



BEAUFORT COUNTY
STORMWATER MANAGEMENT UTILITY BOARD AGENDA
Wednesday, May 8, 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 – April 10, 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
 - A. Delinquent Accounts Brief – Thomas J. Keaveny, III, County Attorney
6. NEW BUSINESS
 - A. Living Shorelines – Dr. Denise Sanger, SC DNR
7. PUBLIC COMMENT
8. NEXT MEETING AGENDA
 - A. June 12, 2019 ([backup](#))
9. ADJOURNMENT



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

April 10, 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 4/23/2019

Board Members

Present

William Bruggeman
Marc Feinberg
James Fargher
James Clark
Patrick Mitchell

Absent

Allyn Schneider

Ex-Officio Members

Present

Neil Desai
Kim Jones
Scott Liggett
Van Willis

Absent

Beaufort County Staff

Eric Larson
David Wilhelm
Melissa Allen
Patricia Wilson
Carolyn Wallace
Katie Herrera

Visitors

Steve Andrews, Andrew's Engineering
Alice Howard, County Council District 4
Denise Parsick, Beaufort Conservation District
Lolita Huckaby, LowCountry Inside Track

1. Meeting called to order – William Bruggeman

- A. Agenda – Approved
- B. March 13, 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.bcgov.net/departments/Administrative/beaufort-county-council/boards-and-commissions/council-appointed/board-list/stormwater-management-utility-board/agendas/2019/031319.pdf>

A. Utility Update – Eric Larson

In reference to item #4c, the letter for the management fee from Town of Bluffton was received. Item #5b has been delayed to the May meeting. Item #8, delinquent accounts, the County Attorney's office will provide a summary of actions being taken during the next meeting. In reference to #10, an Assistant Stormwater Manager has been hired; Mr. Rybak is scheduled to start Monday and will focus on Capital Projects.

B. Monitoring Update – Eric Larson

Please reference the report, no additional updates.

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

The SWIC meets regularly, but related to regional stormwater standard project.

D. Stormwater Related Projects – Eric Larson

Please reference the report, no additional updates.

E. Professional Contracts Report – Eric Larson

Please reference the report, no additional updates.

F. Regional Coordination – Eric Larson

Please reference the report, no additional updates.

G. Municipal Reports – Eric Larson

Please reference the report, no additional updates.

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

Please reference the report, no additional updates.

I. Maintenance Projects Report – Eric Larson

Maintenance reports are routine projects. Mr. Larson noted some projects shared [are older projects] that have taken a while to do an internal audit on.

5. Unfinished Business

Mr. Liggett asked how the presentation at the County Council workshop went. Mr. Larson commented there was very little feedback and no action was taken. He included the recommendation to endorse the five year plan and budget as presented. He also shared the recommendation and discussion about the four additional projects. Mr. Larson indicated that there was healthy discussion about other forms of funding for those projects. He received one negative comment about the addition of staff and shared that the position would be to help with the work load and data management. He noted finance workshops are scheduled over the next month.

Mr. Feinberg asked about the rate increase as recommended by the Board. Mr. Larson explained that the increase is part of the larger budget and gets three readings before it is adopted by Council. It may require a resolution acknowledging the rate increase; that is how it was done last time there was a rate increase.

A question was asked about the timing of the three readings for the budget. Ms. Alice Howard informed the Board the first reading is scheduled for May 6th.

Ms. Kim Jones thanked the Utility staff for meeting with her to help understand the utility rate calculations for the Town of Bluffton if they moved from Option to E to Option A. She is preparing to provide a presentation and recommendation for the May River Watershed Action Plan Advisory Committee to Council for their consideration at a workshop next week.

6. New Business –

A. The special presentation from SCDNR on Living Shorelines has been rescheduled for the May meeting.

7. Public Comment(s) – None.

8. Next Meeting Agenda – Approved with amendments.

Amendments: New Business: Living Shorelines Presentation

Unfinished Business: Delinquent Accounts Brief

9. Meeting Adjourned

DRAFT



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

May 8, 2019

Stormwater Manager's Report for the Stormwater Utility Board Meeting

Utility Update

1. Southern Lowcountry Regional Board (SoLoCo)
 - a) Nothing new to report. – SoLoCo was briefed on the Regional Stormwater Design Standard and Model Ordinance Project at their April meeting.
 - b) See Regionalization below.
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 30th, 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) Living shorelines – Scheduled for today's meeting.
 - c) Other ideas?

6. FY 2020 Budget – According to the timeline published by the Finance department, the budget will receive first reading on May 13th. Staff is scheduled to present the budget to the Finance Committee on May 6th.
7. Military installation and other State and Federal properties SWU fees – See “Delinquent Accounts” below.
8. Delinquent accounts - County legal has prepared letters and sent them out to multiple state agencies. They are still working on the federal accounts and plan to send those letters soon. Legal department and Stormwater staff have been working to clean up data and make adjustments to account as needed so that the information sent out is accurate. During today’s meeting, the Legal department will brief the SWUB on the status of the accounts.

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

9. Board Appointments
 - a) Appointment for Stormwater District 5 has been approved for Steve Andrews. Steve’s first meeting will be May 8, 2019.
10. TY 2019 tax run – Staff has already begun working on the next tax run by reviewing account data.

Monitoring Update

1. Lab Update (From Dr. Alan Warren and Lab Manager Danielle Mickel)
 - i. [See attached report.](#)
2. Monitoring Data (1st Quarter Report)
 - i. [See attached 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 Royal Pines HOA (Lady’s Island). The neighborhood desires to be more proactive and wanted to learn more about the County’s and State’s responsibilities for O&M.

3. Alljoy subwatershed flooding – Release of the RFQ and funding are still pending. Staff received authorization from FEMA to submit a full grant application for 4 projects: a watershed study and 3 phases of land acquisition / structure elevation. Due to limited funding available, FEMA requested we limit our number of applications. We are currently submitting the watershed study and phase 1 acquisition. In order to make a complete application packet, we are scheduling a meeting with the property owners identified as Phase I on May 9, 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 – Staff met with the developer and staff of the design consultant to discuss the schedule of the project, contract arrangements, and funding / reimbursement by the County.
7. Whitehall property purchase – No additional update at this time.
8. US 278 “super street” widening on Jenkins Island (Windmill Harbor area) – The consultant for the design has completed the redesign for the “scaled back” stormwater design. Local MS4 permit has been issued for this design.
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 – Staff met with the consultant for a project update. Contract extensions for FY 2020 are in progress.
 - b) Brewer Memorial – Staff met with BCOLT staff to discuss modification of the existing MOA between the County and BCOLT on the O&M of the park. Staff met with the consultant for a project update. Contract extensions for FY 2020 are in progress.

2. Evergreen Regional Pond 319 grant project – (Design=\$89,286, Construction=\$590,000. Grant=\$229,124) – Staff met with the consultant for a project update.

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 – County Staff participated in the consultant selection review. See municipal reports for more information.
6. The Nature Conservancy – Staff met with David Bishop, Coastal and Midlands Conservation Director with the Nature Conservancy. The topics included watershed level planning, regionalization of Beaufort and Jasper County stormwater, and the 2015 revised SWU fee rate structure. Possible outcomes of the meeting may include involvement in the regionalization discussion and a better understanding of how large tract of land desired for preservation could benefit from reduced SWU fees.

