are included in Engineering Consent Agenda Attachment 9.</b>
Sewer Connection Program	<b>Completed 2018.</b> <b>Staff submitted a \$307,345.00, 319 grant proposal in support of 37 sewer lateral connections for Posey's Court and Historic District Phases 1 and 2 on 5/22/19. Notification is anticipated by 6/30/19.</b>

# MS4 Minimum Control Measure #3 – IDDE (Illicit Discharge Detection & Elimination): Stormwater Infrastructure Inventory

## Stormwater Inventory Collection



### Collection Status

- Completed
- In Progress
- Inventoried SW Utilities
- Mid River/Old Town
- Rose Dhu Watershed
- Stoney Creek Watershed

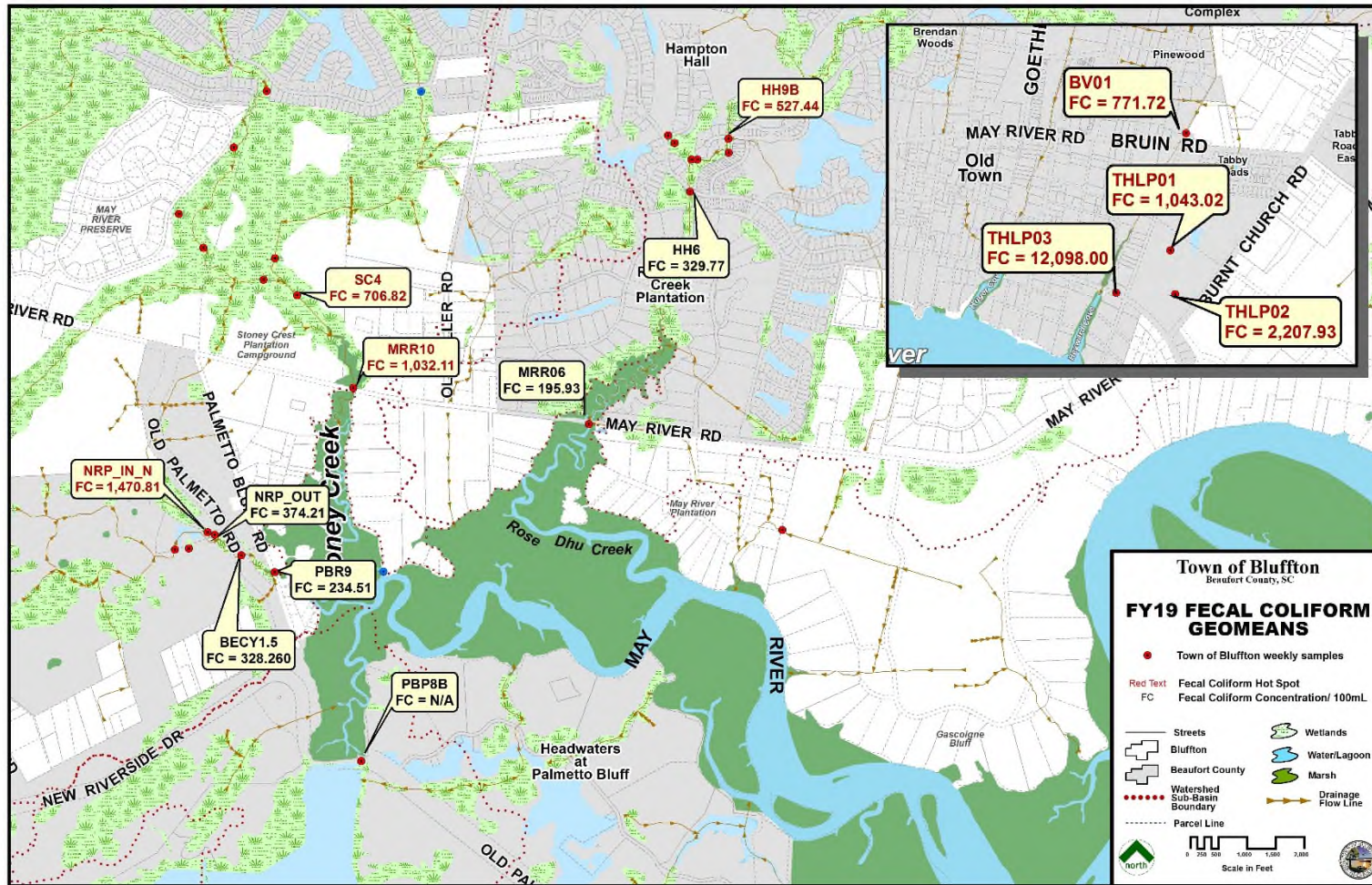
DISCLAIMER  
This map was created by the Town of Bluffton's Stormwater Department and is intended to be used as a general reference only. It is not intended to be used for legal purposes. The Town of Bluffton is not responsible for any errors or omissions in this map. The Town of Bluffton is not responsible for any damages or injuries resulting from the use of this map. The Town of Bluffton is not responsible for any damages or injuries resulting from the use of this map.

### Stormwater Infrastructure Inventory Collection Status

FY 2019 YTD Collection Totals	2,425
FY 2018 Collection Totals	3,777
FY 2017 Collection Totals	3,874



# MS4 Minimum Control Measure #3 – IDDE: Fecal Coliform Concentrations Trend Map



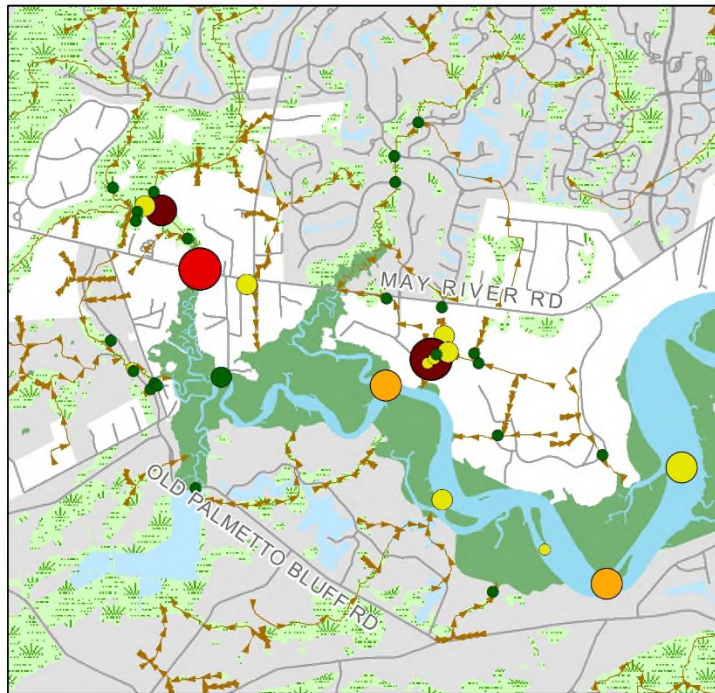
	USCB Water Quality Samples	Microbial Source Tracking Samples	MS4 Quarterly Samples Collected
FY 2019 YTD Totals	220	163	187
FY 2018 Totals	216	217	224
FY 2017 Totals	307	179	224
FY 2016 Totals	668	11	-

5/23/2019

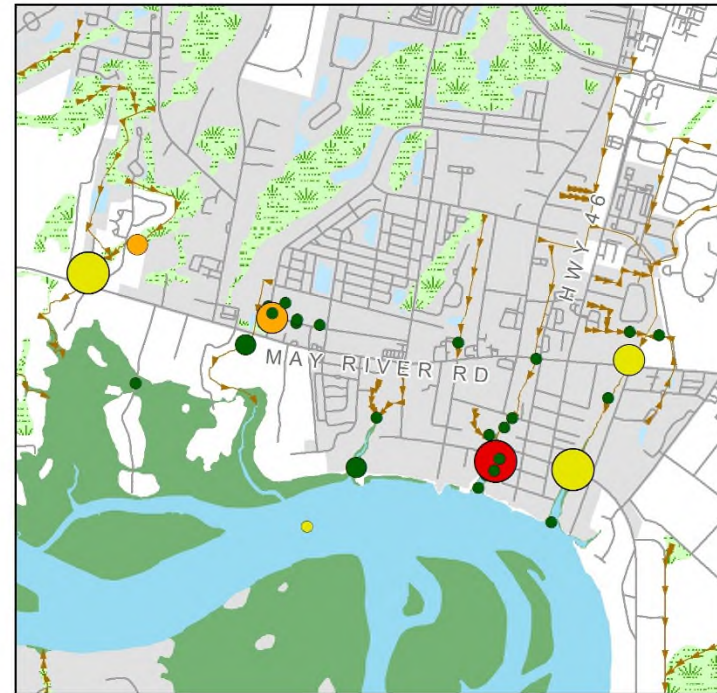
- MST program began November 2016; MS4 Quarterly Sampling initiated 2/2017
- Totals include only samples submitted for laboratory analysis, and not *in situ* parameters.



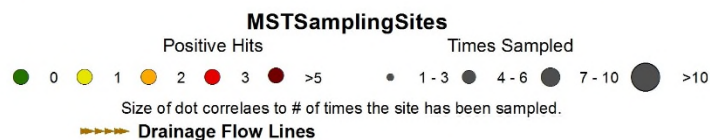
# MS4 Minimum Control Measure #3 – IDDE: Human Microbial Source Tracking (MST) Trend Map



Microbial Source Tracking Trend Map  
Headwaters May River



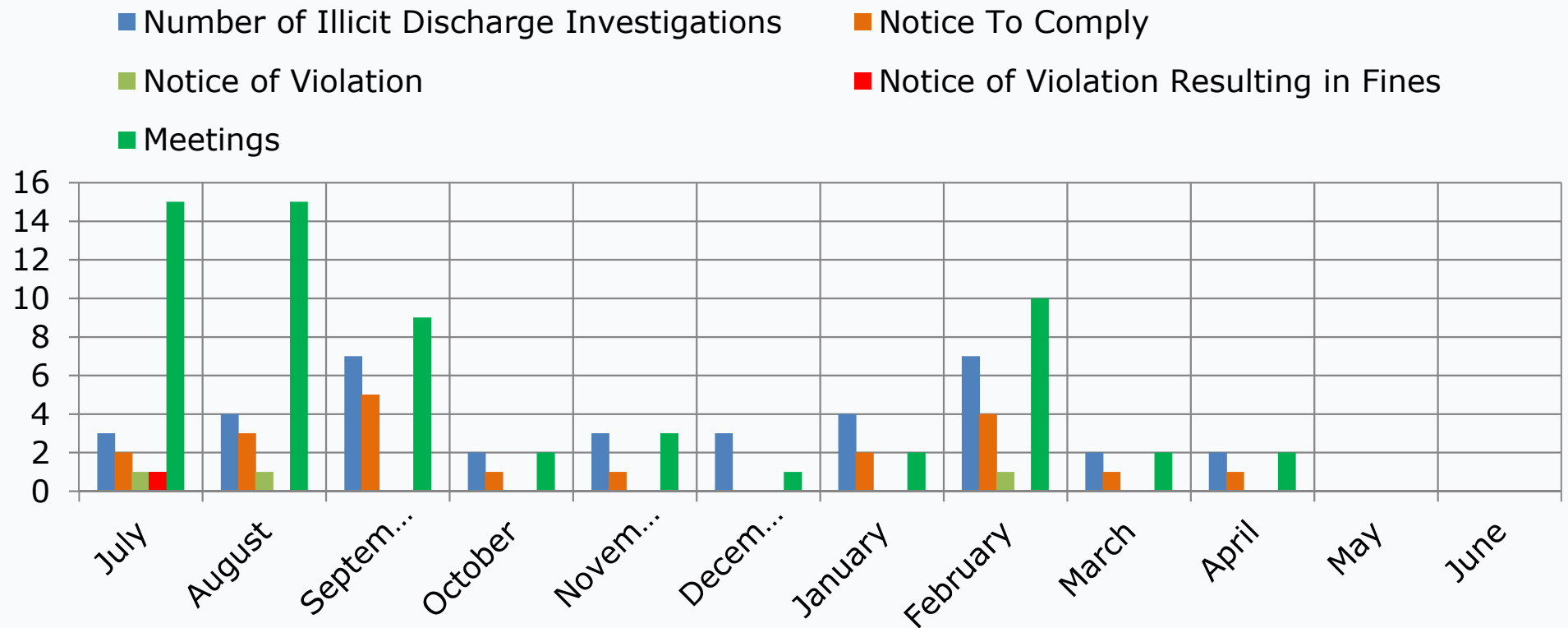
Microbial Source Tracking Trend Map  
Old Town May River



Updated: 3/19/2018

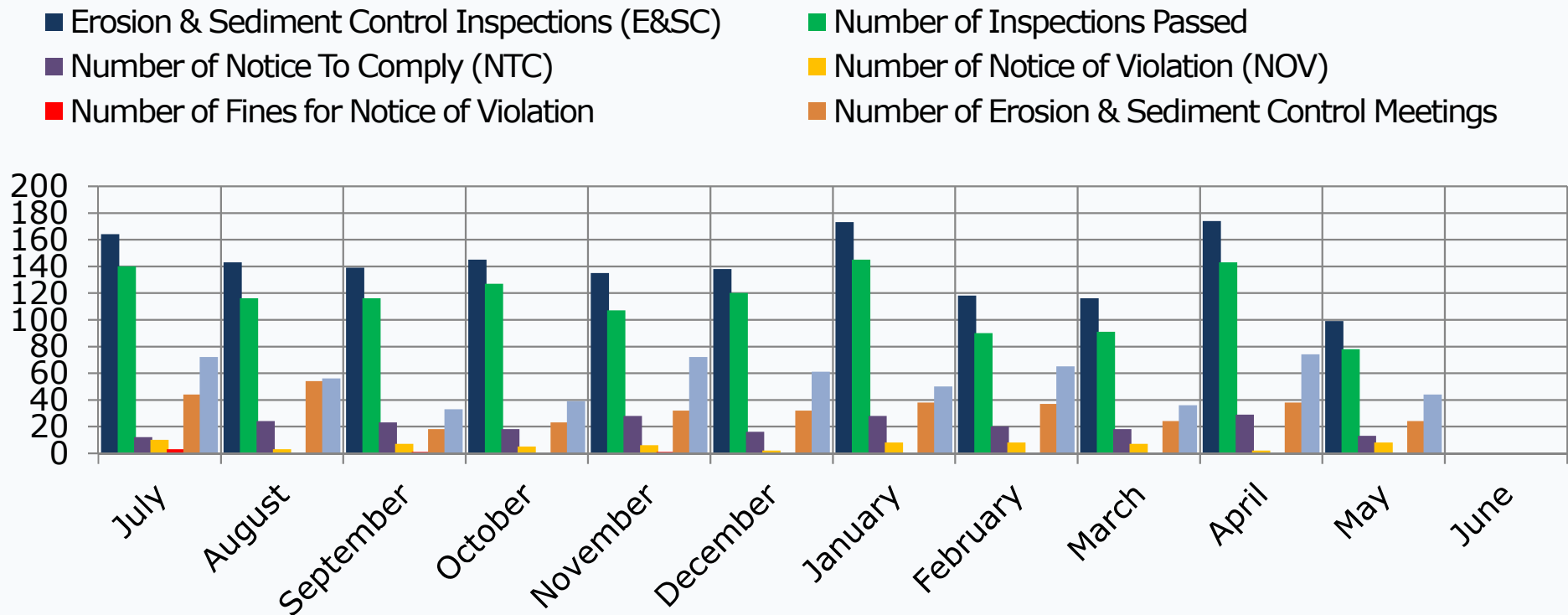


## MS4 Minimum Control Measure #3 – IDDE: Illicit Discharge Investigations



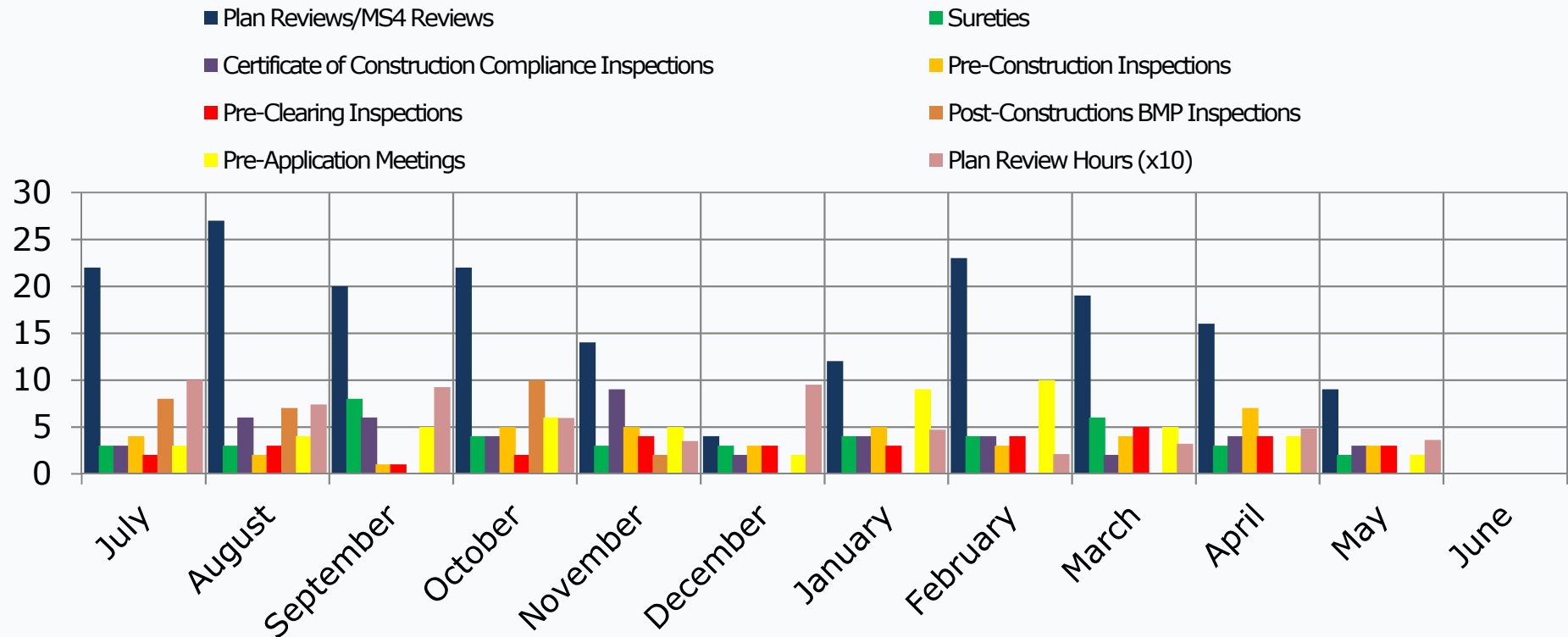
	Number of Illicit Discharge Investigations	Number of Notices To Comply Issued	Number of Notices of Violation Issued	Number of NOV Enforcement Actions	Number of Meetings
FY 2019 YTD Totals	39	20	3	1	61
FY 2018 Totals	48	20	4	2	60
FY 2017 Totals	50	19	8	13	67

## MS4 Minimum Control Measure #4 - Construction Site Stormwater Runoff Control



	Number of Sediment & Erosion Control Inspections	Number of Inspections Passed	Number of NTC Issued	Number of NOVs Issued	Number of NOV Enforcement Actions	Number of E&SC Meetings
FY 2019 YTD Totals	1544	1273	229	66	5	500
FY 2018 Totals	1504	1159	300	83	10	499
FY 2017 Totals	1,219	862	233	58	10	237

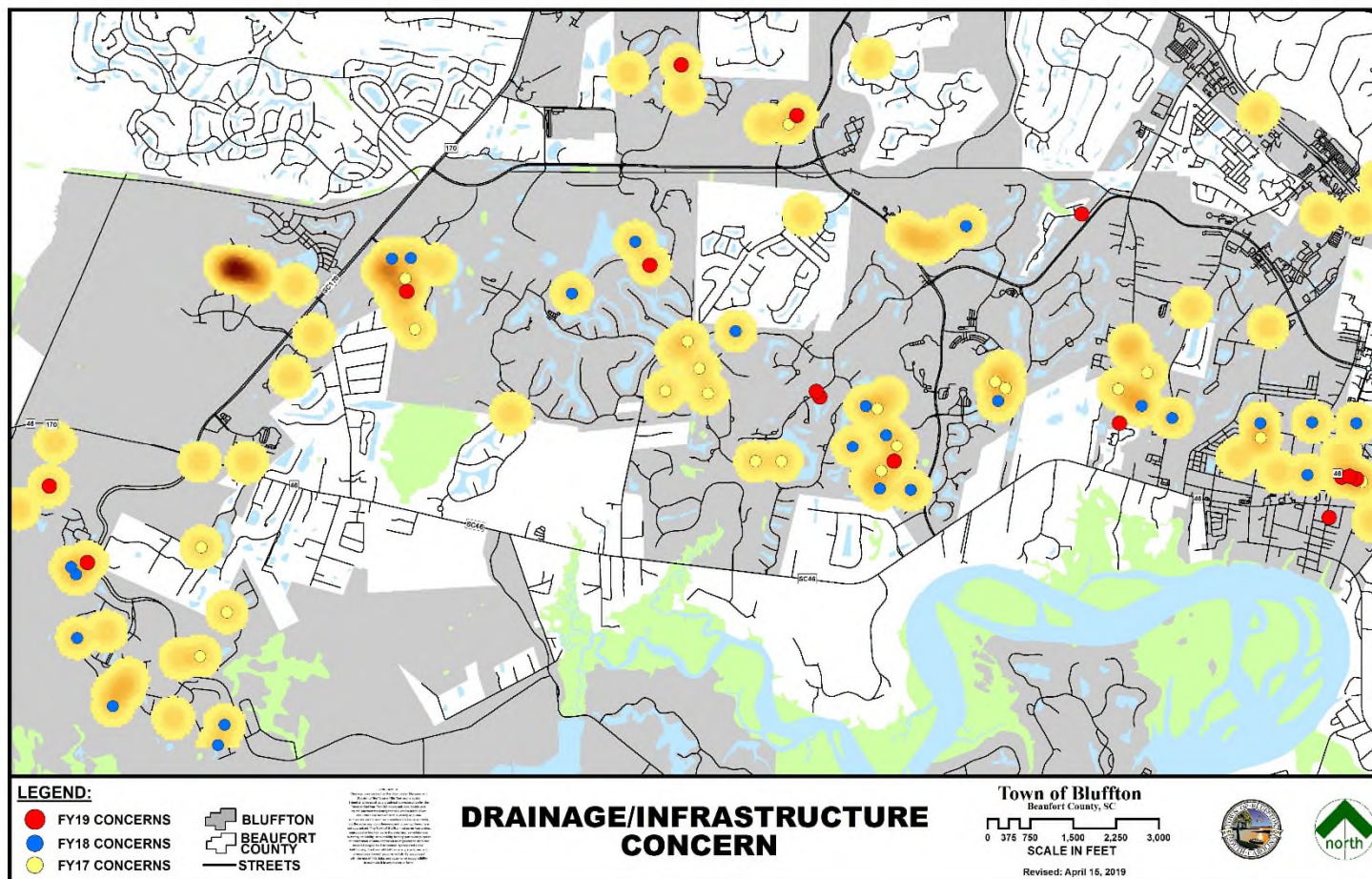
## MS4 Minimum Control Measure #5 Stormwater Plan Review & Related Activity



	Plan Reviews MS4 Reviews	Sureties	Certificate of Construction Compliance Inspections	Pre- Construction Meetings	Pre-Clearing Inspections	Post Construction BMP Inspections	Pre-Application Meetings	Total Plan Review Hours
FY 2019 YTD Totals	188	43	47	42	34	27	55	639 Hrs.
FY 2018 Totals	242	59	50	32	32	88	88	1,210 Hrs.
FY 2017 Totals	253	62	96	47	45	7	23	1,265 Hrs.



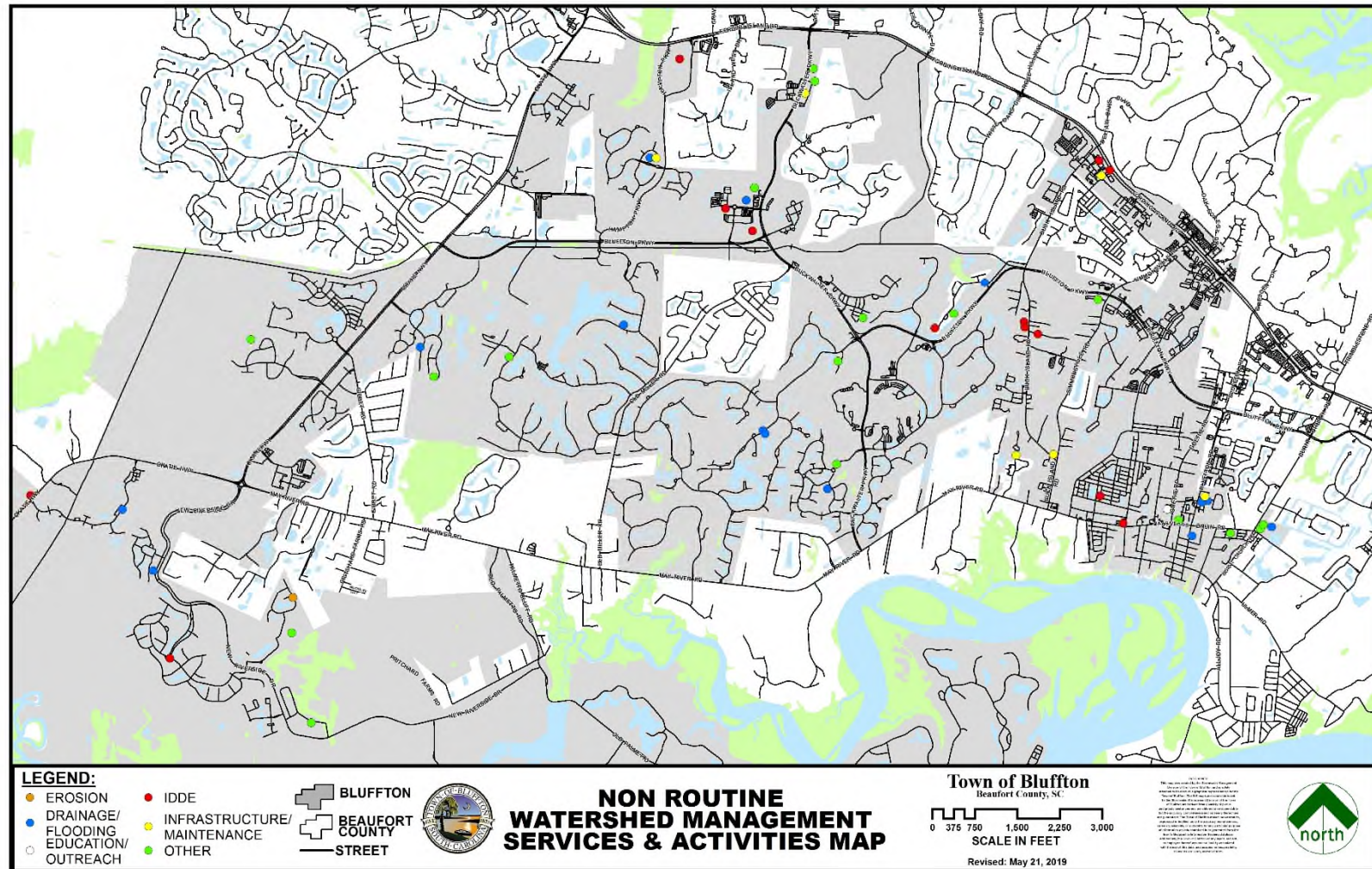
## Citizen Drainage Concern Heat Map (Drainage, Maintenance and Inspections)



	Number of Drainage Concerns Investigated	Number of Meetings
FY 2019 YTD Totals	51	39
FY 2018 Totals	48	75
FY 2017 Totals	72	80

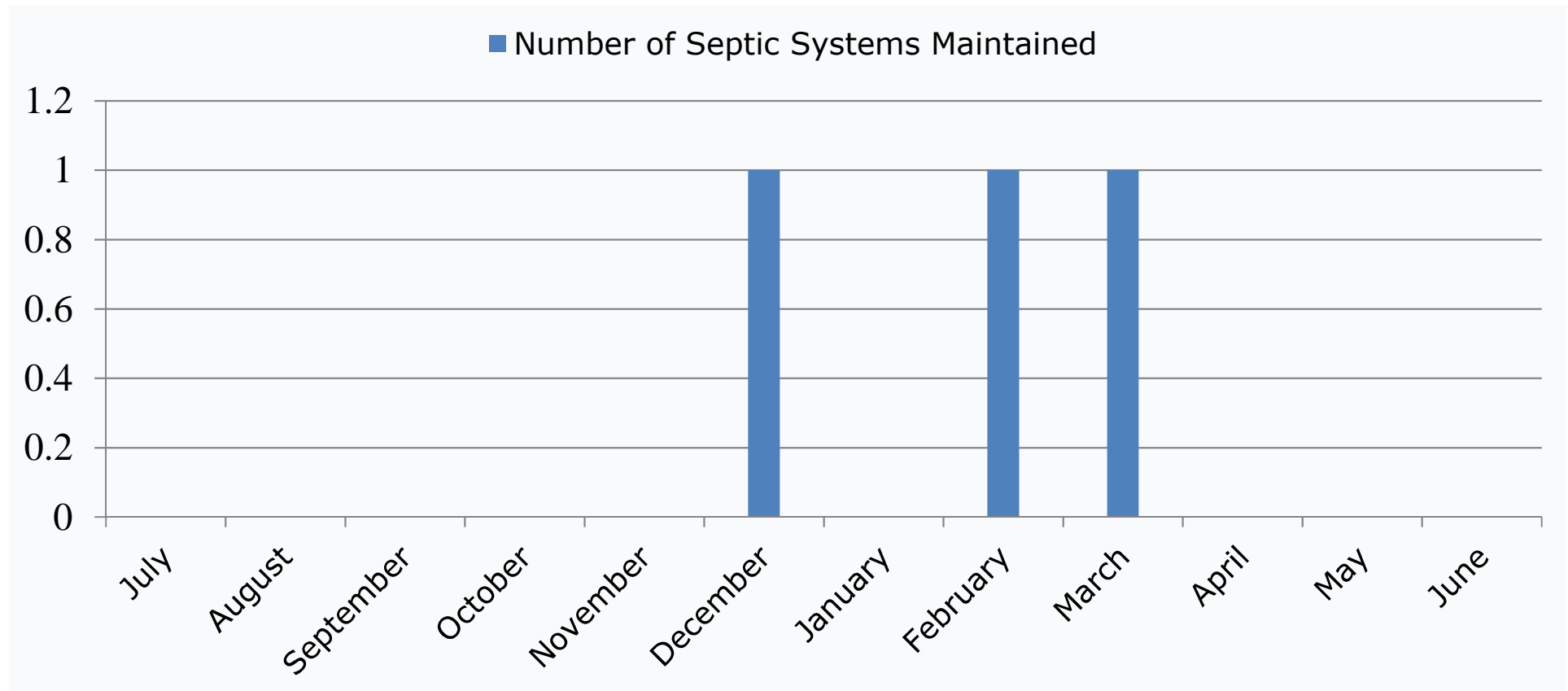


# Citizen Request for Watershed Mngt. Services & Activities Map



	Number of Citizen Requests Investigated	Number of Meetings
FY 2019 YTD Totals	49	52
FY 2018 Totals	75	79
FY 2017 Totals	53	82

## Septic System Maintenance Assistance



	Number of Septic Systems Maintained
FY 2019 YTD Totals	4
FY 2018 Totals	16
FY 2017 Totals	18



## **CITY OF BEAUFORT**

**TO:** Eric Larson, P.E.

**FROM:** Neil Desai, P.E.

**DATE:** June 5, 2019

**SUBJECT:** Stormwater Utility Board Report

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The following is the City of Beaufort Public Works Department monthly report from May 1 to May 31, 2019

### **1) CAPITAL IMPROVEMENTS UPDATE**

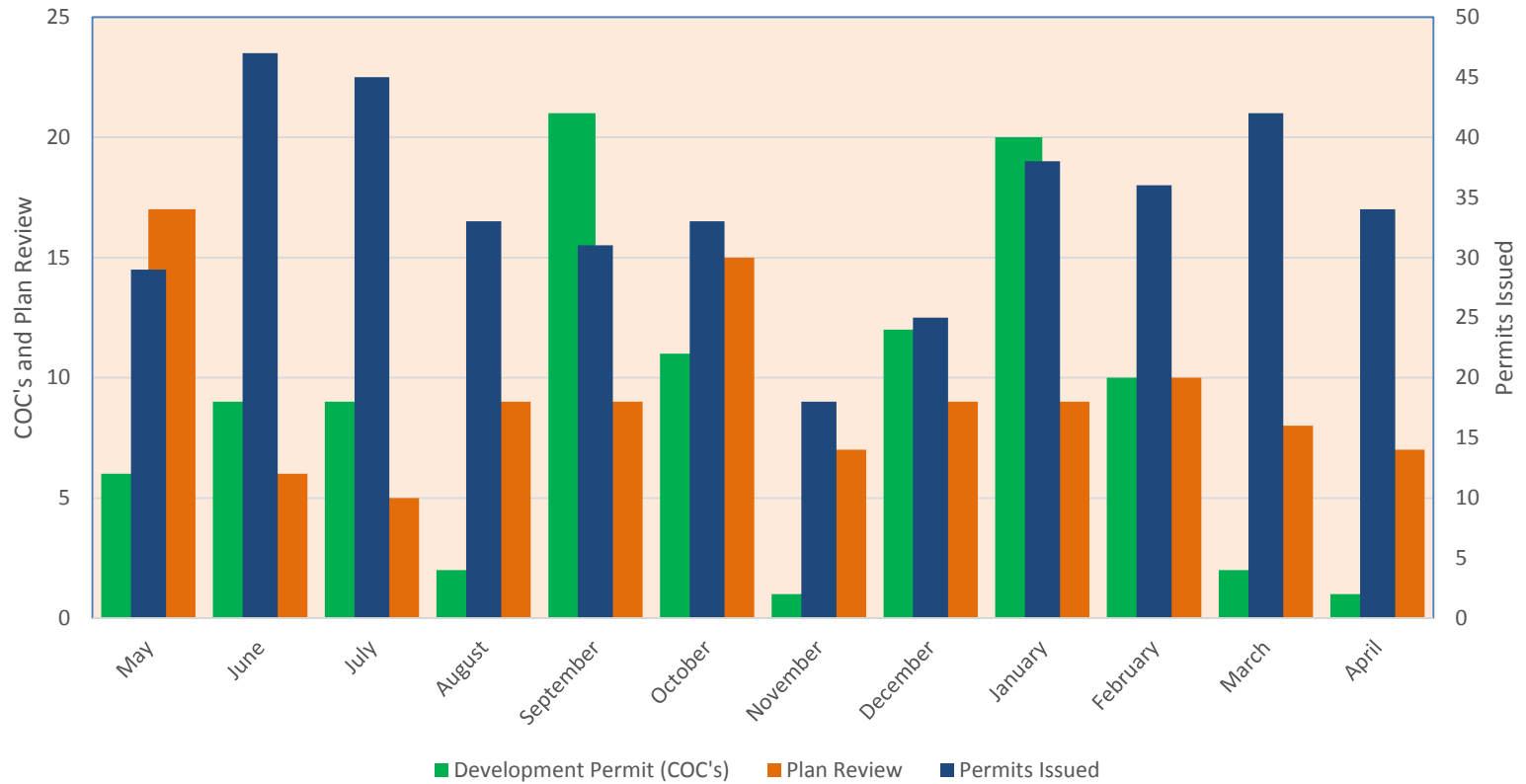
- a) Mossy Oaks Drainage Project – City has received approval from OCRM for State M&R permits where applicable. Jane Way Canal drainage improvements currently underway.
- b) Battery Shores Drainage Improvement – project to be re-scoped due to inability to obtain drainage easement from property owner.

- c) Greenlawn Streetscape – Water Quality component with manufactured device at outfall. Utility companies working out final design of utility banks.

## 2) **MAINTANCE & REPAIR UPDATE**

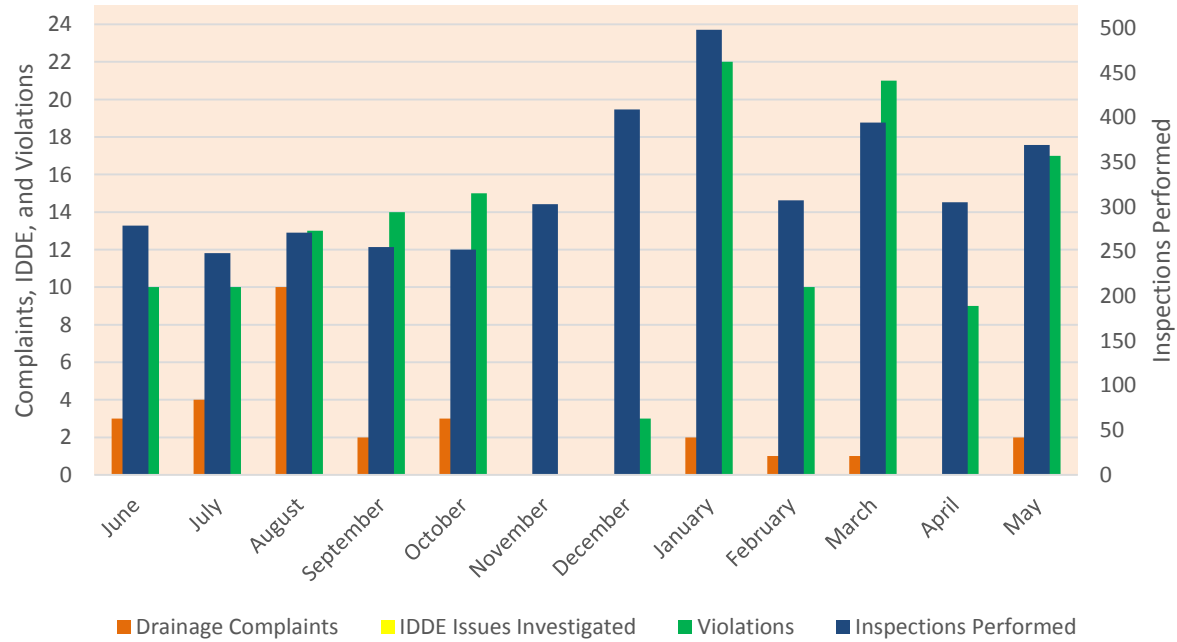
- a) Complete maintenance of entire Battery Shores Subdivision – Vac Truck Contractor
  - i) Phase I – re-establish roadside drainage ditch
  - ii) Phase II – blow out driveway pipes
- b) Routine maintenance of drainage easement City wide.