Municipal Reports

1. Town of Hilton Head Island (From Jeff Netzinger, Stormwater Manager and Brian Eber, MS4 Coordinator)
 - i. No information was available at the time of this 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. No information was available at the time of this 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 – Staff attended a series of meeting with the software vendor to kick-off the implementation of the software and learn about its capabilities. Implementation is 18-24 months long.
7. MS4 Statewide General permit – No update at this time.
8. Statewide General permit for Construction – DHEC has released the permit for public comment. There is a public information meeting in Columbia on May 20. Comment period closes June 3.

USCB Water Quality Lab Update

Beaufort County

Crystal Lake: Fish Consumption

- **Project Description:** Beaufort County wishes to determine whether Crystal Lake should be deemed “catch and release” or be unrestricted in terms of the consumption of legally-caught fish regardless of species. Currently, we have received the analysis results of the supplied fish tissue from Test America and are writing up the report to include a compared tissue contaminant levels to risk- based values to determine whether consumption should be restricted. As such, the project consists of the five components listed below. A proposed budget follows, broken down into component parts.
 1. Collection of a minimum of three individual fish of up to three edible species with a cast net, set net, trotline and/or rod and reel.
 2. Processing fish for analysis by scaling, filleting, wrapping, bagging and freezing.
 3. Submission of fish tissue to TestAmerica Laboratories, Inc. for the analysis of metals, including mercury, polycyclic aromatic hydrocarbons (PAHs), pesticides and polychlorinated biphenyls (PCBs).
 4. Comparison of tissue contaminant concentrations to U.S. EPA risk-based consumption limits and/or U.S. FDA action levels.
 5. Delivery of comparative analysis to Beaufort County to support a risk management decision on consumption of fish from Crystal Lake.

Proposed Budget:*

1. Fish collection: 2 fishermen x 8 hr/day x 2.5 days x \$45/hr/fisherman = \$1800
2. Fish processing (scaling, filleting, wrapping, bagging, freezing): 4 hr x 45/hr = \$180
3. Shipping cost and dry ice: \$200
4. Analysis by TestAmerica Laboratories, Inc.: \$597.50 per sample x 9 samples = \$5377.50 (see quote attached)
5. Comparative analysis of tissue contaminant data with risk-based consumption limits and/or action levels: \$2000

Total: \$9557.50

UPDATE: USCB WQ Lab is to collect bait and set trot line on 3/6/19. Collection of fish should be within 24-48 hours after trot line is set.

Okatie West Pond: Bold and Gold

- **Project Description:** Environmental Conservation Solutions, LLC, in conjunction with Beaufort County, installed an innovative bacteria and nutrient removing side-bank filter to a section of a newly constructed wet detention pond for the Okatie West Regional Stormwater Project. The purpose of the joint effort is to evaluate the efficiency of the Bold & Gold Side-Bank filter for the possible application in the county to achieve target stormwater treatment in existing and new stormwater BMPs. The pilot project is a 60-foot side bank filter with a 2-foot layer of Bold & Gold® CTS Filtration media as the treatment mechanism, overlaid by a 6-inch well-draining soil that is connected to an underdrain pipe. The filter is located on the south side of the wet detention pond.
- **Status:** USCB is waiting on pump materials to arrive from Environmental Conservation Solutions, LLC. See proposal below:



UNIVERSITY OF
SOUTH CAROLINA
BEAUFORT

Date: January 24, 2019

To: Antony Rios, E.I, Environmental Conservation Solutions, LLC and Eric Larson, P.E., Beaufort County, SC Government

From: D. Alan Warren, M.P.H., Ph.D.

Subject: Function of Bold & Gold Side-Bank Filter at Okatie West BMP

This letter represents a response to your request for a proposal to measure the ability of Bold & Gold filtration media to remove contaminants of concern from stormwater detained in the pond known as Okatie West. We propose to collect and analyze sediment overlying the bank filter on one occasion, while collecting and analyzing water on four occasions, each separated by a minimum of 3 weeks, but no more than 1 month. Water samples will be taken in two locations – one from an area of the pond overlying the bank filter and another from the pipe containing filtered water. The underdrain holding filtered water will be pumped dry and allowed a minimum of 5 hours to refill prior to sample collection. The results of each sampling event will be relayed electronically as data become available, as will the elevation of pond water relative to the weir at the time of sampling. In addition, a

final report of the entire project will be submitted once analytical results from the fourth sampling event are received. Whenever possible, methods certified by the State of South Carolina will be used for sample collection and quantification of analytes/parameters.

The project will be undertaken by three employees of the University of South Carolina Beaufort – Alan Warren, Danielle Mickel, and Hamp Simkins. Together, these employees run the University’s Water Quality Laboratory. It is estimated that the project will involve four site visits by two employees, each lasting about 10 hours when travel time is included. The cost for the field collection component of the project is estimated below, followed by analytical costs. When taken together, the overall cost of the project is estimated at \$6518.72.

Sample Collection

Personnel: 2 persons x 10 hours x \$45/hour x 4 sampling events = \$3600

Travel: 46 miles roundtrip x 4 sampling events = 184 miles x \$0.58/mile = \$106.72

Subtotal: \$3706.72

Ex-situ Water Parameters

E. Coli (\$60)

Fecal Coliform (\$60)

Total Suspended Solids (\$20)

Copper and Zinc (\$24)

Total Kjeldahl Nitrogen (\$35)

Nitrates/Nitrites (\$18)

Total Phosphorus (\$25)

Orthophosphate (\$30)

Subtotal: \$272 per sampling event x 4 events x 2 locations = \$2176

In-situ Water Parameters

Dissolved Oxygen

Turbidity

Specific Conductivity

Salinity

pH

Temperature

Subtotal: \$46 per sampling event x 4 events x 2 locations = \$368

Soil Parameters

Percent Moisture (\$10)

Total Organic Carbon (\$150)
Total Kjeldahl Nitrogen (\$35)
Nitrates/Nitrites (\$18)
Total Phosphorus (\$25)
Orthophosphate (\$30)

Subtotal: \$268 per sampling event x 1 event = \$268

UPDATE: Antony Rios from Environmental Conservation Solutions, LLC , emailed on April 26th stating he was ready to send sampling equipment and arrangements for a forklift had to be made since these supplies weigh approximately 400 pounds. These supplies will be used for the intention of evacuating 3,350 gallons of water which evacuates the water in the entire system; underdrain, surrounding rock and media. This should take approximately 11.5 hours to avoid the pump running dry. After water has re-infiltrated the media, USCB will collect the required samples.

Okatie West Pond:

- Post BMP construction site visit occurred on 2/1/19 with BC and USCB.
- Post BMP construction sample collection began on 2/1/19 and continue every M, W, F for a total of 11 samples to mirror the schedule of the Pre BMP sample collection.

UPDATE: Sample collection has finished and a report will be presented with results of the efficiency of the pond.

Walmart Pond 278:

- Sample collection and analysis has ended.
- Report was in February's update.

Port Royal Cypress Wetland:

- Cypress wetland project ended October 2018.
- Report was in February's update.

Port Royal Redevelopment:

- Sample collection for the first quarter of 2019 is complete.
- Continue sampling quarterly wet events.