### MS4 Minimum Control Measure #5 Stormwater Plan Review



TYPE	May	June	July	August	September	October	November	December	January	February	March	April	May	Last 12 Months
Development Permit (COC's)	6	9	9	2	21	11	1	12	20	10	2	1	9	59
Plan Review	17	6	5	9	9	15	7	9	9	10	8	7	11	104
Permits Issued	29	47	45	33	31	33	18	25	38	36	42	34	40	236

### MS4 Minimum Control Measure #4 Erosion Sediment Control Inspections



TYPE	June	July	August	September	October	November	December	January	February	March	April	May	Last 12 Months
Inspections Performed	279	248	271	255	252	303	409	498	307	394	305	369	3890
Drainage Complaints	3	4	10	2	3	0	0	2	1	1	0	2	22
IDDE Issues Investigated	0	1	2	1	2	0	1	0	1	0	1	2	11
Violations	10	10	13	14	15	0	3	22	10	21	9	17	62

## Beaufort County Weather Stations Daily Rainfall Amounts - May 2019

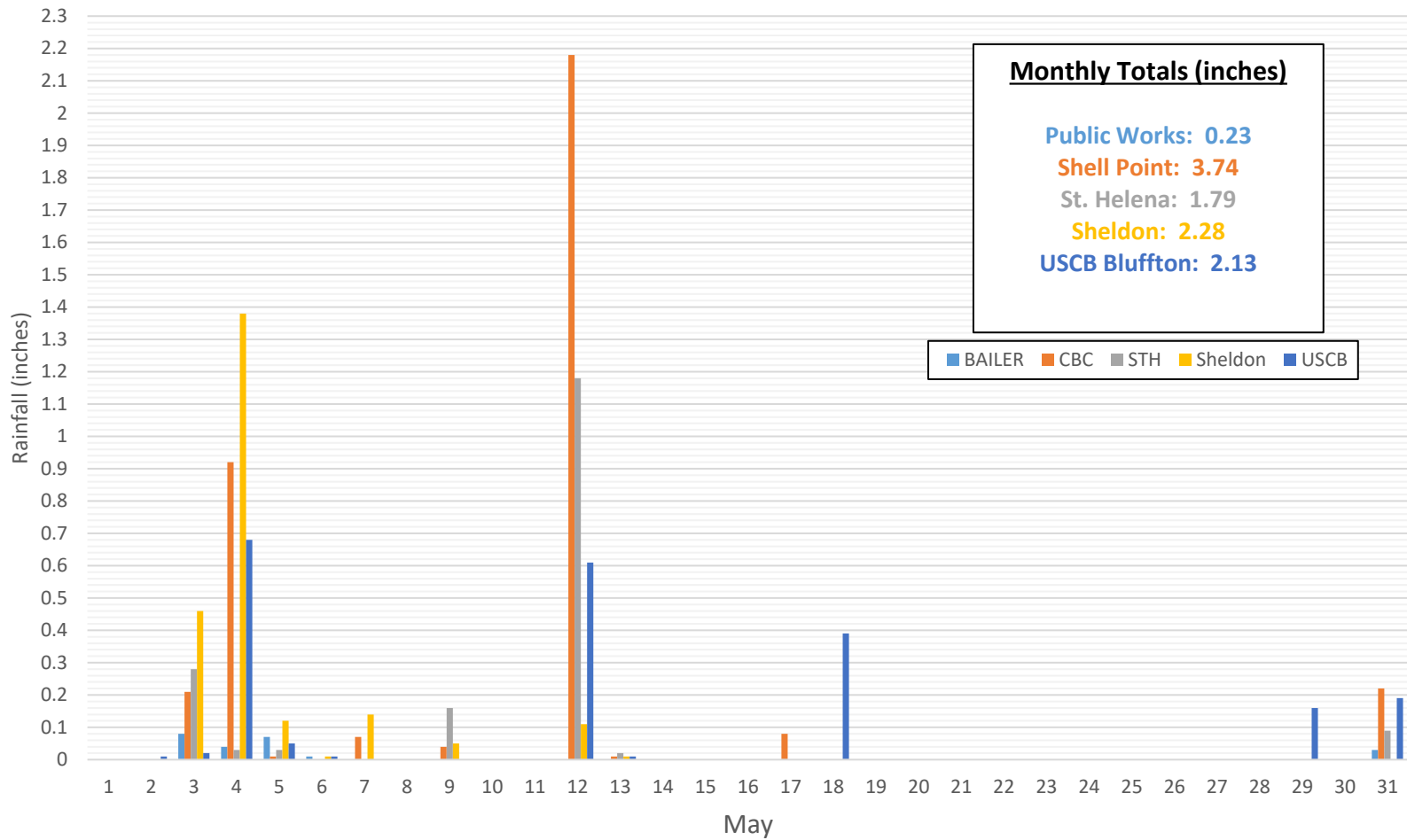
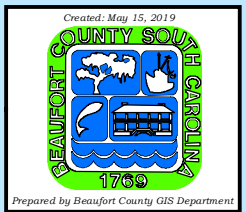
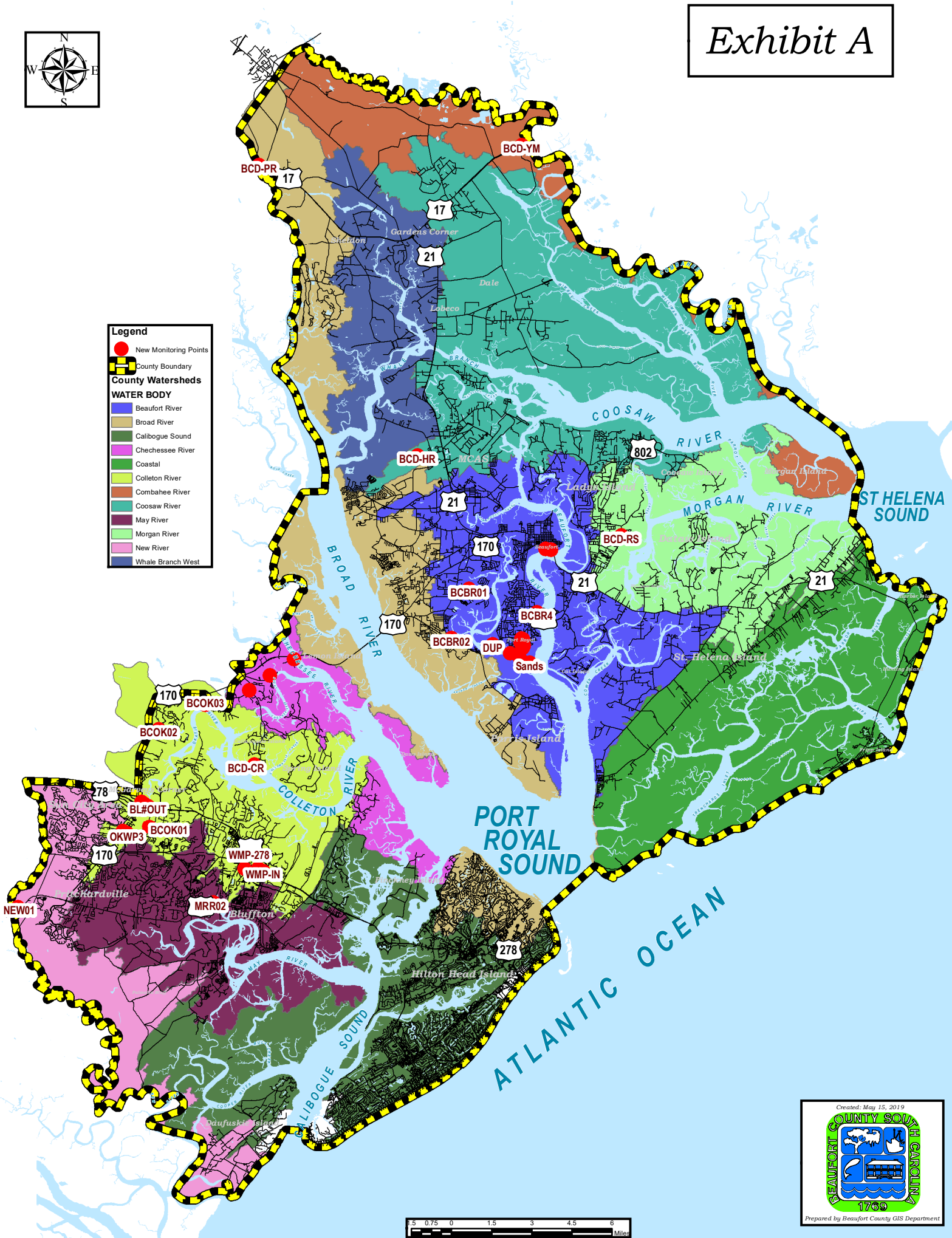




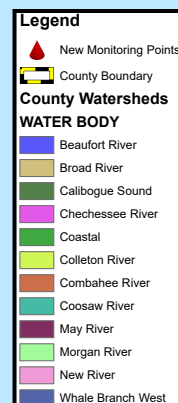
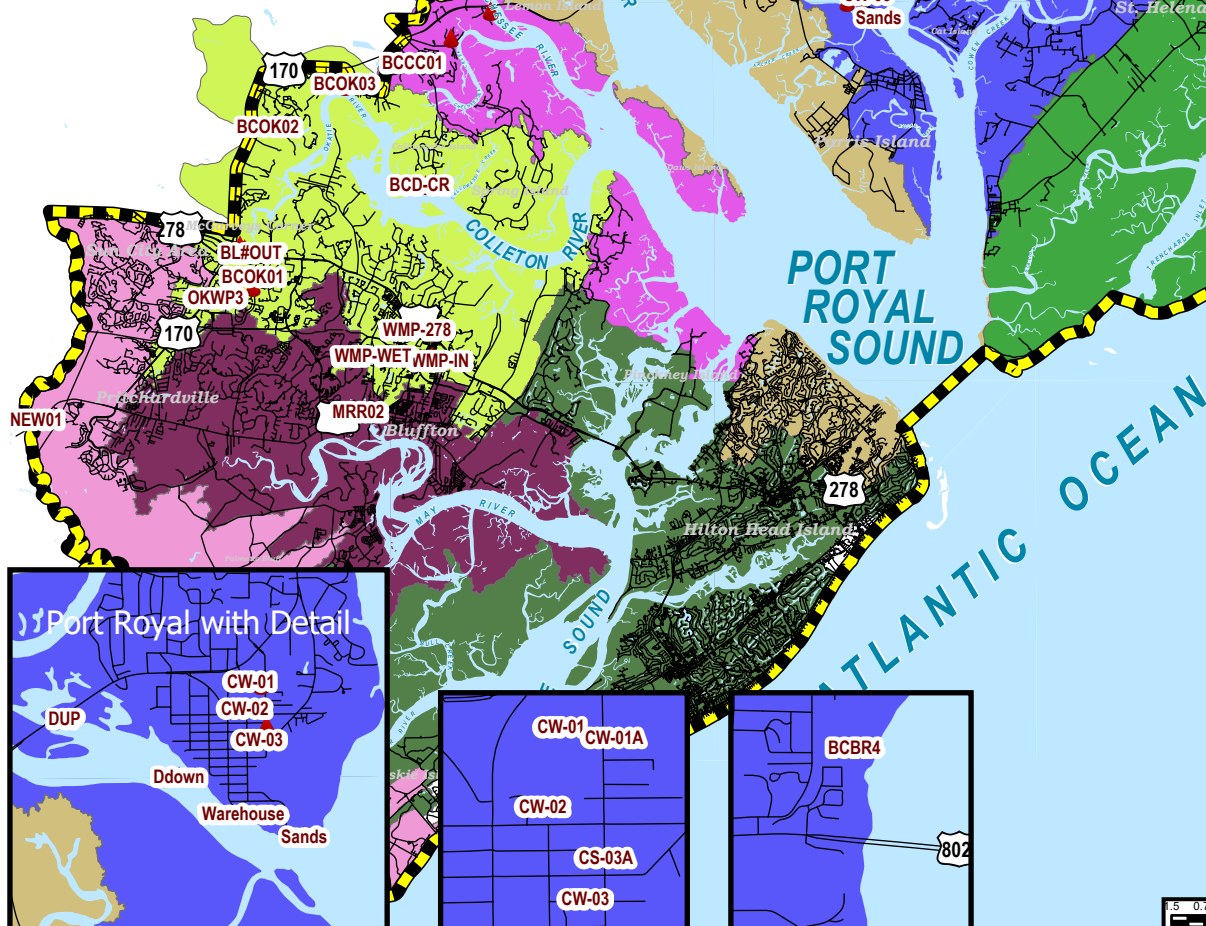
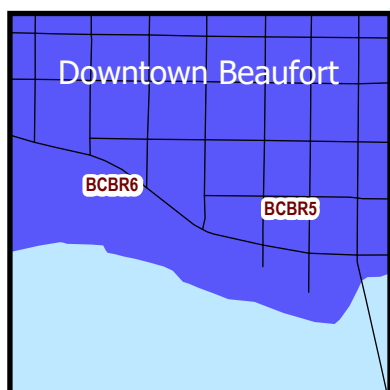


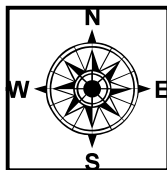
Exhibit A




Created: May 15, 2019  
Prepared by Beaufort County GIS Department







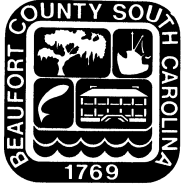
Created: May 15, 2019



1769

Prepared by Beaufort County GIS Department





## MEMORANDUM

Date: June 12, 2019

To: Stormwater Management Utility Board

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

Re: **Maintenance Project Report**

This report will cover two major projects and thirteen minor projects. The Project Summary Reports are attached.

### **Major Project:**

- **Beaufort County Government Center – City of Beaufort (SWUD 1):** This project improved 95 feet of drainage system. The scope of work consisted of constructing and cleaning out 95 feet of critical line, replacing 95 feet of channel pipe, installing 1 catch basin, 1 Bio Infiltrator system, rip rap, handseeding, hydroseeding for erosion control and repairing a sinkhole. The total cost was **\$53,787.28.**
- **Ulmer Road and Devonwood Drive – Bluffton (SWUD 4):** This project improved 2,332 feet of drainage system. The scope of work included grubbing and clearing 1,237 feet of workshelf, bush hogging 95 feet of roadside ditch, 212 feet of channel, cleaning out 1,402 feet of channel, installing 1 access pipe, jetting 1 crossline pipe, 1 driveway pipe and handseeding for erosion control. The total cost was **\$48,544.62.**

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

- **Bluffton Vacuum Truck – Bluffton (SWUD 4):** This project improved 759 feet of drainage system. The scope of work included cleaning out 38 catch basins, 20 feet of roadside ditch, jetting 15 crossline pipes, 2 driveway pipes and 739 feet of channel pipe. The total cost was **\$19,900.11.**
- **Port Royal Island Bush Hog – Port Royal Island (SWUD 6):** This project improved 31,873 feet of drainage system. The scope of work included bush hogging 31,873 feet of channel. The total cost was **\$16,015.24.**
- **Johnson Landing Road – Lady's Island (SWUD 7):** This project improved 240 feet drainage system. The scope of work included grubbing and clearing 240 feet of workshelf, cleaning out 180 feet of channel, installing 1 driveway pipe, 2 access pipes and rip rap for erosion control. The total cost was **\$14,212.68.**
- **Royal Pines Boulevard – Lady's Island (SWUD 7):** This project improved 75 feet of drainage system. The scope of work included replacing 75 feet of channel pipe, repairing a sinkhole and washout, installing rip rap, handseeding and hydroseeding for erosion control. The total cost was **\$13,069.55.**

- **Gumwood Drive – Lady’s Island (SWUD 7):** This project improved 260 feet of drainage system. The scope of work included grubbing and clearing 260 feet of workshelf and cleaning out 260 of channel. The total cost was **\$8,197.23.**
- **Salem Drive W – Port Royal Island (SWUD 6):** This project improved 740 feet of drainage system. The scope of work included cleaning out 740 feet of roadside ditch and jetting 1 crossline pipe. The total cost was **\$5,197.47.**
- **Poppy Hill Road – Port Royal Island (SWUD 6):** This project improved 1,160 feet of drainage system. The scope of work included cleaning out 1,160 feet of roadside ditch, jetting 13 driveway pipes and 1 crossline pipe. The total cost was **\$4,450.67.**
- **Windy Lakes Subdivision – Bluffton (SWUD 4):** This project improved 458 feet of drainage system. The scope of work included cleaning out 458 feet of roadside ditch, jetting 1 driveway pipe, 1 crossline pipe and hydroseeding for erosion control. The total cost was **\$4,207.96.**
- **Hamrick Drive – Port Royal Island (SWUD 6):** This project improved 40 feet of drainage system. The scope of work included installing 1 crossline pipe and rip rap for erosion control. The total cost was **\$4,030.98.**
- **Braeburn Lane – Lady’s Island (SWUD 7):** This project improved 2,793 feet of drainage system. The scope of work included bush hogging 2,029 feet of channel, cleaning out 664 feet of channel and 100 feet of roadside ditch. The total cost was **\$3,914.88.**
- **St Helena Island Vacuum Truck – St Helena Island (SWUD 8):** This project improved 172 feet of drainage system. The scope of work included cleaning out 4 catch basins, jetting 7 driveway pipes, 5 crossline pipes and 172 feet of roadside pipe. The total cost was **\$3,607.25.**
- **Landing Hill Road – St Helena Island (SWUD 8):** The scope of work included replacing a separated joint and repairing a washout. The total cost was **\$3,139.92.**
- **ToHHI Vacuum Truck – Hilton Head (SWUD 3):** This project improved 912 feet of drainage system. The scope of work included removing a blockage from flowline, cleaning out 3 basins, jetting 792 feet of roadside pipe, 2 crossline pipes and 120 feet of channel pipe. The total cost was **\$2,324.61.**



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

**Project Summary:** Beaufort County Government Center

**Activity:** Drainage Improvement

**Duration:** 08/14/18-11/15/18

**Narrative Description of Project:**

Project improved 95 L.F. of drainage system. Constructed and cleaned out 95 L.F. of critical line. Replaced 95 L.F. of channel pipe. Installed (1) catch basin, (1) bio infiltrator system, rip rap, handseeded and hydroseeded for erosion control. Repaired sinkhole.

**2018-564 / Beaufort County Government Center**

	<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>
ASI / Asphalt Installation	0.0	\$0.00	\$0.00	\$0.00	\$6,850.00	\$0.00	\$6,850.00
AUDIT / Audit Project	3.0	\$65.37	\$0.00	\$0.00	\$0.00	\$0.00	\$65.37
BKFILL / Back Fill	70.0	\$1,880.10	\$362.84	\$192.84	\$0.00	\$819.80	\$3,255.58
CBINS / Catch basin - installed	91.0	\$2,397.20	\$543.10	\$1,171.02	\$0.00	\$1,079.13	\$5,190.45
CBLRE / Catch Basin Lid - Reset	32.0	\$659.52	\$130.96	\$89.52	\$0.00	\$411.12	\$1,291.12
CPI / Channel Pipe - Installation	73.5	\$1,936.20	\$732.53	\$823.26	\$0.00	\$871.61	\$4,363.60
HAND / HANDSEEDED	9.0	\$185.94	\$11.52	\$65.72	\$0.00	\$116.01	\$379.19
HAUL / Hauling	192.5	\$4,312.16	\$3,447.21	\$6,724.56	\$0.00	\$2,004.88	\$16,488.80
HYDR / Hydroseeding	15.0	\$439.95	\$31.64	\$1,728.58	\$0.00	\$149.55	\$2,349.72
LM / Loading Materials	23.0	\$512.21	\$523.34	\$83.20	\$0.00	\$331.66	\$1,450.41
PP / Project Preparation	70.0	\$1,880.10	\$501.60	\$1,410.72	\$0.00	\$819.80	\$4,612.22
RDSW / Street/Road Sweep	8.0	\$154.24	\$213.36	\$44.20	\$0.00	\$0.00	\$411.80
SC / Sediment Control	8.0	\$175.78	\$57.42	\$18.20	\$0.00	\$112.32	\$363.72
SD / Soft Digging	14.0	\$311.92	\$268.24	\$85.50	\$0.00	\$200.76	\$866.42
SPSWI / Special Project - SWI	68.5	\$1,758.11	\$86.83	\$70.94	\$0.00	\$949.98	\$2,865.85
SR / Sinkhole repair	32.0	\$849.12	\$50.35	\$53.46	\$0.00	\$311.04	\$1,263.97
UTLOC / Utility locates	1.5	\$37.05	\$0.00	\$0.00	\$0.00	\$19.85	\$56.90
WSDR / Workshelf - Dressed	40.0	\$866.90	\$136.03	\$107.85	\$0.00	\$551.40	\$1,662.18
2018-564 / Beaufort County Government Center Sub Total	751.0	\$18,421.87	\$7,096.97	\$12,669.56	\$6,850.00	\$8,748.89	\$53,787.28
<b>Grand Total</b>	<b>751.0</b>	<b>\$18,421.87</b>	<b>\$7,096.97</b>	<b>\$12,669.56</b>	<b>\$6,850.00</b>	<b>\$8,748.89</b>	<b>\$53,787.28</b>

**Before**



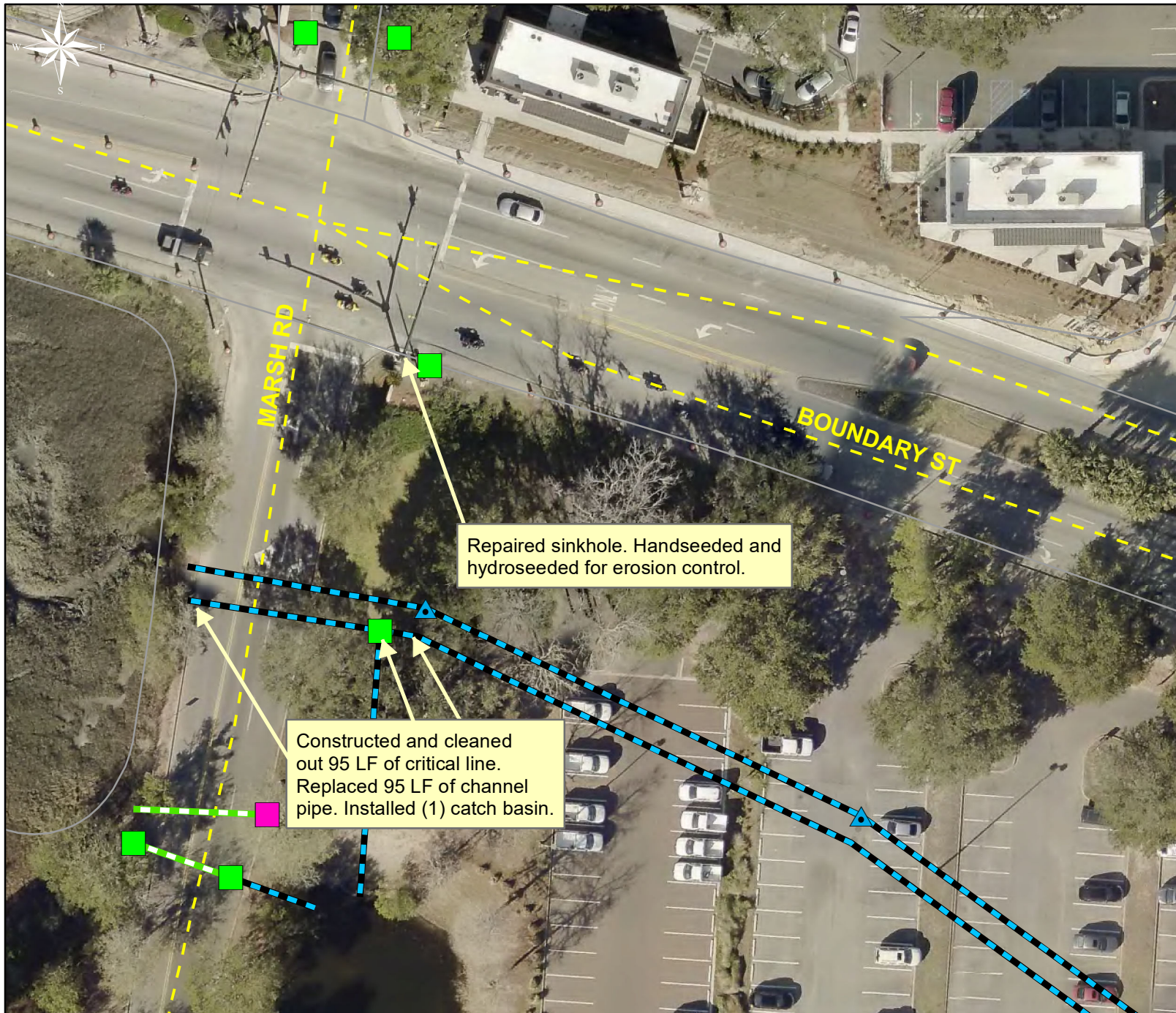
**During**



**After**







Project: Beaufort  
County  
Government  
Center Map #1

Activity: Drainage  
Improvement

Project #:  
2018-564

Township/SW Dist:  
City Of Beaufort/1

Completed:  
November 2018

0 10 20 40 60 80  
Feet

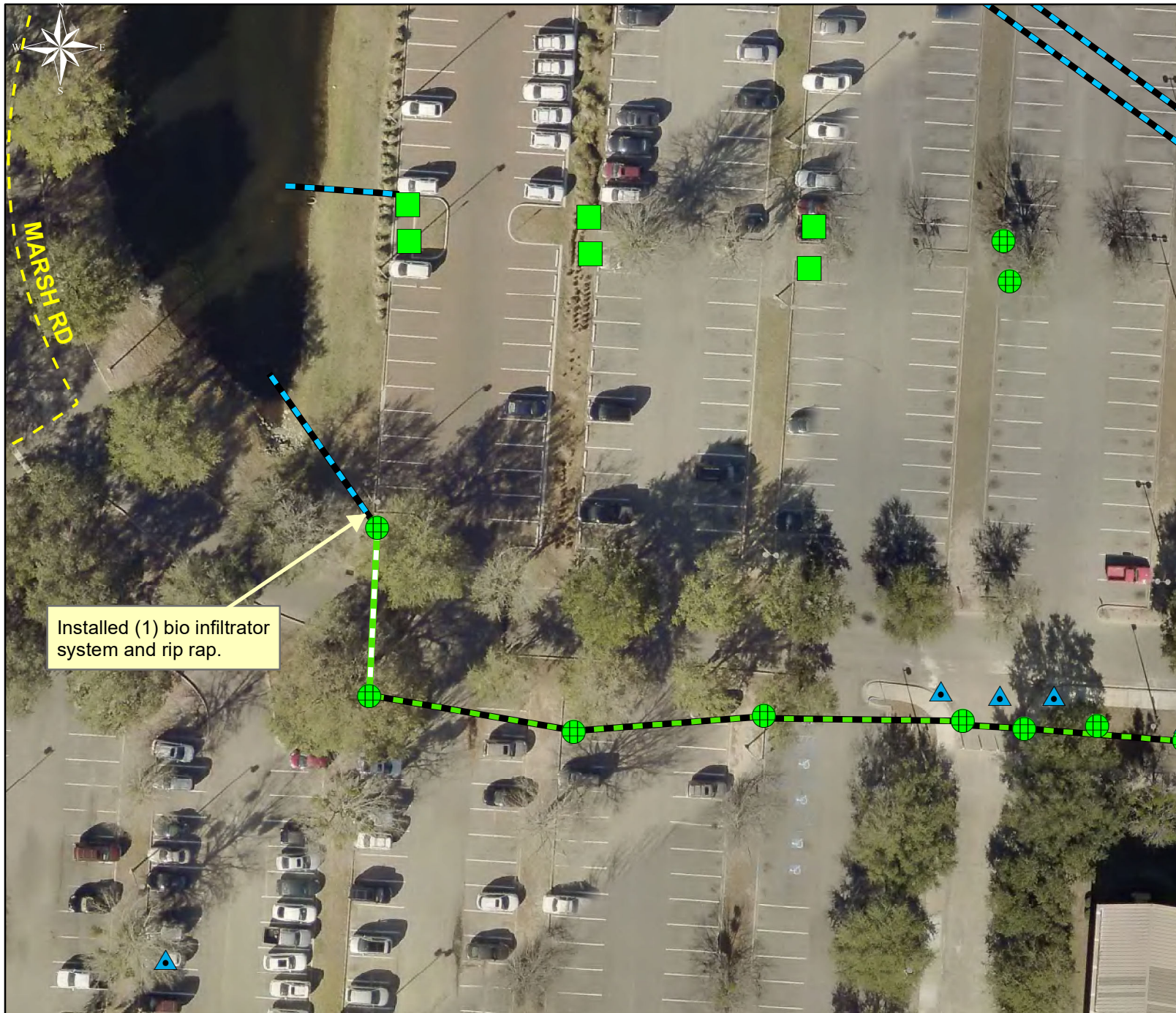
1 inch = 50 feet

Prepared By: BC Stormwater Management Utility

Date Print: 05/09/19

File: C:\project summaries map\Beaufort County Government Center Map #1\_2018-564





Project: Beaufort  
County  
Government  
Center Map #2

Activity: Drainage  
Improvement

Project #:  
2018-564

Township/SW Dist:  
City Of Beaufort/1

Completed:  
November 2018

### Legend

#### Drainage Type

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

0 10 20 40 60 80  
Feet

1 inch = 50 feet

Prepared By: BC Stormwater Management Utility

Date Print: 05/09/19

File: C:\project summaries map\Beaufort County Government Center Map #2\_2018-564



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

**Project Summary:** Ulmer Road and Devonwood Drive

**Activity:** Drainage Improvement

**Duration:** 08/06/18-11/21/18

**Narrative Description of Project:**

Project improved 2,332 L.F. of drainage system. Grubbed and cleared 1,237 L.F. of workshelf. Bush hogged 95 L.F. of roadside ditch and 212 L.F. of channel. Cleaned out 1,402 L.F. of channel. Installed (1) access pipe. Jetted (1) crossline pipe and (1) driveway pipe. Handseeded for erosion control.

<b>2019-513 / Ulmer Road &amp; Devonwood Drive</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>
APINS / Access pipe - installed	80.0	\$2,188.10	\$304.89	\$340.95	\$0.00	\$932.00	\$3,765.94
APREM / Access pipe- removed	25.0	\$650.60	\$19.20	\$13.00	\$0.00	\$281.85	\$964.65
AUDIT / Audit Project	1.5	\$32.69	\$0.00	\$0.00	\$0.00	\$0.00	\$32.69
CBH / Channel- bushhogged	15.0	\$322.08	\$266.86	\$92.06	\$0.00	\$205.25	\$886.25
CCO / Channel - cleaned out	140.0	\$4,188.55	\$745.40	\$210.84	\$0.00	\$1,843.10	\$6,987.89
DPJT / Driveway Pipe - Jetted	4.0	\$89.12	\$76.64	\$18.10	\$0.00	\$57.36	\$241.22
HAND / HANDSEEDDED	12.0	\$369.36	\$15.36	\$140.00	\$0.00	\$111.44	\$636.16
HAUL / Hauling	154.0	\$3,366.48	\$2,222.52	\$1,859.58	\$0.00	\$1,473.42	\$8,921.99
LM / Loading Materials	40.0	\$842.40	\$189.78	\$66.82	\$0.00	\$529.20	\$1,628.20
ONJV / Onsite Job Visit	9.0	\$189.60	\$10.80	\$27.82	\$0.00	\$119.58	\$347.80
PL / Project Layout	28.0	\$564.48	\$55.51	\$21.40	\$0.00	\$263.55	\$904.94
PS / Push up soil	6.0	\$122.76	\$39.43	\$58.26	\$0.00	\$76.32	\$296.77
STBY / Stand By	20.0	\$440.60	\$283.20	\$65.00	\$0.00	\$144.20	\$933.00
UTLOC / Utility locates	3.5	\$120.95	\$3.60	\$4.28	\$0.00	\$49.76	\$178.59
WSGRB / Workshelf - Grubbed	348.0	\$9,424.80	\$5,426.73	\$1,414.16	\$0.00	\$4,655.02	\$20,920.71
WSL / Workshelf - Level	20.0	\$397.20	\$200.80	\$55.64	\$0.00	\$244.20	\$897.84
2019-513 / Ulmer Road & Devonwood Drive Sub Total	906.0	\$23,309.76	\$9,860.72	\$4,387.90	\$0.00	\$10,986.24	\$48,544.62
<b>Grand Total</b>	<b>906.0</b>	<b>\$23,309.76</b>	<b>\$9,860.72</b>	<b>\$4,387.90</b>	<b>\$0.00</b>	<b>\$10,986.24</b>	<b>\$48,544.62</b>

**During**

**After**

(No Picture Available)







Project: Ulmer  
Road and  
Devonwood  
Drive Map #1

Activity: Routine/  
Preventive  
Maintenance














Project #:  
2019-513

Township/SW Dist:  
Bluffton/4

Completed:  
November 2018

### 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

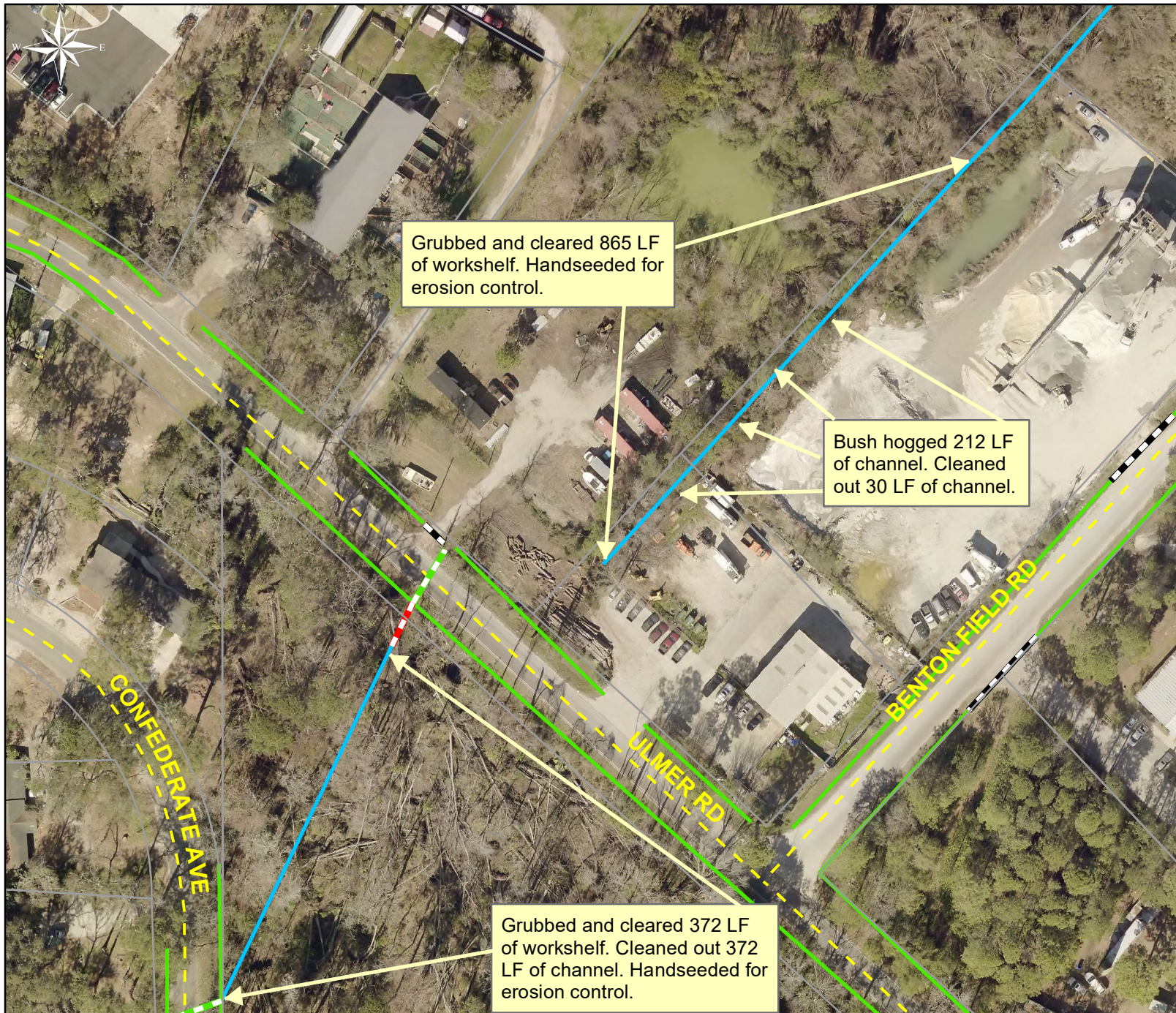
1 inch = 130 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/08/19

File: C:\project summaries map\Ulmer Road and Devonwood Drive Map #1\_2019-513





Project: Ulmer  
Road and  
Devonwood  
Drive Map #2

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-513

Township/SW Dist:  
Bluffton/4

Completed:  
November 2018

### 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: 03/08/19

File: C:\project summaries map\Ulmer Road and Devonwood Drive Map #2 2019-513





Project: Ulmer Road and Devonwood Drive Map #3

Activity: Routine/ Preventive Maintenance

Project #: 2019-513

Township/SW Dist: Bluffton/4

Completed: November 2018

### 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: 03/08/19

File: C:\project summaries map\Ulmer Road and Devonwood Drive Map #3\_2019-513





Project: Ulmer  
Road and  
Devonwood  
Drive Map #4

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-513

Township/SW Dist:  
Bluffton/4

Completed:  
November 2018

### 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: 03/08/19

File: C:\project summaries map\Ulmer Road and Devonwood Drive Map #4\_2019-513





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

**Project Summary:** Bluffton Vacuum Truck

Lake Linden Drive, Bluffton Parkway, Oyster Street, Palmetto Beach Lane,  
 Fording Island Road Extension, Sandy Pointe Drive, W Morningside Drive,  
 Skylark Drive, Sunny Glen Drive, E Morningside Drive, Thomas Lawton Drive,  
 Sailors Choice, Allendale Street

**Activity:** Routine/Preventive Maintenance

**Duration:** 07/12/18-12/06/18

**Narrative Description of Project:**

Project improved 759 L.F. of drainage system. Cleaned out (38) catch basins and 20 L.F. of roadside ditch. Jetted (15) crossline pipes, (2) driveway pipes and 739 L.F. of channel pipe.

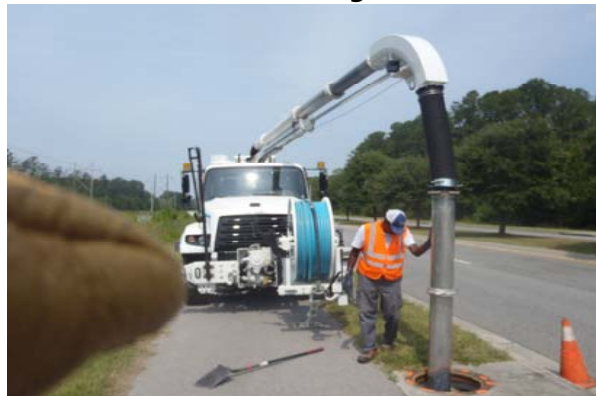
**2019-310 / Bluffton Vacuum Truck**

	<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	1.5	\$32.69	\$0.00	\$0.00	\$0.00	\$0.00	\$32.69
CBCO / Catch basin - clean out	240.0	\$5,278.26	\$4,064.48	\$952.09	\$0.00	\$2,998.02	\$13,292.85
CLPJT / Crossline Pipe - Jetted	30.0	\$674.40	\$574.80	\$123.78	\$0.00	\$435.30	\$1,808.28
CPJ / Channel Pipe - Jetted	10.0	\$222.80	\$191.60	\$46.60	\$0.00	\$143.40	\$604.40
DPJT / Driveway Pipe - Jetted	44.0	\$980.32	\$843.04	\$188.98	\$0.00	\$630.96	\$2,643.30
RSPJ / Roadside Pipe - Jetted	20.0	\$445.60	\$383.20	\$53.68	\$0.00	\$286.80	\$1,169.28
SITEINSP / Site Inspection	6.0	\$133.68	\$114.96	\$14.64	\$0.00	\$86.04	\$349.32
2019-310 / Bluffton Vacuum Truck Sub Total	351.5	\$7,767.75	\$6,172.08	\$1,379.77	\$0.00	\$4,580.52	\$19,900.11
<b>Grand Total</b>	<b>351.5</b>	<b>\$7,767.75</b>	<b>\$6,172.08</b>	<b>\$1,379.77</b>	<b>\$0.00</b>	<b>\$4,580.52</b>	<b>\$19,900.11</b>