BC Monitoring Plan 2019:

- Sample collection for the first quarter wet events is complete. This includes all sample sites for purposes of TMDL, water quality, MOA's, and specials.
- Second quarter has started.

Town of Bluffton

Monitoring Plan:

- Accepting samples to analyze for E.coli at same time as MST analysis.
- Continue with weekly sample analysis.
- Accepting samples for new project: EPA 319 Grant Town Hall Pervious Paving Parking Lot. Wet event samples but as often as possible before construction begins.
- Additional bi-monthly nutrient (T-N, T-P) parameter analysis for NRP-pond site.
- USCB Lab continues to collect and share data with TOB for the shared BC MS4 sites.

Town of Hilton Head

Jarvis Creek Project:

- **Project Description:** Jarvis Creek pump station will be undergoing a modernization upgrade sometime in February of 2019. The purpose of water quality sampling is to analyze the impacts downstream of the pump station upgrade.
- Status: Jarvis Creek Park water quality sampling pre-pump upgrade has ended and will begin after upgrade project has finished.

USCB Laboratory

Additional Projects:

- Palmetto Bluff: Continued sampling efforts of 12x/year for 6 wet/6 dry events.
- Water Oak Utility: Continue accepting weekly samples for E.coli from their pump station.
- GEL Engineering: Continue accepting samples for Hilton Head collected by GEL Engineering 4x/ quarter.

Lab Projects:

- Just completed a three year evaluation from SCDHEC. Summary of evaluation will be mailed within 30 days.
- Proficiency testing for 2019 has begun. Must be completed within the year for all certified analysis to upkeep lab certification.
- Upkeep of equipment.
- Launch of new laboratory information system to include sample ID, sites, clients, field data, lab results, QA/QC requirements, reporting, etc.
- Continue laboratory certification upkeep as per state requirements.
- Continue cost tracking and invoicing of all projects.

**BEAUFORT COUNTY MONITORING 2019
IN-SITU**

Date of Collection	Site ID	Time of Collection	Air Temp (°C)	Water Temp (°C)	Specific Cond (SpC) (m/s/cm)	DO (mg/L)	pH (H+)	Salinity (ppt)	Turbidity (NTU)	Weather Observed	Tide Stage	Flow (visual)	Monitoring Category	GPS Coordinates	Remarks	
2/20/2019	BCCC1	1322	14.11	13.90	0.204	6.13	7.86	0.10	29.7	02		M	TMDL SHARED-TOB	32.3558456, -80.8641047		
2/20/2019	BCCC2	1340	13.98	13.82	34.2	8.25	7.08	20.63	28.7	22		M	TMDL SHARED-TOB	32.3627148, -80.8509683		
2/20/2019	BCOK1 Wet	1219	14.16	12.66	0.122	7.47	6.57	0.06	9.8	02	4100	M	TMDL SHARED-TOB	32.27876 -80.94587		
	BCOK1 Dry															
2/20/2019	BCOK2	1234	13.94	14.51	36.2	6.43	6.21	21.73	9.6	02	4200	M	TMDL SHARED-TOB	32.334256, -80.922064	POOL-SAMPLE FURTHER DOWN AT CREEK	
2/20/2019	BCOK3	1304	15.13	14.43	8.78	6.61	6.65	22.01	32.0	02	4200	M	TMDL SHARED-TOB	32.347974, -80.891552	SAMPLED BAILEY LANDING	
3.5/2019	NEW1 Wet	1436	11.2	16.66	0.196	6.17	5.93	0.09	8.7	00	4100	H	WQ MOA-TOB	32.236088, -81.013417	UCSB COLLECTED	
3/20/2019	NEW1 Dry	1326	20.0	15.59	0.203	6.09	6.50	0.10	7.6	00	4200	L				
2/20/2019	OKW3A Wet	1053	13.71	13.59	0.156	6.25	6.96	0.09	12.1	02		M	TMDL MOA-TOB	32.27876 -80.94587		
3/20/2019	OKW3A Dry	20.0	15.36	0.163	7.88	6.69	0.08	10.2	00	NA	L					
2/20/2019	MRR02 Wet	1119	13.50	13.59	0.212	3.94	6.91	0.10	4.7	02		M	TMDL MOA-TOB	32.240785 -80.885964		
2/7/2019	MRR02 Dry	1315	23.90	16.30	0.208	4.91	8.39	0.10	18.0	00	NA	L			TOB COLLECTED SAMPLE	
3/4/2019	BCD-PR	1208	11.11	18.01	12.67	6.00	6.45	7.21	45.3	02	4200	H	WQ	32.639401, -80.857303		
3/4/2019	BCD-HC	1238	13.33	18.23	0.66	7.73	6.77	0.32	37.4	00	4200	H	WQ	32.48118, -80.755535		
3/4/2019	BCD-CR	1318	18.64	18.23	40.7	7.30	7.37	25.77	8.9	00	4200	M	WQ	32.3135635, -80.8591359		
3/4/2019	BCD-RS	1606	13.33	18.55	0.213	5.76	6.97	0.10	28.0	02		L	WQ SPECIAL	32.442109, -80.628637		
3/4/2019	BCD-YM	1132	11.11	17.55	2.99	7.54	6.56	1.54	8.2	02	4100	H	WQ	32.652932, -80.683649		
3/4/2019	BCD-LM	1458	16.10	18.53	40.1	7.55	7.57	25.27	5.4	00	2100	M	WQ SHARED-TOPR	32.4095898, -80.7242011		
1/24/2019	BCBR2	1403	18.3	16.77	4.96	6.88	6.48	2.73	9.0	01	4100	M	WQ MOA-TOPR	32.3831697, -80.734907		
2/21/2019	BCBR3 (SANDS)	1421	18.62	19.15	45.100	7.42	7.85	28.97	71.3	00	4200	H	WQ MOA-TOPR SPECIAL	32.370383, -80.658153	Wet	
1/24/2019	BCBR4	1440	18.0	12.73	43.7	8.03	7.71	27.6	12.1	01	4200	M	WQ MOA-COB	32.394572, -80.677906		
1/24/2019	BCBR5	1502	18.0	13.46	41.3	8.25	7.71	26.03	32.8	01	4200	M	WQ MOA-COB	32.431819, -80.674322		
3/5/2019	BCBR6	1024	7.2	9.67	0.00*	10.19	7.10	0.00*	26.9	02	4100	L	WQ MOA-COB	32.429729, -80.670973	No flow-no sample (1/24). Instrument misread* (3.5.19)	
3/4/2019	BCBR7	1525	20.00	20.57	10.54	0.52	6.97	5.91	5.5	00	2100	L	WQ	32.440031, -80.687597	Tidal stage still too high (1/24)	
2/21/2019	BRIDGE (DUP)	1304	20.74	16.12	44.000	6.64	5.99	27.84	18.2	00	4100	H	SPECIAL	32.38011 -80.70884	Wet	
2/21/2019	Ddown	1325	22.43	15.57	44.100	7.64	7.55	28.02	4.0	00	4200	H	SPECIAL	32.37552 -80.69624	Wet	
2/21/2019	WAREHOUSE	1357	19.74	15.46	44.400	7.55	7.72	28.15	12.3	00	4200	H	SPECIAL	32.37148 -80.69148	Wet	
2/20/2019	OKWP1	1002	16.14	12.95	0.126	6.52	5.84	0.06	14.8	02		M	SPECIAL	32.2796 -80.9410		
2/20/2019	OKWPOUT	1018	12.96	14.43	0.181	3.82	6.37	0.09	40.1	02		M	SPECIAL	TBD		
2/20/2019	OKWP2	1145	13.73	13.15	28.0	7.18	6.47	16.93	8.3	02	4100	M	SPECIAL	32.2821 -80.9358		
2/20/2019	OKWP3	1154	13.75	13.47	33.6	6.91	6.84	20.68	17.5	22	4100	M	SPECIAL	32.2827 -80.9338		
2/20/2019	OKWPOND *	1010	14.04	12.82	0.123	6.55	6.29	0.06	22.0	02					In Forbay area. In-situ only	
2/20/2019	OKWPOND *	1022	12.79	14.00	0.182	3.65	6.64	0.09	49.1	02					Outside of Forbay. In-situ only	
3/4/2019	BL#4IN	1406	16.10	20.62	0.114	9.83	6.79	0.06	14.5	00	2000	L	SPECIAL	32.29447173, -80.93433199		
3/4/2019	BL#4OUT	1412	16.10	21.36	0.112	8.61	6.63	0.06	9.4	00	2000	L	SPECIAL	32.294560, -80.933913		
3/4/2019	BL#3IN	1426	16.10	18.39	0.443	7.84	6.44	0.21	32.4	00	2000	L	SPECIAL	32.290441, -80.931489		
3/4/2019	BL#3OUT	1433	16.10	21.86	19.4	7.64	6.40	11.48	22.9	00	2000	L	SPECIAL	32.290229, -80.930990		

Notes: Further details for notes are addressed in comments section.

- NS = No Sample Collected
- NF = No Flow Observed at sample site
- H = High Flow Observed at sample site
- M = Medium Flow Observed at sample site
- L = Low Flow Observed at sample site
- NW = No Water Observed at sample site
- ND = No Data recorded
- CLR = Clear Skies
- F = Fair Weather (Partly Cloudy, no Thunderstorm/Rain event occurred in vicinity)
- CLDY = Cloudy Skies
- R = Rain (Thunderstorm or Continuous due to frontal system passage)

Additional Comments:

WET EVENT

COC #003397

Weather Code	Tide Stage	Monitoring Category
00 = (Clear; NSW)	2000 = Ebb	* TMDL (CAT 1)
01 = (Fair Weather)	2100 = 3/4 Fld	*IDDE (CAT 2)
02 = (Cloudy Skies)	2200 = 1/2 Fld	*WQ (CAT 3)
22 = (Rain/Storm)	2300 = 3/4 Fld	*MOA (CAT 4)
	4000 = FLOOD	*SPECIAL (CAT 5)
	4300 = 3/4 Ebb	* SHARED
	4200 = 1/2 Ebb	SHARED=sites in other jurisdictions that BC sampling
	4100 = 1/4 Ebb	

**Beaufort County
Monitoring
2019**

Date of Collection	Site ID	Time of Collection	MPN E. Coli (MPN/100 mL)	MPN Fecal (MPN/100 mL)	MPN Enterococcus (MPN/100 mL)	MPN E. Coli	MPN Fecal	MPN Enterococcus	Remarks
						Dilution	Dilution	Dilution	
2/20/2019	BCCC1	1317	1141			5			
2/20/2019	BCCC2	1335	3244			5			
2/20/2019	BCOK1	1214	829			5			
2/20/2019	BCOK2	1239	192			5			
2/20/2019	BCOK3	1259	757.5			5			
2/20/2019	NEW1	1436	1079	538	189	10	10	10	
3/20/2019	NEW1 Dry	1323	243.5	170.5	75	5	5	10	
2/20/2019	OKW3A	1048	443	278.5		5	5		
3/20/2019	OKW3A Dry	1342	782.5	936	NS	5	5		
2/20/2019	MRR02 Wet	1114	492	1071		5	5		
2/7/2019	MRR02 Dry	1310	406.5	508.5		5	5		
3/4/2019	BCD-PR	1203			738			10	
3/4/2019	BCD-HC	1233		9208			10		
3/4/2019	BCD-CR	1315		4.0			2		
3/4/2019	BCD-RS	1604		551			2		
3/4/2019	BCD-YM	1127		36.6			2		
3/4/2019	BCD-LM	1455		75			10		
1/24/2019	BCBR2	1358		362			5		
2/21/2019	BCBR3 (SANDS)	1416	41		<10	10		10	
1/24/2019	BCBR4	1438		<10	<10		10	10	
1/24/2019	BCBR5	1500		20			10		
1/24/2019	BCBR6	1020		3972.6	7270		2	10	
3/4/2019	BCBR7	1522		>4839.2			2		
2/21/2019	BRIDGE (DUP)	1259	10		10	10		10	
2/21/2019	Ddown	NS	10			10			
2/21/2019	WAREHOUSE	NS	20			10			
2/20/2019	OKWP1	1007	1034.4	397.8		2	2		
2/20/2019	OKWPOUT	1027	22	8.2		2	2		
2/20/2019	OKWP2	1140	495	364		10	10		
2/20/2019	OKWP3	1149	594	602		10	10		
3/4/2019	BL#4IN	1403		497.8			2		
3/4/2019	BL#4OUT	1410		730.8			2		
3/4/2019	BL#3IN	1422		>4839.2			2		
3/4/2019	BL#3OUT	1430		1670			10		

Notes: Further details for notes are addressed in comments section.

NS = No Sample Collected

NF = No Flow Observed at sample site

NW = No Water Observed at sample site

ND = No Data recorded

Comments:

Beaufort County
Monitoring
2019

Date of Collection	Site ID	Time of Collection	Total Kjeldahl Nitrogen (TKN) mg/L	Nitrate/Nitrite (NOx) mg/L	Ammonia (NH3) mg/L	Total Nitrogen (TN) mg/L	Total Phosphorus (T-P) mg/L	Metals-Copper (Cu) mg/L	Metals-Lead (Pb) mg/L	Metals-Zinc (Zn) mg/L	Metals-Mercury (Hg) mg/L	Remarks
2/20/2019	BCCC1	1317		0.11	<-0.25		<-0.10					
2/20/2019	BCCC2	NS										
2/20/2019	BCOK1	NS										
2/20/2019	BCOK2	NS										
2/20/2019	BCOK3	NS										
2/20/2019	NEW1	NS										
3/20/2019	NEW1 Dry	1323	0.93	<-0.050		0.96	<-0.10				<-0.0020	
2/20/2019	OKW3A	1048				0.92	<-0.10					
3/20/2019	OKW3A Dry	1342	0.76	0.14		0.90	0.12					
2/20/2019	MRR02	1114				1.2	0.36					
2/7/2019	MRR02 Dry	1310	0.71	0.13		0.84	0.30					
1/24/2019	BCD-PR	NS										
1/24/2019	BCD-HC	NS										
1/24/2019	BCD-CR	NS										
1/24/2019	BCD-RS	NS										
1/24/2019	BCD-YM	NS										
1/24/2019	BCBR1	1326		<-0.050	0.31		0.26					
1/24/2019	BCBR2	1358		0.26	0.27		0.17					
2/21/2019	BCBR3 (SANDS)	1416		<-0.050	<-0.25		0.45					
1/24/2019	BCBR4	1438		<-0.050	<-0.25		0.15					
1/24/2019	BCBR5	1500		<-0.050	<-0.25		0.16					
1/24/2019	BCBR6	NS										
1/24/2019	BCBR7	NS										
1/24/2019	BRIDGE (DUP)	NS										
1/24/2019	Ddown	NS										
1/24/2019	WAREHOUSE	NS										
2/20/2019	OKWP1	NS										No Chem analyses required
2/20/2019	OKWPOUT	NS										No Chem analyses required
2/20/2019	OKWP2	NS										No Chem analyses required
2/20/2019	OKWP3	NS										No Chem analyses required
3/4/2019	BL#4OUT	NS										No Chem analyses required
3/4/2019	BL#3IN	NS										No Chem analyses required
3/4/2019	BL#3OUT	NS										No Chem analyses required
3/4/2019	BGIN	NS										No Chem analyses required
3/4/2019	BGOUT	NS										No Chem analyses required