**Before**



**During**



**After**







Project: Bluffton  
Vacuum Truck-  
Lake Linden Drive  
Map #1

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-310

Township/SW Dist:  
Bluffton/4

Completed:  
December 2018

### 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

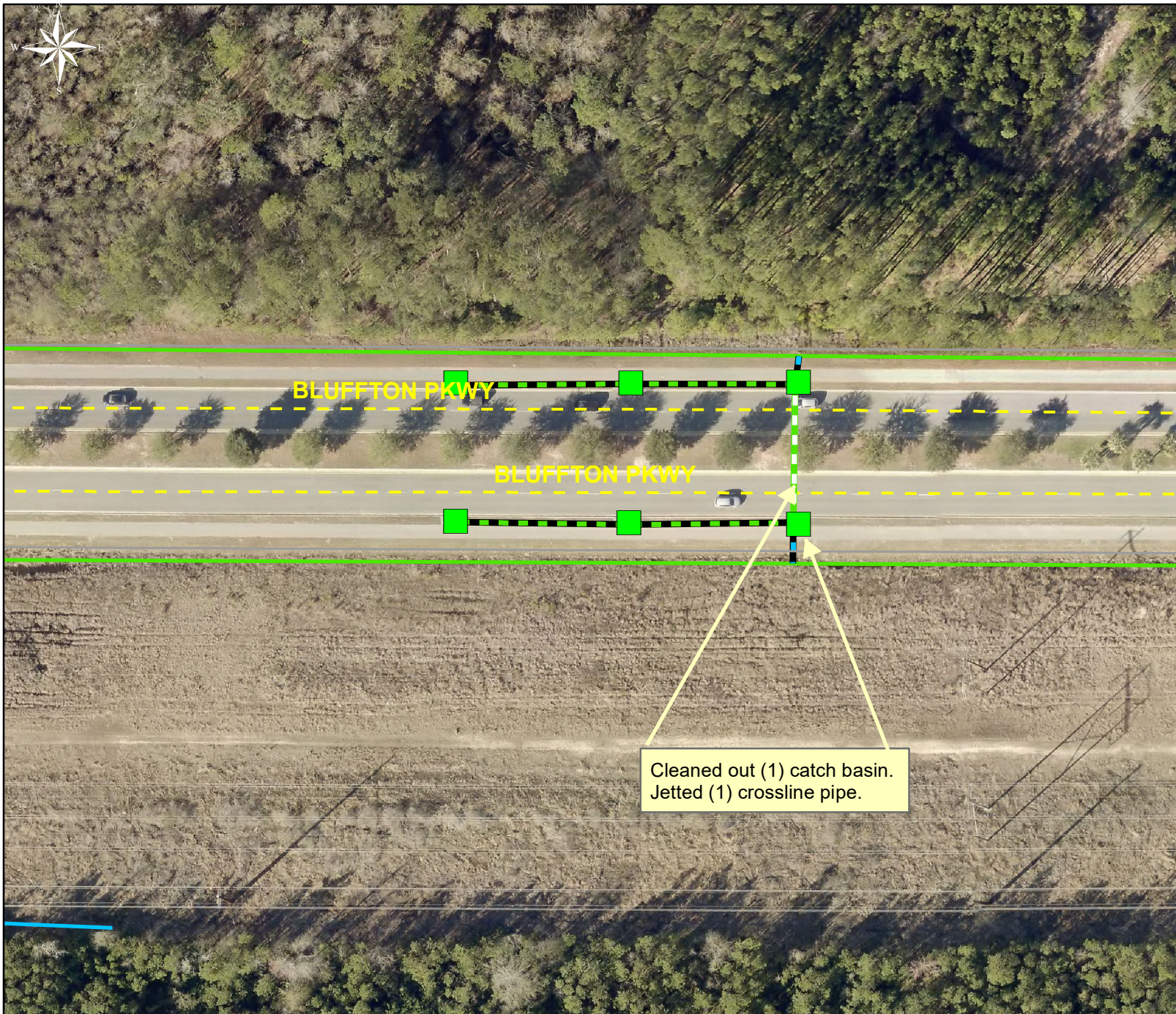
1 inch = 170 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/12/19

File: C:\project summaries map\Bluffton Vacuum Truck-Lake Linden Drive Map #1\_2019-310





Project: Bluffton  
Vacuum Truck-  
Bluffton Parkway  
Map #2

Activity: Routine/  
Preventive  
Maintenance














Project #:  
2019-310

Township/SW Dist:  
Bluffton/4

Completed:  
December 2018

### 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: 03/13/19

File: C:\project summaries map\Bluffton Vacuum Truck-Bluffton Parkway Map #2\_2019-310





Project: Bluffton  
Vacuum Truck-  
Oyster Street  
Map #3

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-310

Township/SW Dist:  
Bluffton/4

Completed:  
December 2018

### 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: 03/13/19

File: C:\project summaries map\Bluffton Vacuum Truck-Oyster Street Map #3\_2019-310









Project: Bluffton  
Vacuum Truck-  
Fording Island  
Road Ext. Map #5

Activity: Routine/  
Preventive  
Maintenance














Project #:  
2019-310

Township/SW Dist:  
Bluffton/4

Completed:  
December 2018

### 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

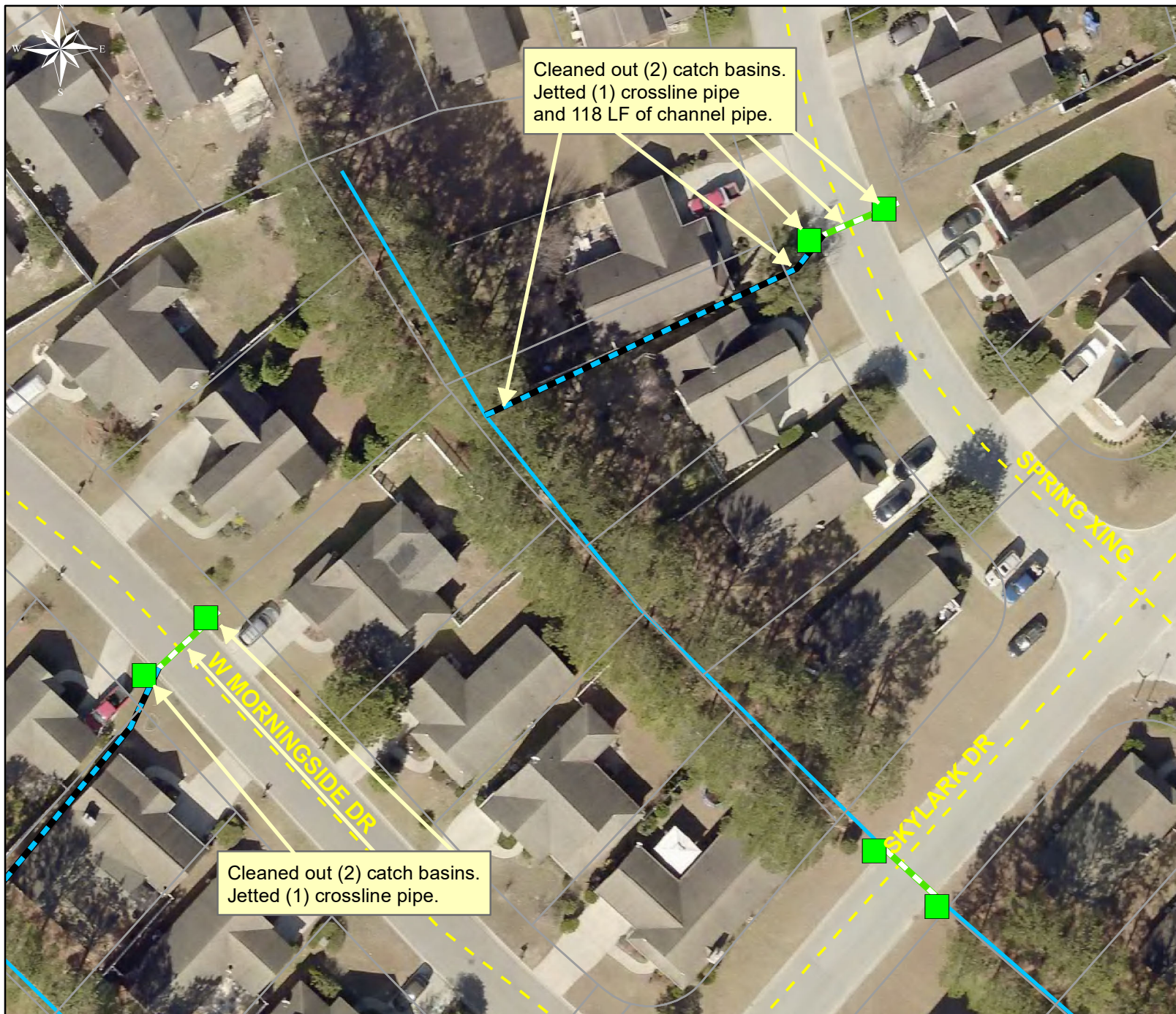
1 inch = 67 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/13/19

File: C:\project summaries map\Bluffton Vacuum Truck-Fording Island Road Ext. Map #5\_2019-310





Project: Bluffton  
Vacuum Truck-  
Map #6 Sandy  
Pointe Drive & W  
Morningside Drive

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-310

Township/SW Dist:  
Bluffton/4

Completed:  
December 2018

### Legend

#### Drainage Type

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

0 10 20 40 60 80  
Feet 1 inch = 50 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/13/19

File: C:\project summaries map\Bluffton Vacuum Truck Sandy Pointe Dr & W Morningside Dr Map #6\_2019-310





Project: Bluffton  
Vacuum Truck-  
Map #7 Skylark  
Drive

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-310

Township/SW Dist:  
Bluffton/4

Completed:  
December 2018

### Legend

#### Drainage Type

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

0 5 10 20 30 40  
Feet

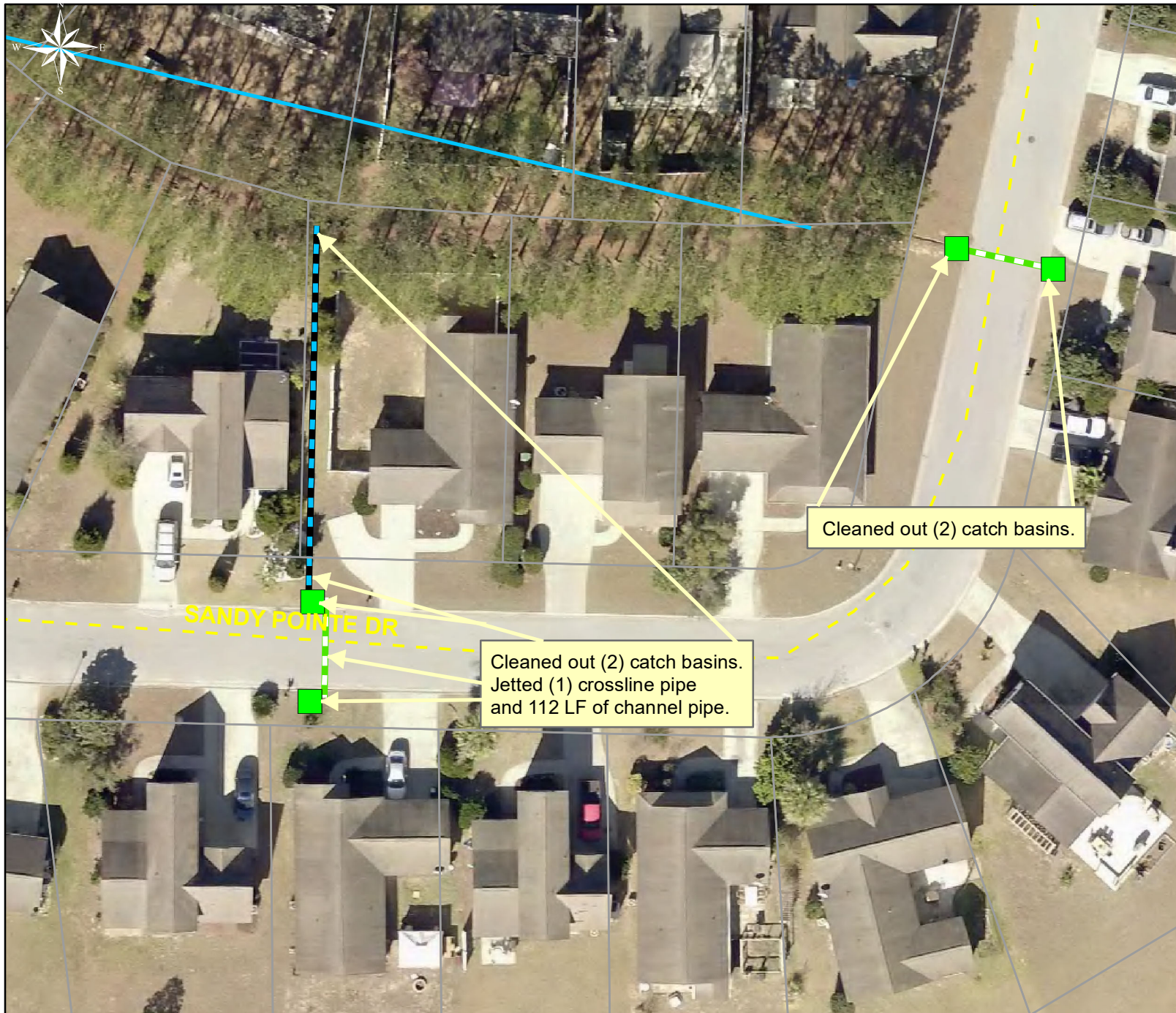
1 inch = 33 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/13/19

File: C:\project summaries map\Bluffton Vacuum Truck Skylark Drive Map #7\_2019-310





Project: Bluffton  
Vacuum Truck-  
Map #8 Sandy  
Pointe Drive

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-310

Township/SW Dist:  
Bluffton/4

Completed:  
December 2018

### 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

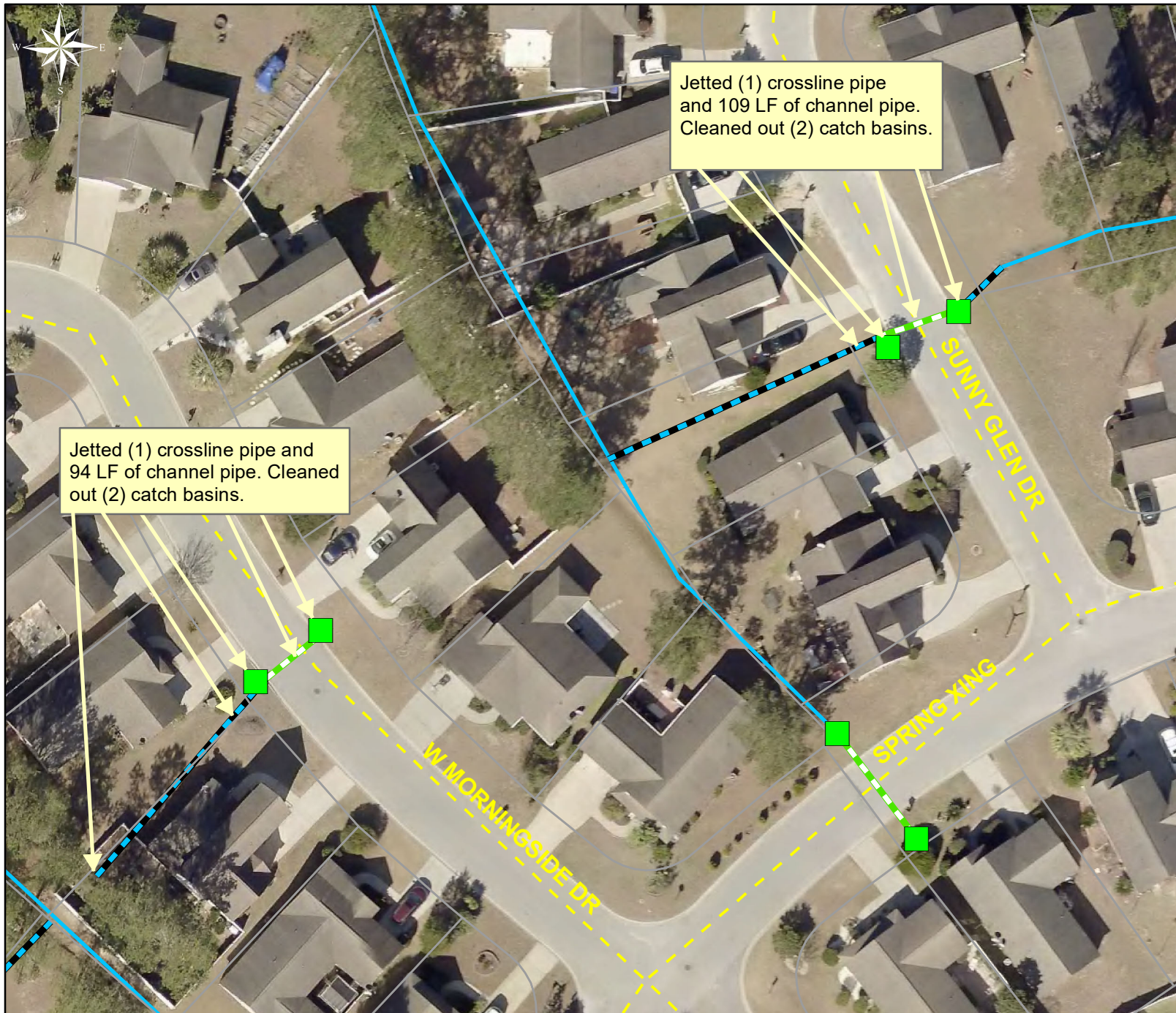
1 inch = 42 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/13/19

File: C:\project summaries map\Bluffton Vacuum Truck Sandy Pointe Drive Map #8\_2019-310





Project: Bluffton  
Vacuum Truck-  
Map #9 Sunny  
Glen Drive & W  
Morningside Drive

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-310

Township/SW Dist:  
Bluffton/4

Completed:  
December 2018

### Legend

#### Drainage Type

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

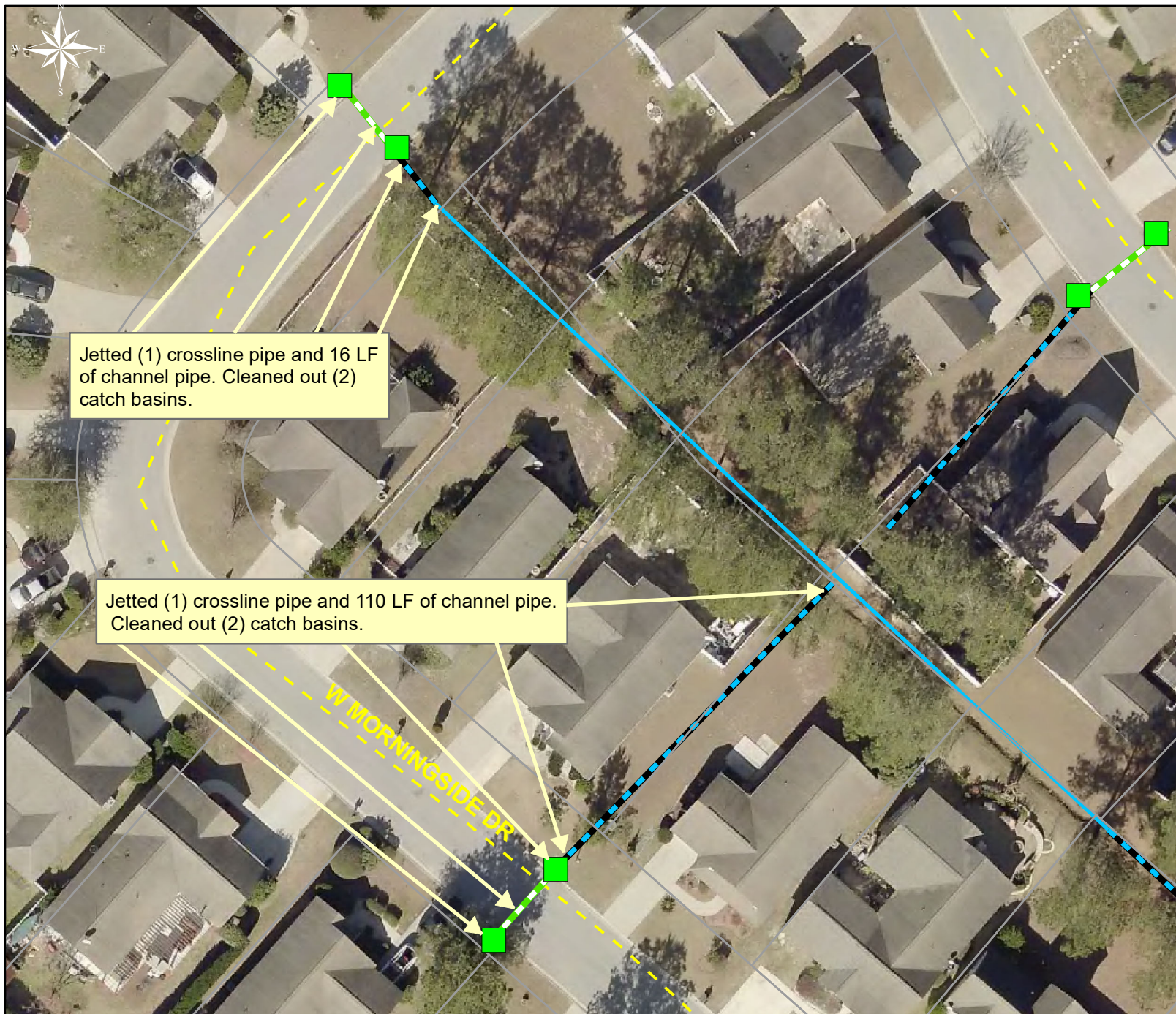
0 10 20 40 60 80  
Feet 1 inch = 50 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/13/19

File: C:\project summaries map\Bluffton Vacuum Truck- Sunny Glen Dr & W. Morningside Dr Map #9\_2019-310





Project: Bluffton  
Vacuum Truck-  
Map #10 W  
Morningside Drive

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-310

Township/SW Dist:  
Bluffton/4

Completed:  
December 2018

### 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: 03/13/19

File: C:\project summaries map\Bluffton Vacuum Truck- W Morningside Drive Map #10\_2019-310