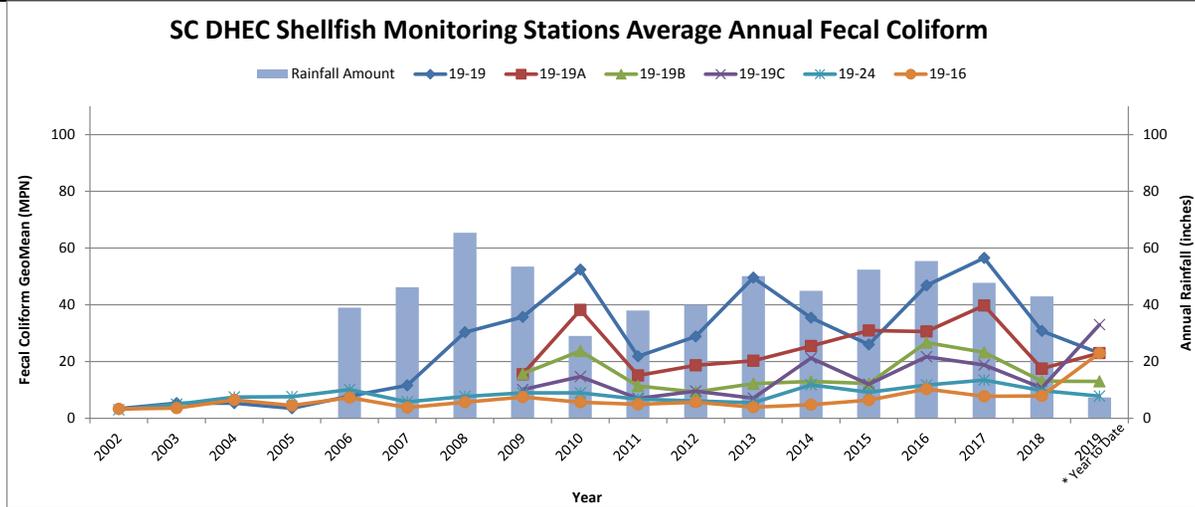
Notes: Further details for notes are addressed in comments section.

NS = No Sample Collected
 NF = No Flow Observed at sample site
 NW = No Water Observed at sample site
 ND = No Data recorded

Comments:

	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)																							
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		23.0	23.0	33.0		49.0	7.8	17.0		49.0	2.0	13.0		14.0	23.0	23.0		17.0	4.5	13.0	
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																								
Average Annual GeoMean	46.8	56.5	30.8	29.7	30.6	39.8	17.5	21.8	26.7	23.3	13.1	11.2	21.7	18.8	10.7	17.3	11.7	13.5	9.8	9.9	10.3	7.7	7.9	9.8
** Truncated GeoMetric Mean	37.0	44.0	42.0	40.0	30.0	36.0	29.0	25.0	16.0	20.0	20.0	16.0	16.0	16.0	15.0	14.0	9.0	10.0	10.0	11.0	6.0	7.0	8.0	8.0
** Truncated 90th Percentile	105.0	203.0	176.0	181.0	89.0	133.0	115.0	102.0	69.0	83.0	71.0	60.0	65.0	57.0	56.0	53.0	29.0	37.0	44.0	46.0	21.0	29.0	30.0	30.0

NS = No Sample
AS = Additional Samples
** Town staff calculations utilizing DHEC statistics