Project: Bluffton  
Vacuum Truck-  
Map #11 Sunny  
Glen Drive

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-310

Township/SW Dist:  
Bluffton/4

Completed:  
December 2018

### Legend

#### Drainage Type

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

0 10 20 40 60 80  
Feet

1 inch = 50 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/13/19

File: C:\project summaries map\Bluffton Vacuum Truck- Sunny Glen Drive Map #11\_2019-310





Project: Bluffton  
Vacuum Truck-  
Map #12 E  
Morningside Drive

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-310

Township/SW Dist:  
Bluffton/4

Completed:  
December 2018

### Legend

#### Drainage Type

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

0 10 20 40 60 80  
Feet

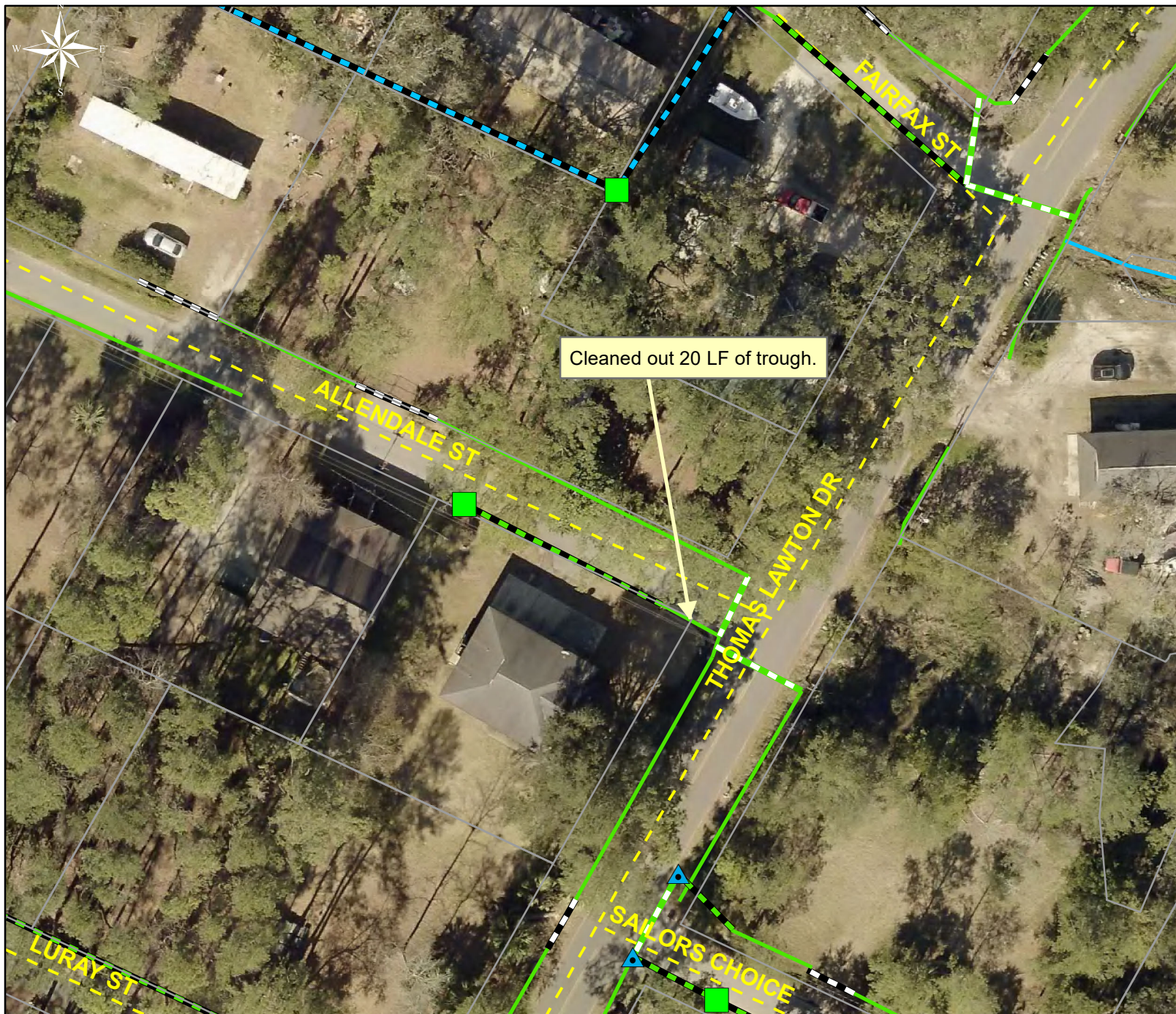
1 inch = 50 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/13/19

File: C:\project summaries map\Bluffton Vacuum Truck- E Morningside Drive Map #12\_2019-310





Project: Bluffton  
Vacuum Truck-  
Thomas Lawton  
Drive Map #13

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-310

Township/SW Dist:  
Bluffton/4

Completed:  
December 2018

### Legend

#### Drainage Type

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

0 10 20 40 60 80  
Feet

1 inch = 50 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/19/19

File: C:\project summaries map\Bluffton Vacuum Truck-Thomas Lawton Dr Map #13\_2019-310





Project: Bluffton  
Vacuum Truck-  
Sailors Choice  
Map #14

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-310

Township/SW Dist:  
Bluffton/4

Completed:  
December 2018

### Legend

#### Drainage Type

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

0 10 20 40 60 80  
Feet

1 inch = 50 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 03/19/19  
File: C:\project summaries map\Bluffton Vacuum Truck-Sailors Choice Map #14\_2019-310



Project: Bluffton  
Vacuum Truck-  
Bluffton Parkway  
Map #15

Activity: Routine/  
Preventive  
Maintenance














Project #:  
2019-310

Township/SW Dist:  
Bluffton/4

Completed:  
December 2018

### Legend

#### Drainage Type

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



0 60 120 240 360 480  
Feet

1 inch = 250 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/19/19

File: C:\project summaries map\Bluffton Vacuum Truck- Bluffton Parkway Map #15 2019-310





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

**Project Summary:** Port Royal Island Bush Hog

**Activity:** Routine/Preventive Maintenance

**Duration:** 01/07/19-03/13/19

**Narrative Description of Project:**

Second Rotation: 01/07/19-03/13/19 Project improved 31,873 L.F. of drainage system. Bush hogged 31,873 L.F. of channel. This project consisted of the following areas: Chisholm Hill Road (3,329 L.F.), Gillison Loop (291 L.F.), Young Circle (307 L.F.), Twelve Oaks Road (1,100 L.F.), LH Nelson Drive (2,149 L.F.), Wimbee Landing Road (703 L.F.), Hale Drive (5,053 L.F.), St Pauls Church Road (6,089 L.F.), Mink Point Boulevard (1,210 L.F.), Goethe Hill Road (1,402 L.F.), Munch Drive (1,298 L.F.), Burton Wells Road (1,124 L.F.), Shanklin Road (1,767 L.F.) and Powell Drive (5,331 L.F.)

**2019-301A / Port Royal Island Bush Hog**

	<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	\$21.79	\$0.00	\$0.00	\$0.00	\$0.00	\$21.79
CBH / Channel- bushhogged	362.0	\$7,509.58	\$4,310.50	\$926.07	\$0.00	\$3,247.30	\$15,993.45
2019-301A / Port Royal Island Bush Hog Sub Total	363.0	\$7,531.37	\$4,310.50	\$926.07	\$0.00	\$3,247.30	\$16,015.24
<b>Grand Total</b>	<b>363.0</b>	<b>\$7,531.37</b>	<b>\$4,310.50</b>	<b>\$926.07</b>	<b>\$0.00</b>	<b>\$3,247.30</b>	<b>\$16,015.24</b>

**Before**



**During**



**After**





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

**Project Summary:** Johnson Landing Road

**Activity:** Routine/Preventive Maintenance

**Duration:** 06/13/18-07/17/18

**Narrative Description of Project:**

Project improved 240 L.F. of drainage system. Grubbed and cleared 240 L.F. of workshelf. Cleaned out 180 L.F. of channel. Installed (1) driveway pipe, (2) access pipes and rip rap for erosion control.

2018-621 / Johnson Landing Road	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
APINS / Access pipe - installed	60.0	\$1,443.20	\$342.13	\$1,293.06	\$0.00	\$821.80	\$3,900.19
AUDIT / Audit Project	1.0	\$21.79	\$0.00	\$0.00	\$0.00	\$0.00	\$21.79
CCO / Channel - cleaned out	38.0	\$879.00	\$137.48	\$158.35	\$0.00	\$410.90	\$1,585.73
WSGRB / Workshelf -Grubbed	40.0	\$920.20	\$137.48	\$27.04	\$0.00	\$533.00	\$1,617.72
DPINS / Driveway Pipe - Installed	16.0	\$346.76	\$64.56	\$372.42	\$0.00	\$171.72	\$955.46
HAUL / Hauling	76.0	\$1,684.96	\$1,033.50	\$1,895.42	\$0.00	\$659.40	\$5,273.28
PP / Project Preparation	12.0	\$288.64	\$72.00	\$42.65	\$0.00	\$164.36	\$567.65
TC / Traffic Control - Jobsite	6.0	\$129.80	\$7.68	\$18.72	\$0.00	\$77.76	\$233.96
UTLOC / Utility locates	1.5	\$37.05	\$0.00	\$0.00	\$0.00	\$19.85	\$56.90
2018-621 / Johnson Landing Road Sub Total	250.5	\$5,751.40	\$1,794.83	\$3,807.66	\$0.00	\$2,858.79	\$14,212.68
<b>Grand Total</b>	<b>250.5</b>	<b>\$5,751.40</b>	<b>\$1,794.83</b>	<b>\$3,807.66</b>	<b>\$0.00</b>	<b>\$2,858.79</b>	<b>\$14,212.68</b>

**Before**



**During**



**After**





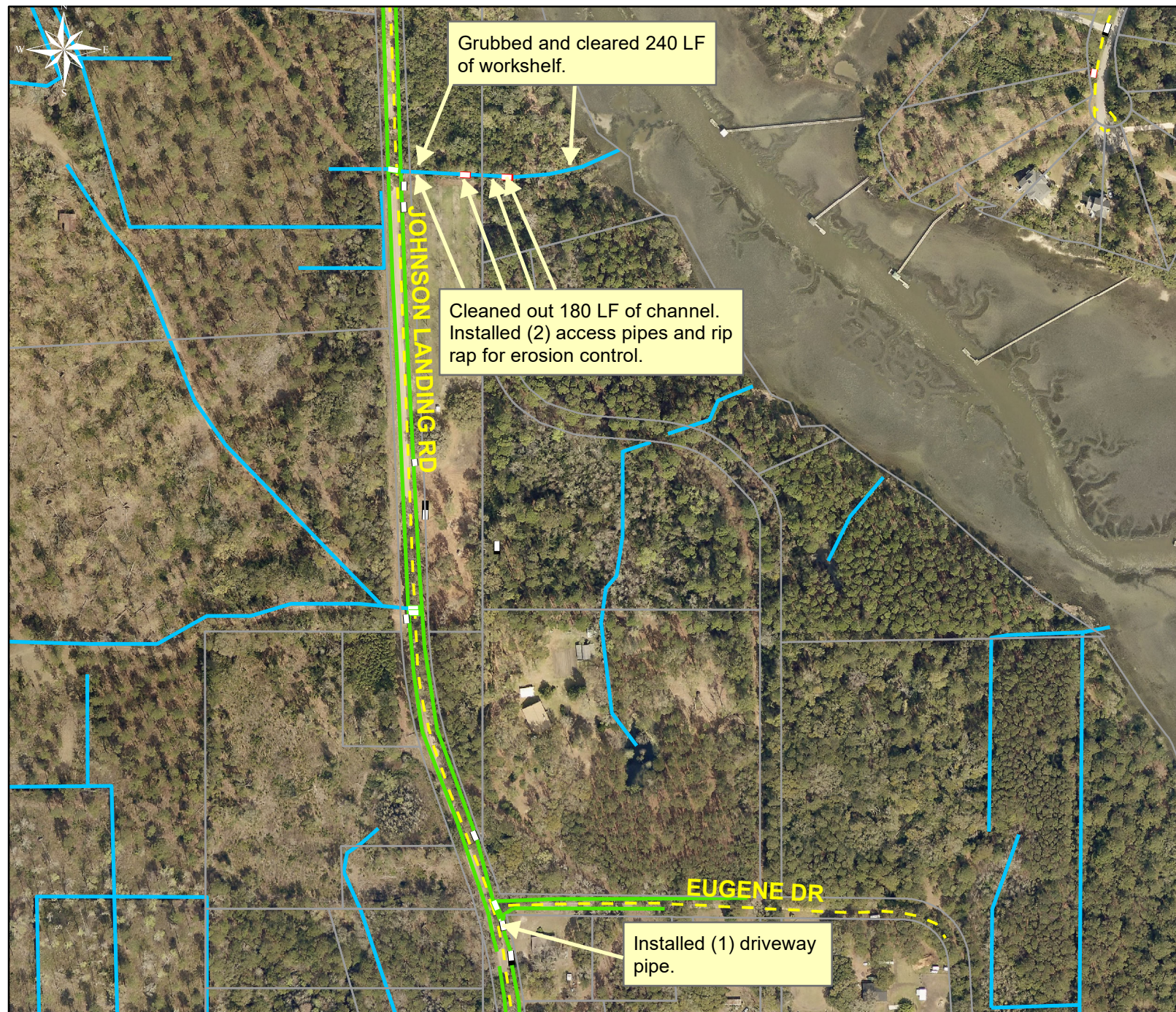
Project: Johnson  
Landing Road

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2018-621

Township/SW Dist:  
Lady's Island/7

Completed:  
July 2018



### Legend

#### Drainage Type

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

0 80 160 320 480 640  
Feet

1 inch = 330 feet

Prepared By: BC Stormwater Management Utility

Date Print: 04/02/19

File: C:\project summaries map\Johnson Landing Road\_2018-621





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

**Project Summary:** Royal Pines Boulevard

**Activity:** Routine/Preventive Maintenance

**Duration:** 05/30/17-07/05/17

**Narrative Description of Project:**

Project improved 75 L.F. of drainage system. Replaced 75 L.F. of channel pipe. Repaired a sinkhole and washout. Installed rip rap, handseeded and hydroseeded for erosion control.

2017-009 / Royal Pines Blvd	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AUDIT / Audit Project	2.0	\$44.43	\$0.00	\$0.00	\$0.00	\$6.62	\$51.05
CPRP / Channel Pipe - Replaced	60.0	\$1,353.40	\$431.25	\$1,363.53	\$0.00	\$807.80	\$3,955.98
HAUL / Hauling	70.0	\$1,540.15	\$559.86	\$1,410.98	\$0.00	\$823.62	\$4,334.61
HYDR / Hydroseeding	8.0	\$163.68	\$26.60	\$109.44	\$0.00	\$101.76	\$401.48
ONJV / Onsite Job Visit	4.0	\$109.52	\$14.40	\$6.96	\$0.00	\$74.88	\$205.76
RPWO / Repaired Washout	30.0	\$656.30	\$94.89	\$27.00	\$0.00	\$419.10	\$1,197.29
RRI / Rip Rap - Installed	30.0	\$687.24	\$160.49	\$495.92	\$0.00	\$406.56	\$1,750.21
SR / Sinkhole repair	4.0	\$91.54	\$46.46	\$9.00	\$0.00	\$59.40	\$206.40
STAGING / Staging Materials/Equipment	9.0	\$182.34	\$10.62	\$7.20	\$0.00	\$76.32	\$276.48
UTLOC / Utility locates	20.0	\$409.20	\$17.70	\$9.00	\$0.00	\$254.40	\$690.30
2017-009 / Royal Pines Blvd Sub Total	237.0	\$5,237.80	\$1,362.27	\$3,439.03	\$0.00	\$3,030.45	\$13,069.55
<b>Grand Total</b>	<b>237.0</b>	<b>\$5,237.80</b>	<b>\$1,362.27</b>	<b>\$3,439.03</b>	<b>\$0.00</b>	<b>\$3,030.45</b>	<b>\$13,069.55</b>
<b>Before</b>			<b>During</b>				<b>After</b>







Project: Royal Pines Blvd Map #1

Activity: Routine Preventive Maintenance

Project #: 2017-009

Township/SW Dist: Lady's Island/7

Completed: July 2017

### Legend

#### Drainage Type

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

0 80 160 320 480 640  
Feet

1 inch = 330 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/11/19

File: C:\project summaries map\Royal Pines Blvd Map #1\_2017-009





Project: Royal  
Pines Blvd Map #2

Activity: Routine  
Preventive  
Maintenance














Project #:  
2017-009

Township/SW Dist:  
Lady's Island/7

Completed:  
July 2017

#### Legend

##### Drainage Type

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

0 60 120 240 360 480  
Feet

1 inch = 250 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/11/19

File: C:\project summaries map\Royal Pines Blvd Map #2\_2017-009





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

**Project Summary:** Gumwood Drive

**Activity:** Routine/Preventive Maintenance

**Duration:** 01/03/19-03/11/19

**Narrative Description of Project:**

Project improved 260 L.F. of drainage system. Grubbed and cleared 260 L.F. of workshelf. Cleaned out 260 L.F. of channel.

<b>2019-540 / Gumwood Drive</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	1.5	\$32.69	\$0.00	\$0.00	\$0.00	\$0.00	\$32.69
CCO / Channel - cleaned out	40.0	\$830.40	\$133.91	\$15.84	\$0.00	\$519.00	\$1,499.15
DEBREM / Debris Removal - Jobsite	18.0	\$371.88	\$235.24	\$11.88	\$0.00	\$232.02	\$851.02
DEBRIS / Debris Removal	21.0	\$438.97	\$68.95	\$41.94	\$0.00	\$178.08	\$727.94
HAUL / Hauling	44.5	\$1,082.12	\$631.16	\$309.09	\$0.00	\$563.89	\$2,586.26
STAGING / Staging Materials/Equipment	30.0	\$627.10	\$95.66	\$17.82	\$0.00	\$254.40	\$994.98
TC / Traffic Control - Jobsite	8.0	\$163.68	\$7.20	\$15.84	\$0.00	\$101.76	\$288.48
UTLOC / Utility locates	1.0	\$23.25	\$0.00	\$0.00	\$0.00	\$6.62	\$29.86
WSGRB / Workshelf - Grubbed	25.0	\$505.60	\$318.52	\$108.34	\$0.00	\$254.40	\$1,186.86
2019-540 / Gumwood Drive Sub Total	189.0	\$4,075.68	\$1,490.64	\$520.75	\$0.00	\$2,110.16	\$8,197.23
<b>Grand Total</b>	<b>189.0</b>	<b>\$4,075.68</b>	<b>\$1,490.64</b>	<b>\$520.75</b>	<b>\$0.00</b>	<b>\$2,110.16</b>	<b>\$8,197.23</b>

**(Before)**



**(During)**



**(After)**

**(No Picture Available)**





Project: Gumwood Drive

Activity: Routine/  
Preventive  
Maintenance














Project #:  
2019-540

Township/SW Dist:  
Lady's Island/7

Completed:  
March 2019

### Legend

#### Drainage Type

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

0 35 70 140 210 280  
Feet

1 inch = 150 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 04/02/19  
File: C:\project summaries map\Gumwood Drive\_2019-540





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

**Project Summary:** Salem Drive W

**Activity:** Routine/Preventive Maintenance

**Duration:** 08/06/18-01/23/19

**Narrative Description of Project:**

Project improved 740 L.F. of drainage system. Cleaned out 740 L.F. of roadside ditch. Jetted (1) crossline pipe.