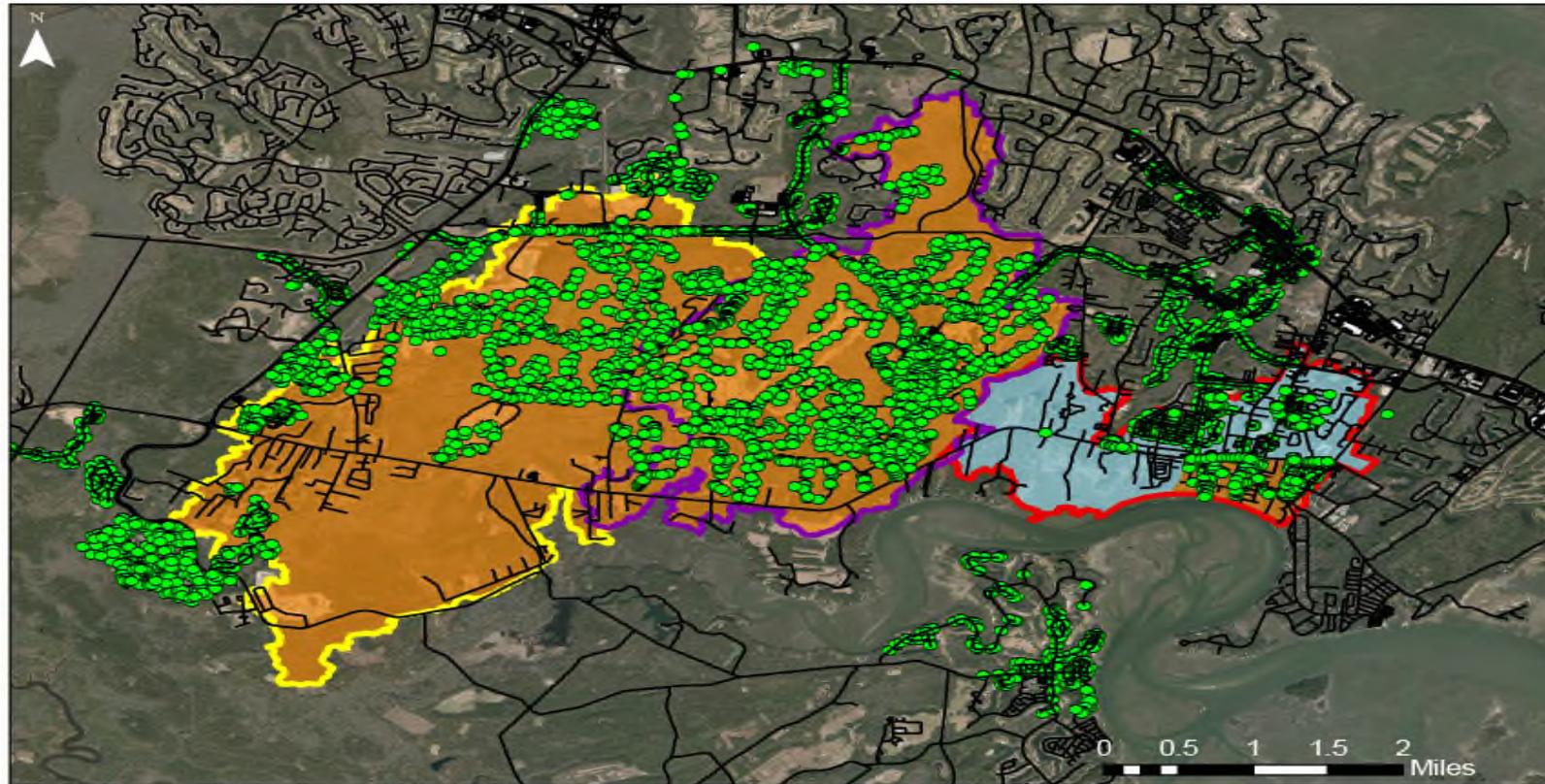


ACTIVITY - POLICY	STATUS
May River Watershed Action Plan Update	Proposals to complete MRWAP Update water quality model, current project assessment, and proposed new projects were received 4/1/19 and reviewed. Contract pending Council action 5/14/19.
Sewer Connection & Extension Policy	Completed 2018. 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	Completed Buck Island/Simmons Road (BIS) Phases I, II, III, IV; Toy Fields; and Jason/Able. 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)	Completed in 2013.
May River 319 Grant Phase 2 - Pine Ridge (Grant award of \$290,000 in 2011)	Completed in 2016.
May River 319 Grant Phase 3 - Town Hall Parking Retrofit (Grant award of \$231,350 in 2016)	Final phase of Town Hall Parking Lot Retrofit is under construction.
Stoney Creek Wetlands Restoration: Preliminary Design Phase	Project on hold following Council direction on 5/31/17.
May River Watershed Water Quality Model	Included in May River Watershed Action Plan Update.
ACTIVITY - FINANCIAL	STATUS
Additional Funding Opportunities	Exploring partnership opportunities with BJWSA for future sewer phases. WAPAC unanimously recommended on 3/28/19 for Town Council to consider changing the rate structure to Option E at \$98 for tax year 2019. Staff 319 grant pre-proposal in support of sewer lateral connections for May River Road and Historic District Phases 1 and 2 was invited to submit a full proposal due 5/22/19.
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. Current updates are included in Engineering Consent Agenda and Attachment 3.
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. Current updates are included in Engineering Consent Agenda Attachment 4a.

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 Current updates are included in Engineering Consent Agenda Attachments 1, 4b, 4c, and 4d.
Construction Site Stormwater Runoff Control Program (MS4 Minimum Control Measure #4)	Sediment and erosion control inspections with escalating enforcement response. Current updates are included in Engineering Consent Agenda Attachment 5.
Stormwater Plan Review & Related Activity Program (MS4 Minimum Control Measure #5)	SCDHEC delegated plan review-related activities. Current updates are included in Engineering Consent Agenda Attachment 6.
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. Current updates are included in Engineering Consent Agenda Attachment 7 and under "Public Works."
Septic System Maintenance Program	On-going assistance offered to Town residents regardless of financial status through Neighborhood Assistance Program. Current updates, as reported by NAP, are included in Engineering Consent Agenda Attachment 9.
Sewer Connection Program	<i>Completed 2018.</i> Staff 319 grant pre-proposal in support of sewer lateral connections for May River Road and Historic District Phases 1 and 2 was invited to submit a full proposal due 5/22/19.

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

Stormwater Inventory Collection



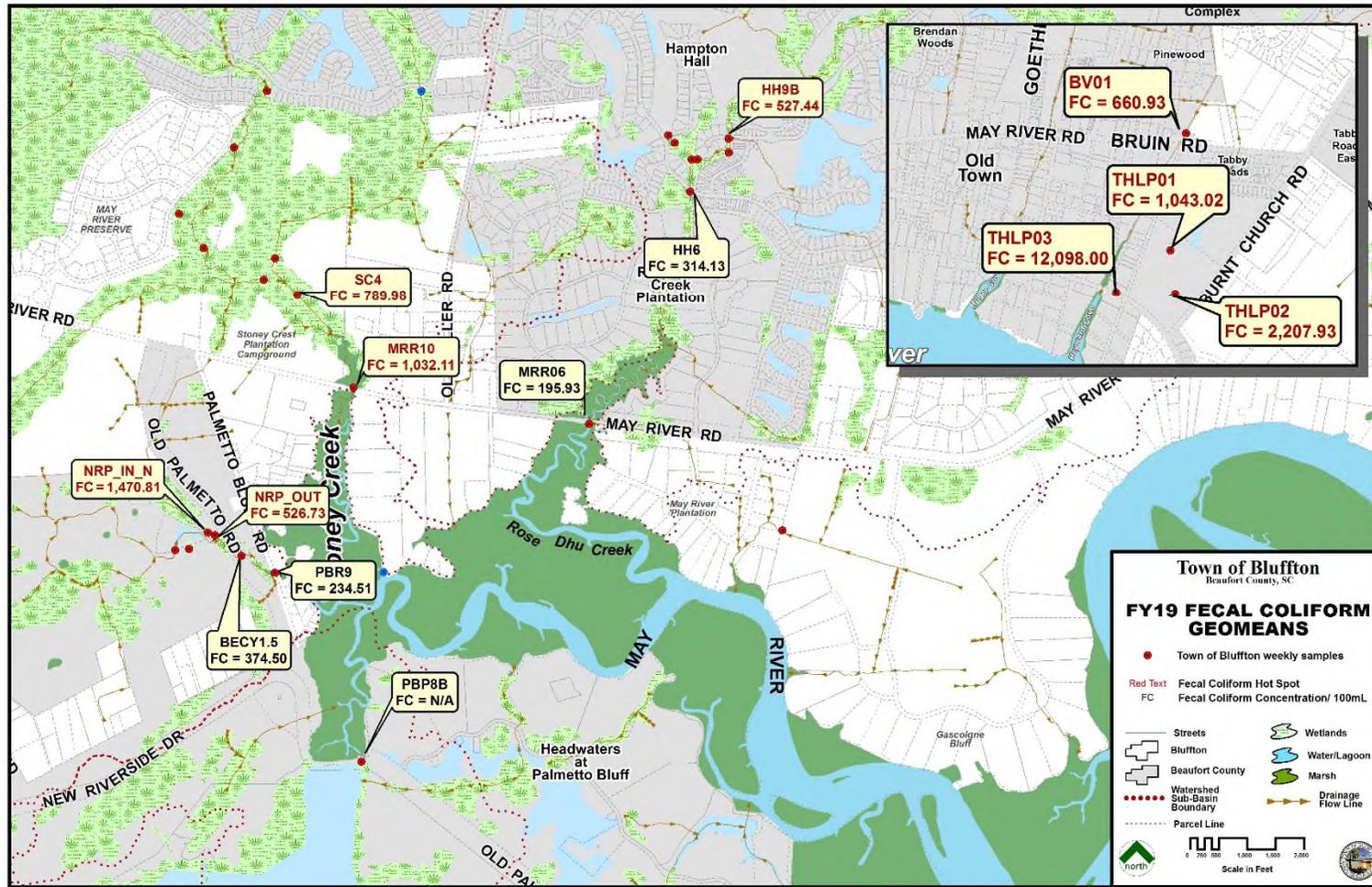
Collection Status

- 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 in collaboration with the Town of Bluffton's GIS Department and is intended for informational purposes only. The Town of Bluffton does not warrant the accuracy, reliability, or availability of the information or data presented on this map. The Town of Bluffton is not responsible for any errors or omissions in this map or for any consequences arising therefrom.

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

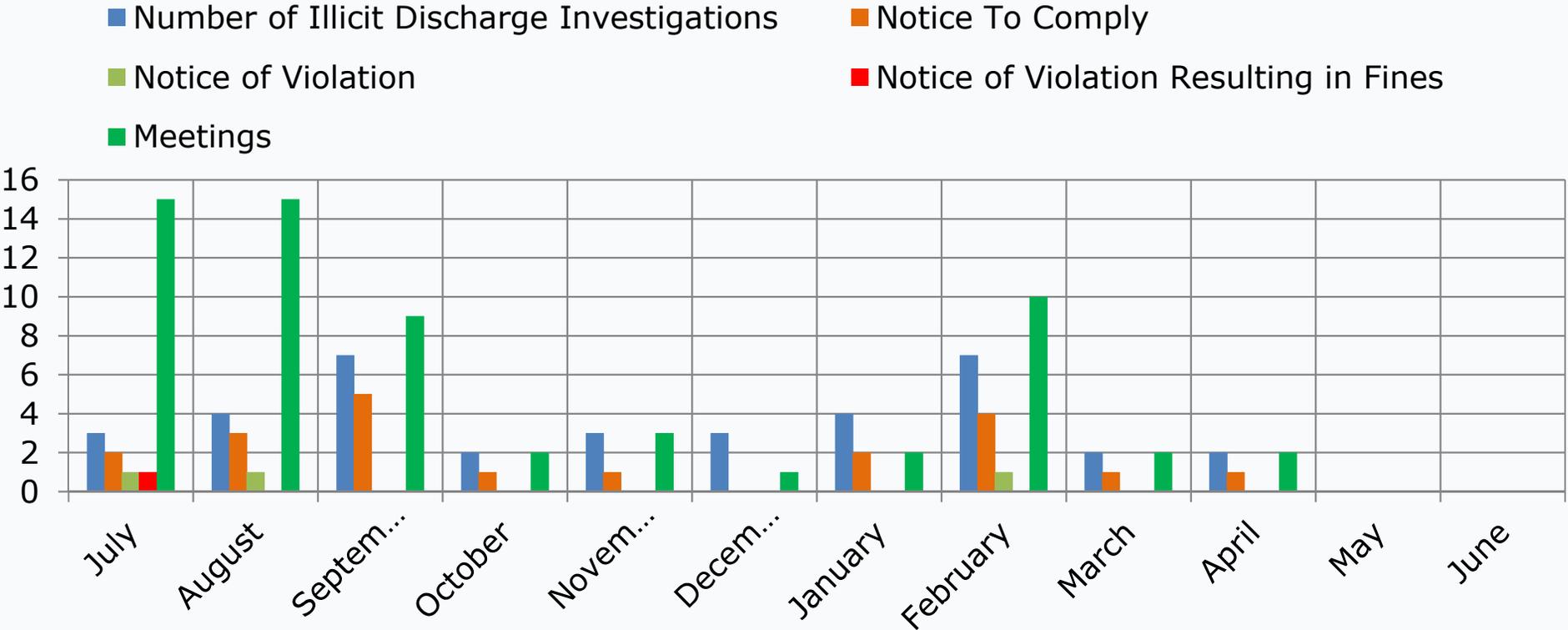


	USCB Water Quality Samples	Microbial Source Tracking Samples	MS4 Quarterly Samples Collected
FY 2019 YTD Totals	184	134	152
FY 2018 Totals	216	217	224
FY 2017 Totals	307	179	224
FY 2016 Totals	668	11	-

4/23/2019

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

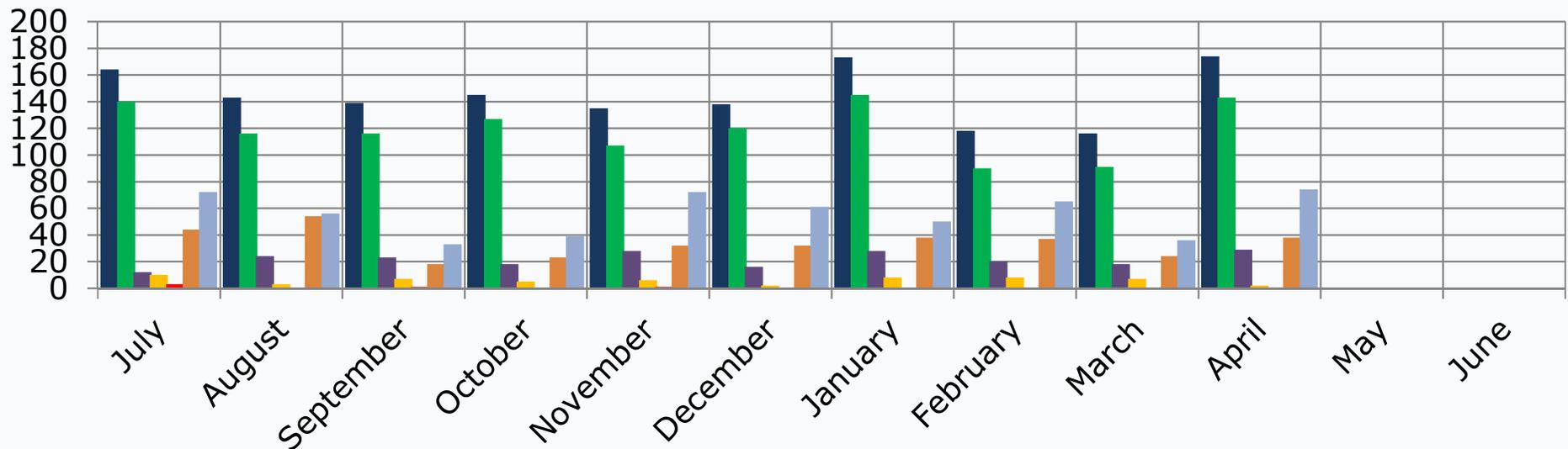
MS4 Minimum Control Measure #3 – IDDE: Illicit Discharge Investigations