**2019-511 / Salem Drive W**

	<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	\$21.79	\$0.00	\$0.00	\$0.00	\$0.00	\$21.79
CLPJT / Crossline Pipe - Jetted	4.0	\$89.12	\$76.64	\$13.05	\$0.00	\$57.36	\$236.17
HAUL / Hauling	22.0	\$480.34	\$311.52	\$90.61	\$0.00	\$28.84	\$911.31
RSDCL / Roadside Ditch - Cleanout	85.0	\$2,450.70	\$367.58	\$75.78	\$0.00	\$1,077.25	\$3,971.31
UTLOC / Utility locates	1.5	\$37.05	\$0.00	\$0.00	\$0.00	\$19.85	\$56.90
2019-511 / Salem Drive W Sub Total	113.5	\$3,079.00	\$755.74	\$179.44	\$0.00	\$1,183.29	\$5,197.47
<b>Grand Total</b>	<b>113.5</b>	<b>\$3,079.00</b>	<b>\$755.74</b>	<b>\$179.44</b>	<b>\$0.00</b>	<b>\$1,183.29</b>	<b>\$5,197.47</b>

**Before**



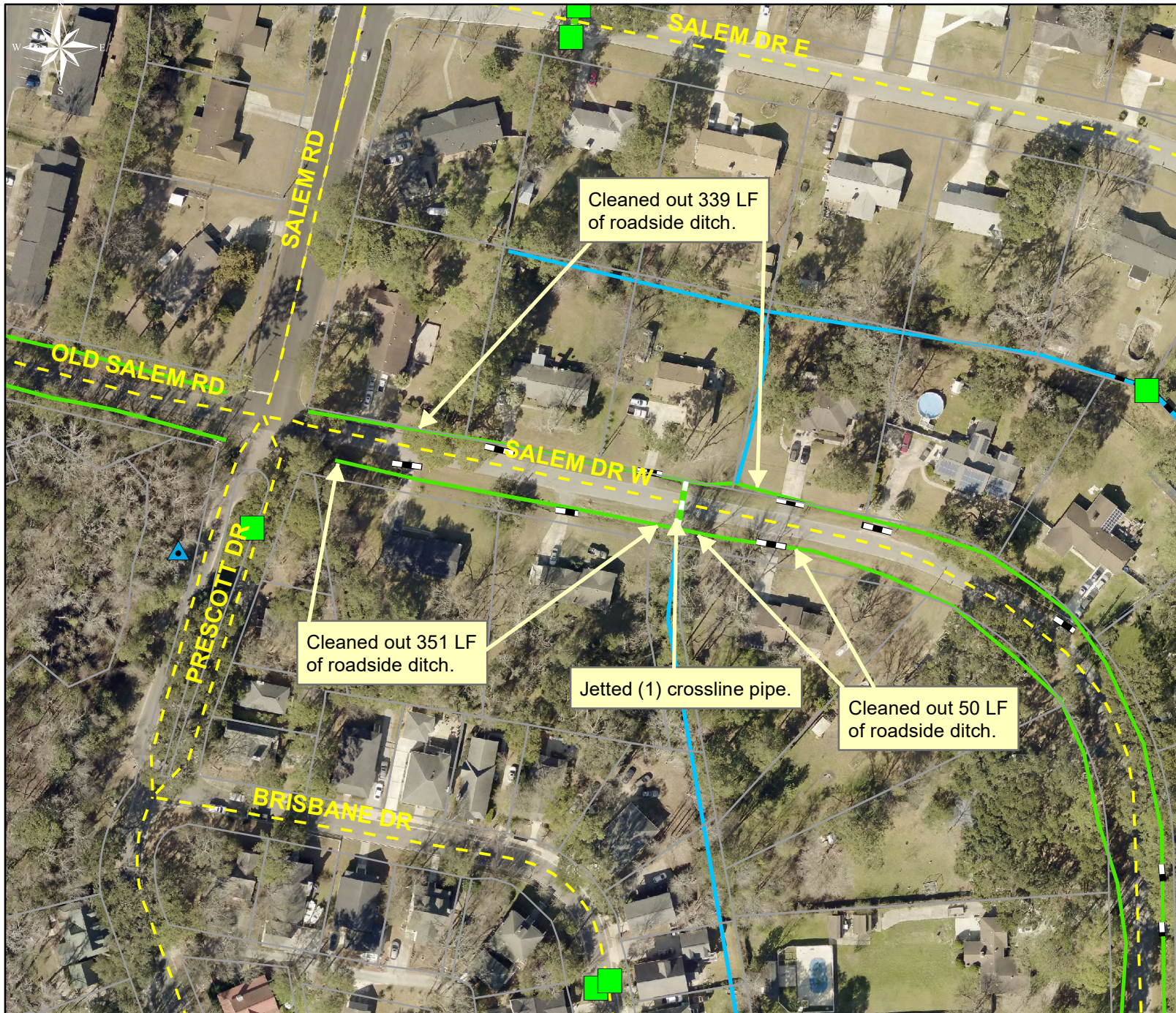
**During**



**After**







Project: Salem Drive W

Activity: Routine/ Preventive Maintenance

Project #: 2019-511

Township/SW Dist: Port Royal Island/6

Completed: January 2019

### 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: 03/28/19  
File: C:\project summaries map\Salem Drive W\_2019-511





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

**Project Summary:** Poppy Hill Road

**Activity:** Routine/Preventive Maintenance

**Duration:** 11/29/18-12/21/18

**Narrative Description of Project:**

Project improved 1,160 L.F. of drainage system. Cleaned out 1,160 L.F. of roadside ditch. Jetted (13) driveway pipes and (1) crossline pipe.

**2019-537 / Poppy Hill Road**

	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Cost</b>	<b>Total Cost</b>
AUDIT / Audit Project	1.5	\$32.69	\$0.00	\$0.00	\$0.00	\$0.00	\$32.69
DPJT / Driveway Pipe - Jetted	24.0	\$534.72	\$459.84	\$93.44	\$0.00	\$344.16	\$1,432.16
HAUL / Hauling	17.0	\$357.66	\$240.72	\$63.44	\$0.00	\$144.20	\$806.02
RSDCL / Roadside Ditch - Cleanout	55.0	\$1,125.44	\$333.40	\$65.33	\$0.00	\$617.70	\$2,141.87
UTLOC / Utility locates	1.0	\$24.70	\$0.00	\$0.00	\$0.00	\$13.23	\$37.93
2019-537 / Poppy Hill Road Sub Total	98.5	\$2,075.21	\$1,033.96	\$222.21	\$0.00	\$1,119.29	\$4,450.67
<b>Grand Total</b>	<b>98.5</b>	<b>\$2,075.21</b>	<b>\$1,033.96</b>	<b>\$222.21</b>	<b>\$0.00</b>	<b>\$1,119.29</b>	<b>\$4,450.67</b>

**Before**



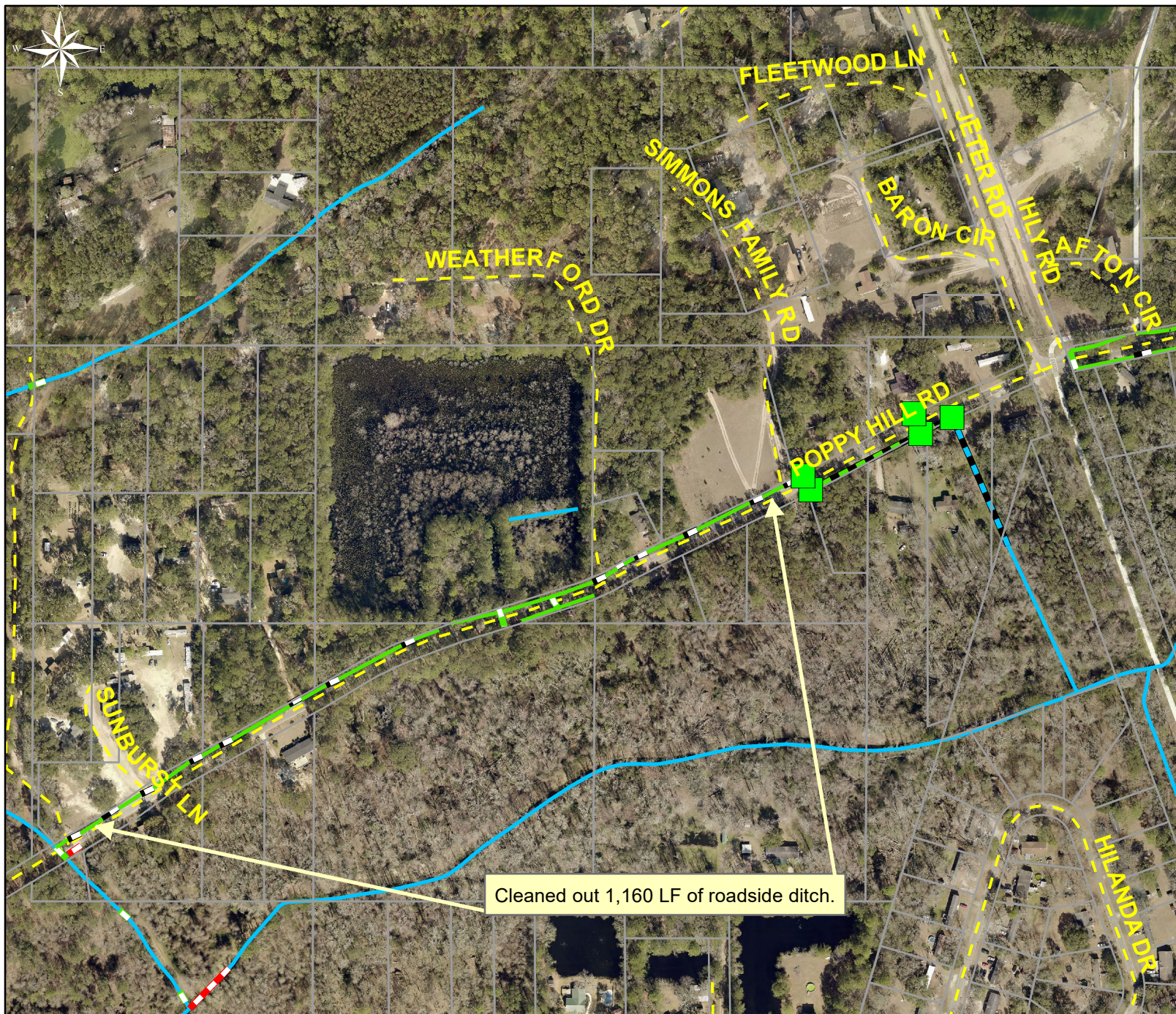
**During**



**After**







Project: Poppy Hill Road Map #1

Activity: Routine/ Preventive Maintenance

Project #: 2019-537

Township/SW Dist: Port Royal Island/6

Completed: December 2018

### Legend

#### Drainage Type

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

0 80 160 320 480 640  
Feet

1 inch = 330 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/27/19

File: C:\project summaries map\Poppy Hill Road Map #1\_2019-537





Project: Poppy Hill Road Map #2

Activity: Routine/ Preventive Maintenance

Project #: 2019-537

Township/SW Dist: Port Royal Island/6

Completed: December 2018

### 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: 03/27/19

File: C:\project summaries map\Poppy Hill Road Map #2\_2019-537





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

**Project Summary:** Windy Lakes Subdivision- Sugaree Drive

**Activity:** Routine/Preventive Maintenance

**Duration:** 12/07/18-01/09/19

**Narrative Description of Project:**

Project improved 458 L.F. of drainage system. Cleaned out 458 L.F. of roadside ditch. Jetted (1) driveway pipe and (1) crossline pipe. Hydroseeded for erosion control.

**2019-538 / Windy Lakes Subdivision- Sugaree Drive**

	<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	\$21.79	\$0.00	\$0.00	\$0.00	\$0.00	\$21.79
DPINP / Driveway Pipe - Inspected	6.0	\$133.71	\$10.80	\$13.26	\$0.00	\$86.04	\$243.81
CLPJT / Crossline Pipe - Jetted	10.0	\$222.80	\$191.60	\$27.02	\$0.00	\$143.40	\$584.82
DPJT / Driveway Pipe - Jetted	6.0	\$133.68	\$114.96	\$33.25	\$0.00	\$86.04	\$367.93
HAUL / Hauling	15.0	\$289.20	\$212.40	\$66.30	\$0.00	\$0.00	\$567.90
HYDR / Hydroseeding	15.0	\$302.05	\$56.52	\$25.22	\$0.00	\$127.20	\$510.99
PP / Project Preparation	8.0	\$163.68	\$7.20	\$6.63	\$0.00	\$101.76	\$279.27
RSDCL / Roadside Ditch - Cleanout	51.0	\$1,011.27	\$215.76	\$85.28	\$0.00	\$300.18	\$1,612.49
UTLOC / Utility locates	0.5	\$12.35	\$0.00	\$0.00	\$0.00	\$6.62	\$18.97
2019-538 / Windy Lakes Subdivision- Sugaree Drive Sub Total	112.5	\$2,290.53	\$809.24	\$256.96	\$0.00	\$851.23	\$4,207.96
<b>Grand Total</b>	<b>112.5</b>	<b>\$2,290.53</b>	<b>\$809.24</b>	<b>\$256.96</b>	<b>\$0.00</b>	<b>\$851.23</b>	<b>\$4,207.96</b>

**Before**



**During**

(No Picture Available)

**After**







Project: Windy  
Lakes Subdivison-  
Sugaree Drive  
Map #1

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-538

Township/SW Dist:  
Bluffton/4

Completed:  
January 2019

### Legend

#### Drainage Type

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

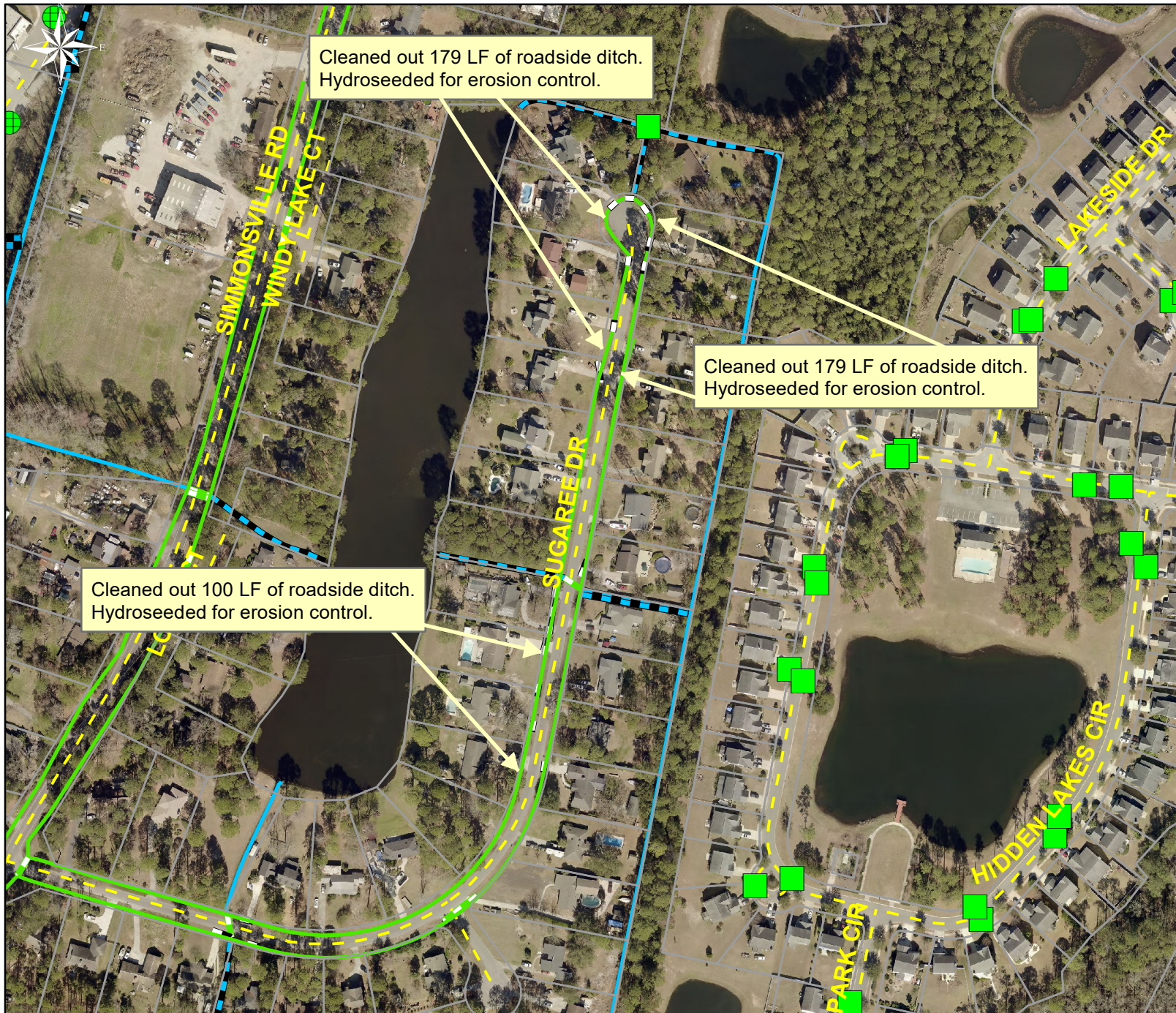
0 40 80 160 240 320  
Feet 1 inch = 170 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/29/19

File: C:\project summaries map\Windy Lakes Subdivision- Sugaree Drive Map #1\_2019-538





Project: Windy Lakes  
Subdivision-  
Sugaree Drive  
Map #2

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-538

Township/SW Dist:  
Bluffton/4

Completed:  
January 2019

0 60 120 240 360 480  
Feet 1 inch = 250 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/29/19

File: C:\project summaries map\Windy Lakes Subdivision- Sugaree Drive Map #2\_2019-538





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

**Project Summary:** Hamrick Drive

**Activity:** Drainage Improvement

**Duration:** 12/07/18-01/09/19

**Narrative Description of Project:**

Project improved 40 L.F. of drainage system. Installed (1) crossline pipe and rip rap for erosion control.

**2019-546 / Hamrick Drive**

	<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	\$21.79	\$0.00	\$0.00	\$0.00	\$0.00	\$21.79
CLPINS / Crossline Pipe - Installed	40.0	\$830.40	\$223.52	\$811.43	\$0.00	\$519.00	\$2,384.35
HAUL / Hauling	20.0	\$415.50	\$283.20	\$626.84	\$0.00	\$288.40	\$1,613.94
UTLOC / Utility locates	0.5	\$10.90	\$0.00	\$0.00	\$0.00	\$0.00	\$10.90
2019-546 / Hamrick Drive Sub Total	61.5	\$1,278.59	\$506.72	\$1,438.27	\$0.00	\$807.40	\$4,030.98
<b>Grand Total</b>	<b>61.5</b>	<b>\$1,278.59</b>	<b>\$506.72</b>	<b>\$1,438.27</b>	<b>\$0.00</b>	<b>\$807.40</b>	<b>\$4,030.98</b>

**(Before)**



**(During)**



**(After)**







Project: Hamrick Drive

Activity: Drainage Improvement

Project #: 2019-546

Township/SW Dist: Port Royal Island/6

Completed: January 2019

### 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 12.525 50 75 100 Feet

1 inch = 60 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 04/02/19  
File: C:\project summaries map\Hamrick Drive\_2019-546





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

**Project Summary:** Braeburn Lane

**Activity:** Routine/Preventive Maintenance

**Duration:** 10/02/18-11/07/18

**Narrative Description of Project:**

Project improved 2,793 L.F. of drainage system. Bush hogged 2,029 L.F. of channel. Cleaned out 664 L.F. of channel and 100 LF of roadside ditch.

2019-523 / Braeburn Lane	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AUDIT / Audit Project	1.0	\$21.79	\$0.00	\$0.00	\$0.00	\$0.00	\$21.79
BW / Bobcat Work	26.0	\$512.66	\$99.60	\$55.20	\$0.00	\$195.36	\$862.82
CCO / Channel - cleaned out	20.0	\$397.20	\$177.12	\$52.00	\$0.00	\$244.20	\$870.52
CBH / Channel- bushhogged	12.0	\$474.30	\$65.44	\$38.25	\$0.00	\$173.34	\$751.33
HAUL / Hauling	31.0	\$623.37	\$410.64	\$122.29	\$0.00	\$82.10	\$1,238.40
RSDCL / Roadside Ditch - Cleanout	3.0	\$59.58	\$35.88	\$0.00	\$0.00	\$36.63	\$132.09
UTLOC / Utility locates	1.0	\$24.70	\$0.00	\$0.00	\$0.00	\$13.23	\$37.93
2019-523 / Braeburn Lane Sub Total	94.0	\$2,113.60	\$788.68	\$267.74	\$0.00	\$744.86	\$3,914.88
<b>Grand Total</b>	<b>94.0</b>	<b>\$2,113.60</b>	<b>\$788.68</b>	<b>\$267.74</b>	<b>\$0.00</b>	<b>\$744.86</b>	<b>\$3,914.88</b>

**(Before)**



**(During)**

**(No Picture Available)**

**(After)**







Project: Braeburn  
Lane Map #1

Activity: Routine/  
Preventive  
Maintenance














Project #:  
2019-523

Township/SW Dist:  
Lady's Island/7

Completed:  
November 2018

### 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: 03/06/19

File: C:\project summaries map\Braeburn Lane Map #1\_2019-523



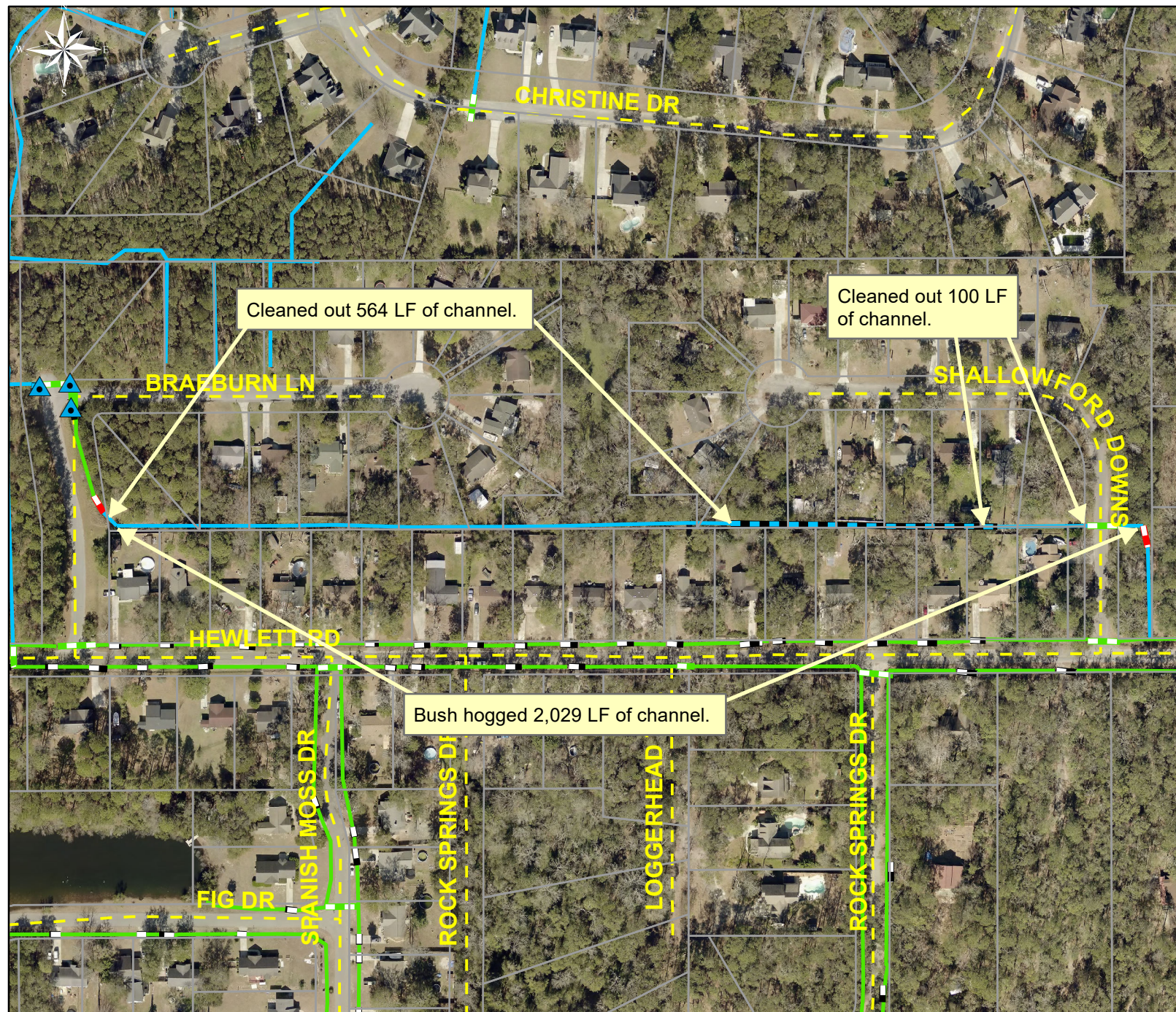
Project: Braeburn  
Lane Map #2

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-523

Township/SW Dist:  
Lady's Island/7

Completed:  
November 2018



### 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: 03/06/19

File: C:\project summaries map\Braeburn Lane Map #2\_2019-523





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

**Project Summary:** St. Helena Island Vacuum Truck  
Jenkins Port Road, Pineland Avenue, Chisolm Road, Fort Fremont Court North

**Activity:** Routine/Preventive Maintenance  
**Duration:** 07/16/18-11/06/18

**Narrative Description of Project:**

Project improved 172 L.F. of drainage system. Cleaned out (4) catch basins. Jetted (7) driveway pipes, (5) crossline pipes and 172 L.F of roadside pipe.

2019-309 / St. Helena Island Vacuum Truck	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AUDIT / Audit Project	1.0	\$21.79	\$0.00	\$0.00	\$0.00	\$0.00	\$21.79
CBCO / Catch basin - clean out	10.0	\$222.80	\$191.60	\$36.10	\$0.00	\$143.40	\$593.90
CLPJT / Crossline Pipe - Jetted	20.0	\$445.60	\$383.20	\$80.00	\$0.00	\$286.80	\$1,195.60
DPJT / Driveway Pipe - Jetted	20.0	\$445.60	\$383.20	\$87.20	\$0.00	\$286.80	\$1202.80
STBY / Stand By	10.0	\$222.80	\$191.60	\$35.36	\$0.00	\$143.40	\$593.16
2019-309 / St. Helena Island Vacuum Truck Sub Total	61.0	\$1,358.59	\$1,149.60	\$238.66	\$0.00	\$860.40	\$3,607.25
<b>Grand Total</b>	<b>61.0</b>	<b>\$1,358.59</b>	<b>\$1149.60</b>	<b>\$238.66</b>	<b>\$0.00</b>	<b>\$860.40</b>	<b>\$3,607.25</b>

**Before**



**During**



**After**







Project: St. Helena  
Island Vacuum  
Truck Fort Fremont  
Court North Map #1

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-309

Township/SW Dist:  
St.Helena Island/8

Completed:  
November 2018

### 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:02/20/19

File:C:\project summaries SHI Vac Truck- Fort Freemont Ct N Map #1 \_2019-309





Project: St. Helena  
Island Vacuum  
Truck- Pineland  
Avenue Map #2

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-309

Township/SW Dist:  
St.Helena Island/8

Completed:  
November 2018

### 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

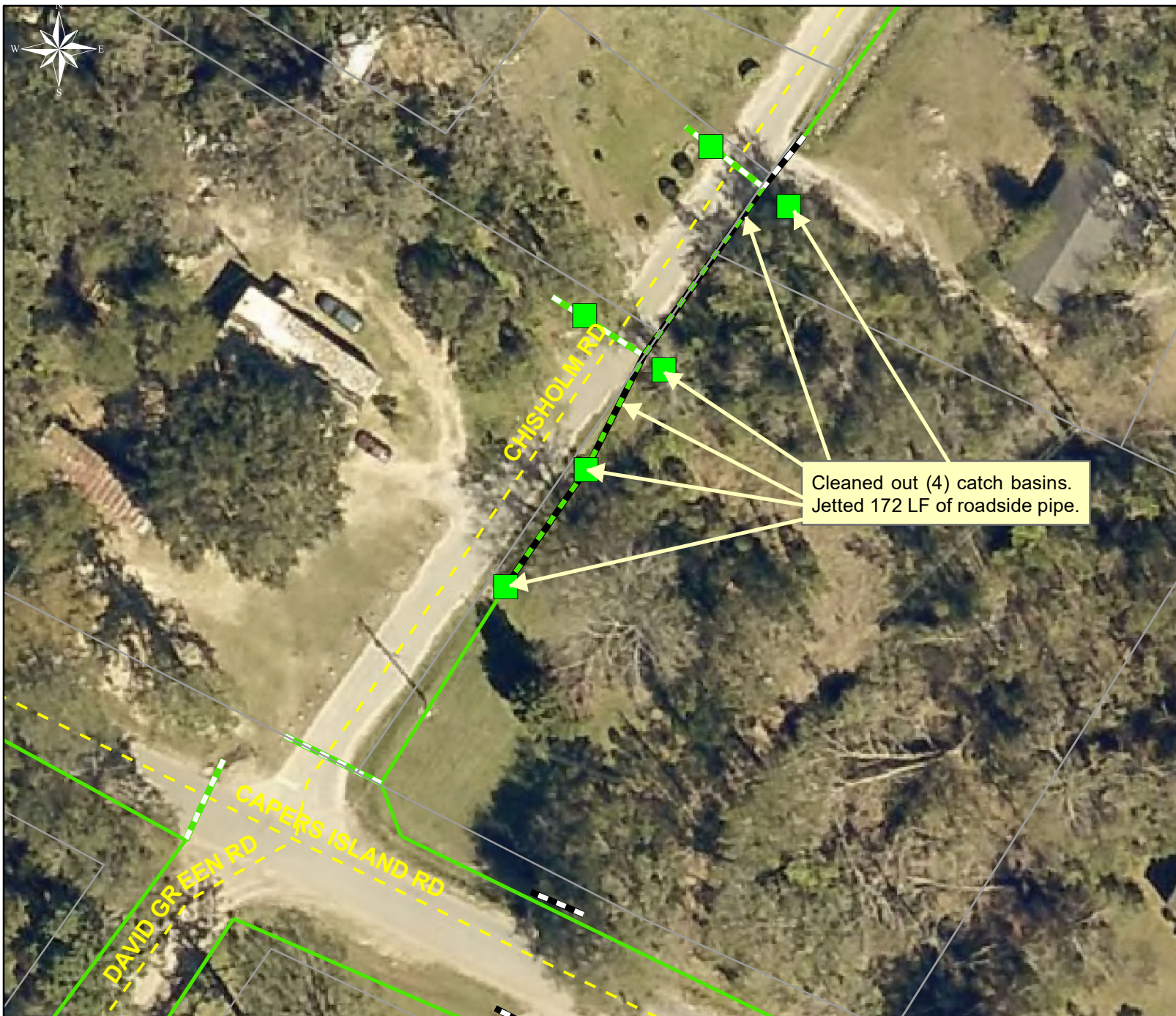
1 inch = 130 feet

Prepared By: BC Stormwater Management Utility

Date Print:02/20/19

File:C:\project summaries SHI Vac Truck- Pineland Avenue Map #2 \_2019-309





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

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-309

Township/SW Dist:  
St.Helena Island/8

Completed:  
November 2018

#### Legend

##### Drainage Type

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

0 10 20 40 60 80  
Feet

1 inch = 50 feet

Prepared By: BC Stormwater Management Utility

Date Print:02/20/19

File:C:\project summaries SHI Vac Truck- Chisholm Road Map #3 \_2019-309





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

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-309

Township/SW Dist:  
St. Helena Island/8

Completed:  
November 2018

### 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:02/28/19

File:C:\project summaries map/SHI Vacuum Truck- Jenkins Port Road Map #4 2019-309





Project: St.Helena  
Island Vacuum  
Truck - Jenkins  
Port Road Map #5

Activity: Routine/  
Preventive  
Maintenance














Project #:  
2019-309

Township/SW Dist:  
St. Helena Island/8

Completed:  
November 2018

#### Legend

##### Drainage Type

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

0 10 20 40 60 80  
Feet

1 inch = 50 feet

Prepared By: BC Stormwater Management Utility

Date Print:02/28/19

File:C:\project summaries map/ SHI Vac Truck- Jenkins Port Road Map #5\_ 2019-309





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

**Project Summary:** Landing Hill Road

**Activity:** Routine/Preventive Maintenance

**Duration:** 11/08/18-11/28/18

**Narrative Description of Project:**

Replaced separated joint. Repaired washout.

**2019-530 / Landing Hill 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	1.0	\$21.79	\$0.00	\$0.00	\$0.00	\$0.00	\$21.79
CLPINP / Crossline Pipe - Inspected	20.0	\$431.58	\$18.00	\$0.00	\$0.00	\$214.65	\$664.22
CPRPL / Crossline Pipe - Replaced	15.0	\$302.05	\$75.26	\$63.46	\$0.00	\$127.20	\$567.97
HAUL / Hauling	16.0	\$338.38	\$226.56	\$515.82	\$0.00	\$144.20	\$1,224.96
RPWO / Repaired Washout	4.0	\$84.24	\$26.83	\$14.30	\$0.00	\$52.92	\$178.29
SD / Soft Digging	5.0	\$123.50	\$191.60	\$47.30	\$0.00	\$82.35	\$444.75
UTLOC / Utility locates	1.0	\$24.70	\$0.00	\$0.00	\$0.00	\$13.23	\$37.93
2019-530 / Landing Hill Road Sub Total	62.0	\$1,326.24	\$538.25	\$640.88	\$0.00	\$634.55	\$3,139.92
<b>Grand Total</b>	<b>62.0</b>	<b>\$1,326.24</b>	<b>\$538.25</b>	<b>\$640.88</b>	<b>\$0.00</b>	<b>\$634.55</b>	<b>\$3,139.92</b>

**Before**

**During**

**After**



**(No Picture Available)**





## Project: Landing Hill Road

Activity: Routine/  
Preventive  
Maintenance














Project #:  
2019-530

Township/SW Dist:  
St. Helena Island/8

Completed:  
November 2018

### 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 = 150 feet**

Prepared By: BC Stormwater Management Utility

Date Print:02/05/19

File:C:\project summaries map\Landing Hill Road\_2019-530





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

**Project Summary:** ToHHI Vacuum Truck

Simmons Road, Sea Front Lane, William Hilton Parkway

**Activity:** Routine/Preventive Maintenance

**Duration:** 07/26/18-12/17/18

**Narrative Description of Project:**

Project improved 912 L.F. of drainage system. Removed blockage from flowline. Cleaned out (3) catch basins. Jetted 792 L.F. of roadside pipe, (2) crossline pipes and 120 L.F. of channel pipe.

2019-311 / ToHHI Vacuum Truck	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AUDIT / Audit Project	1.0	\$21.79	\$0.00	\$0.00	\$0.00	\$0.00	\$21.79
CBCO / Catch basin - clean out	27.0	\$602.63	\$342.56	\$183.66	\$0.00	\$288.49	\$1,417.34
CLPJT / Crossline Pipe - Jetted	6.0	\$133.68	\$114.96	\$32.22	\$0.00	\$86.04	\$366.90
RB / Remove blockage from flowline	12.0	\$265.86	\$50.73	\$73.20	\$0.00	\$128.79	\$518.58
2019-311 / ToHHI Vacuum Truck Sub Total	46.0	\$1,023.96	\$508.25	\$289.08	\$0.00	\$503.32	\$2,324.61
<b>Grand Total</b>	<b>46.0</b>	<b>\$1,023.96</b>	<b>\$508.25</b>	<b>\$289.08</b>	<b>\$0.00</b>	<b>\$503.32</b>	<b>\$2,324.61</b>

**Before**



**During**



**After**







Project: ToHHI  
Vacuum Truck-  
Simmons Road  
Map #1

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-311

Township/SW Dist:  
Hilton Head Isl/3

Completed:  
December 2018

### 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

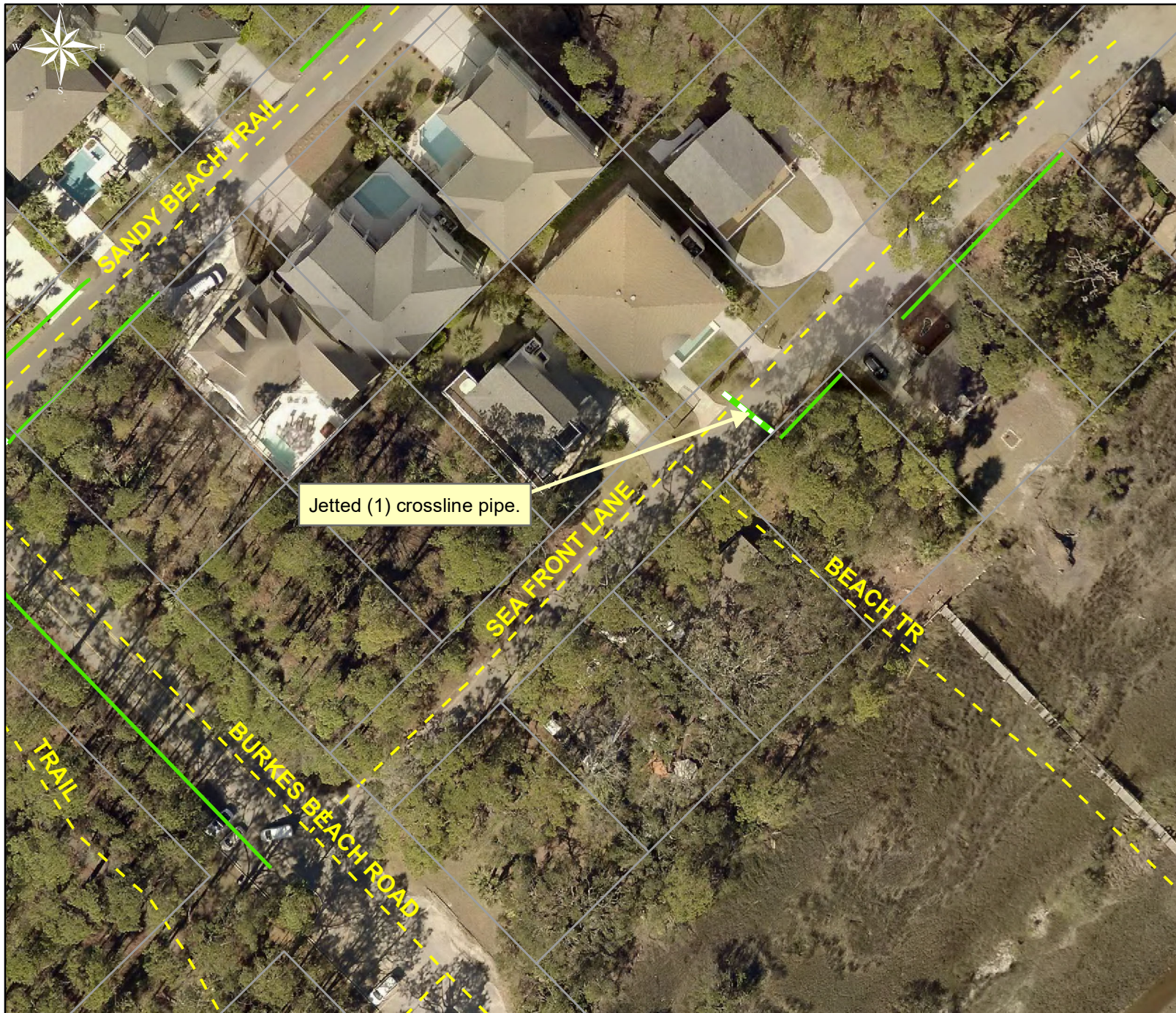
1 inch = 210 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/27/19

File: C:\project summaries map\ToHHI Vacuum Truck- Simmons Road Map #1\_2019-311





Project: ToHHI  
Vacuum Truck-  
Sea Front Lane  
Map #2

Activity: Routine/  
Preventive  
Maintenance














Project #:  
2019-311

Township/SW Dist:  
Hilton Head Isl/3

Completed:  
December 2018

### 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: 03/27/19

File: C:\project summaries map\ToHHI Vacuum Truck- Sea Front Lane Map #2\_ 2019-311





Project: ToHHI  
Vacuum Truck-  
William Hilton  
Parkway Map #3

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-311

Township/SW Dist:  
Hilton Head Isl/3

Completed:  
December 2018

### 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: 03/27/19

File: C:\project summaries map\ToHHI Vacuum Truck- William Hilton Parkway Map #3\_2019-311





Project: ToHHI  
Vacuum Truck-  
William Hilton  
Parkway Map #4

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-311

Township/SW Dist:  
Hilton Head Isl/3

Completed:  
December 2018

### 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: 03/27/19

File: C:\project summaries map\ToHHI Vacuum Truck- William Hilton Parkway Map #4\_2019-311





BEAUFORT COUNTY  
STORMWATER MANAGEMENT UTILITY BOARD AGENDA  
Wednesday, July 10, 2019  
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 – June 12, 2019 ([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, P.E. ([backup](#))
5. UNFINISHED BUSINESS
6. NEW BUSINESS
  - A. Special Presentation - TBD
7. PUBLIC COMMENT
8. NEXT MEETING AGENDA
  - A. August 14, 2019 ([backup](#))
9. ADJOURNMENT