	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

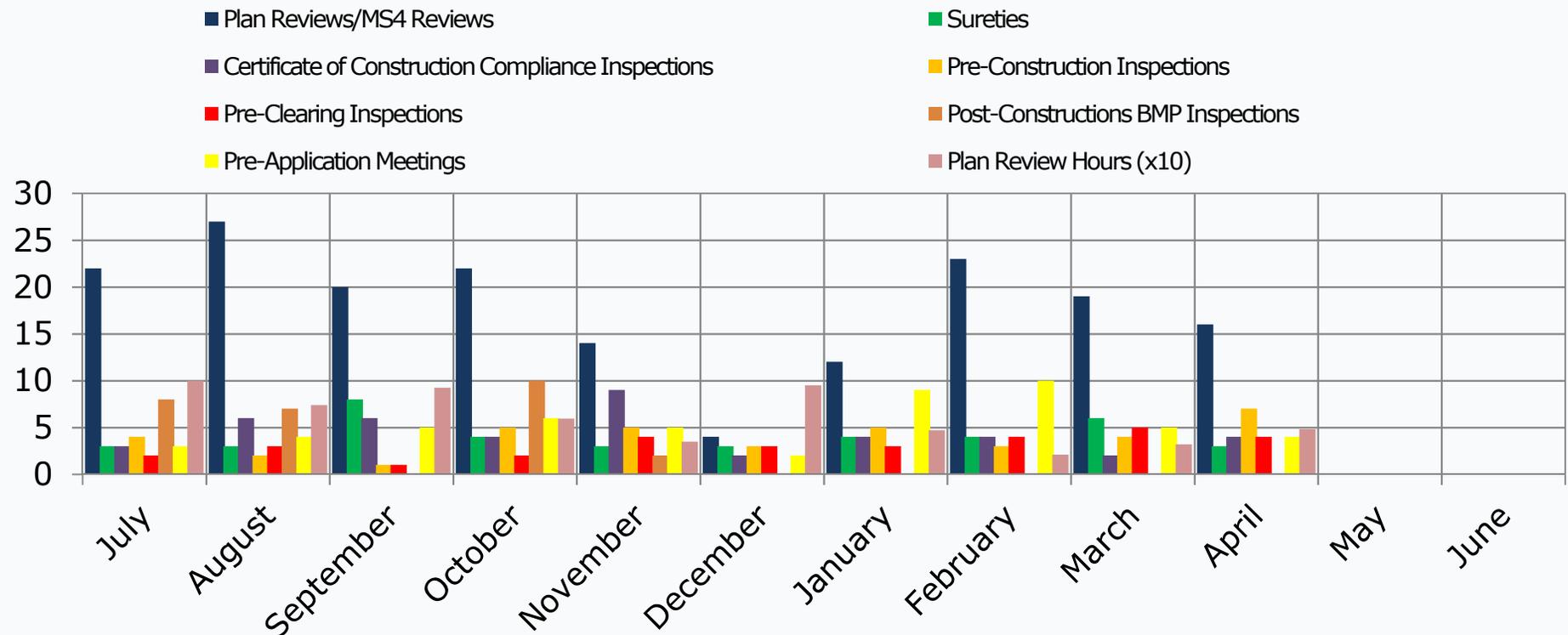
MS4 Minimum Control Measure #4 - Construction Site Stormwater Runoff Control

- Erosion & Sediment Control Inspections (E&SC)
- Number of Inspections Passed
- Number of Notice To Comply (NTC)
- Number of Notice of Violation (NOV)
- Number of Fines for Notice of Violation
- Number of Erosion & Sediment Control Meetings



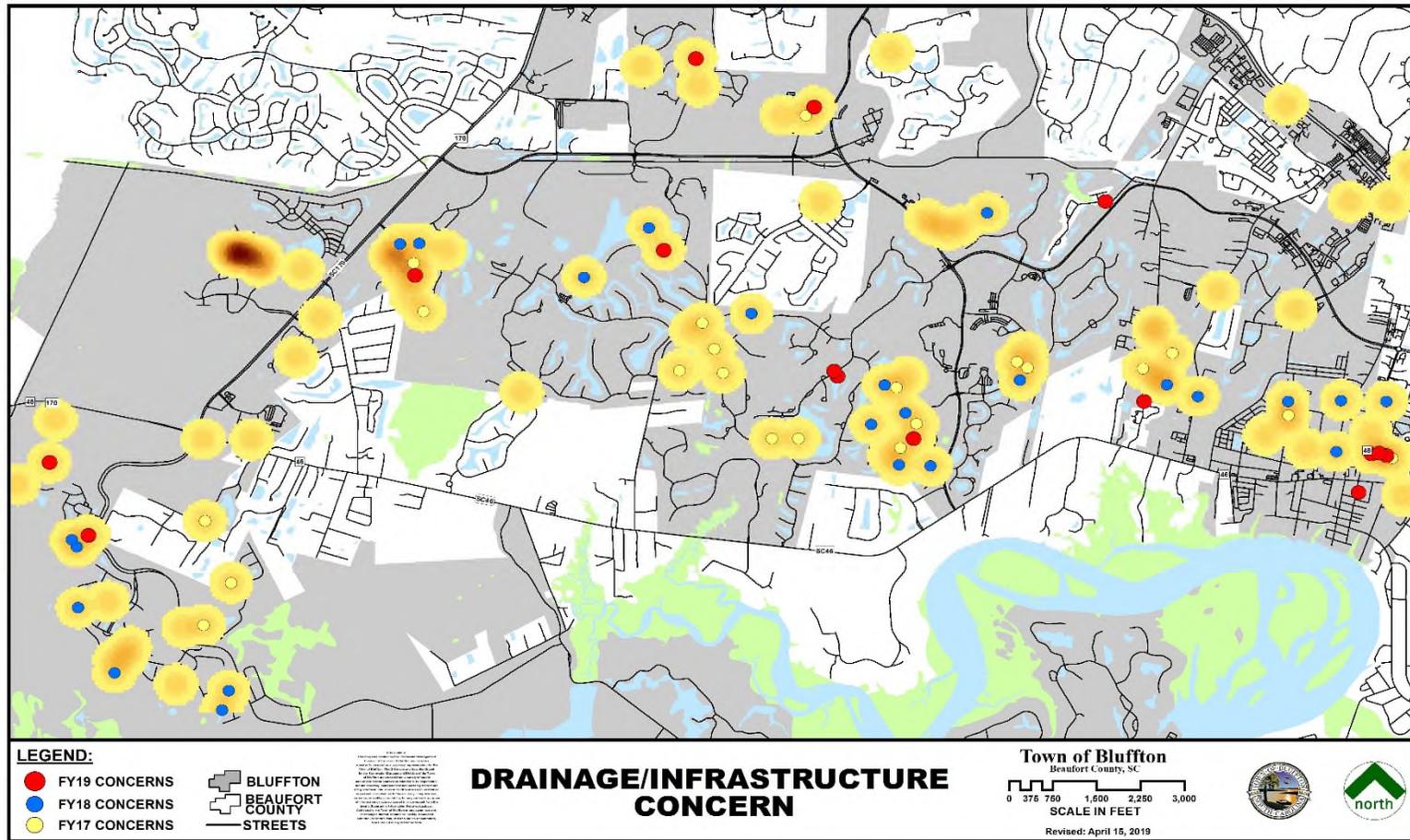
	Number of Sediment & Erosion Control Inspections	Number of Inspections Passed	Number of NTC Issued	Number of NOV Issued	Number of NOV Enforcement Actions	Number of E&SC Meetings
FY 2019 YTD Totals	1445	1195	216	58	5	476
FY 2018 Totals	1504	1159	300	83	10	499
FY 2017 Totals	1,219	862	233	58	10	237

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



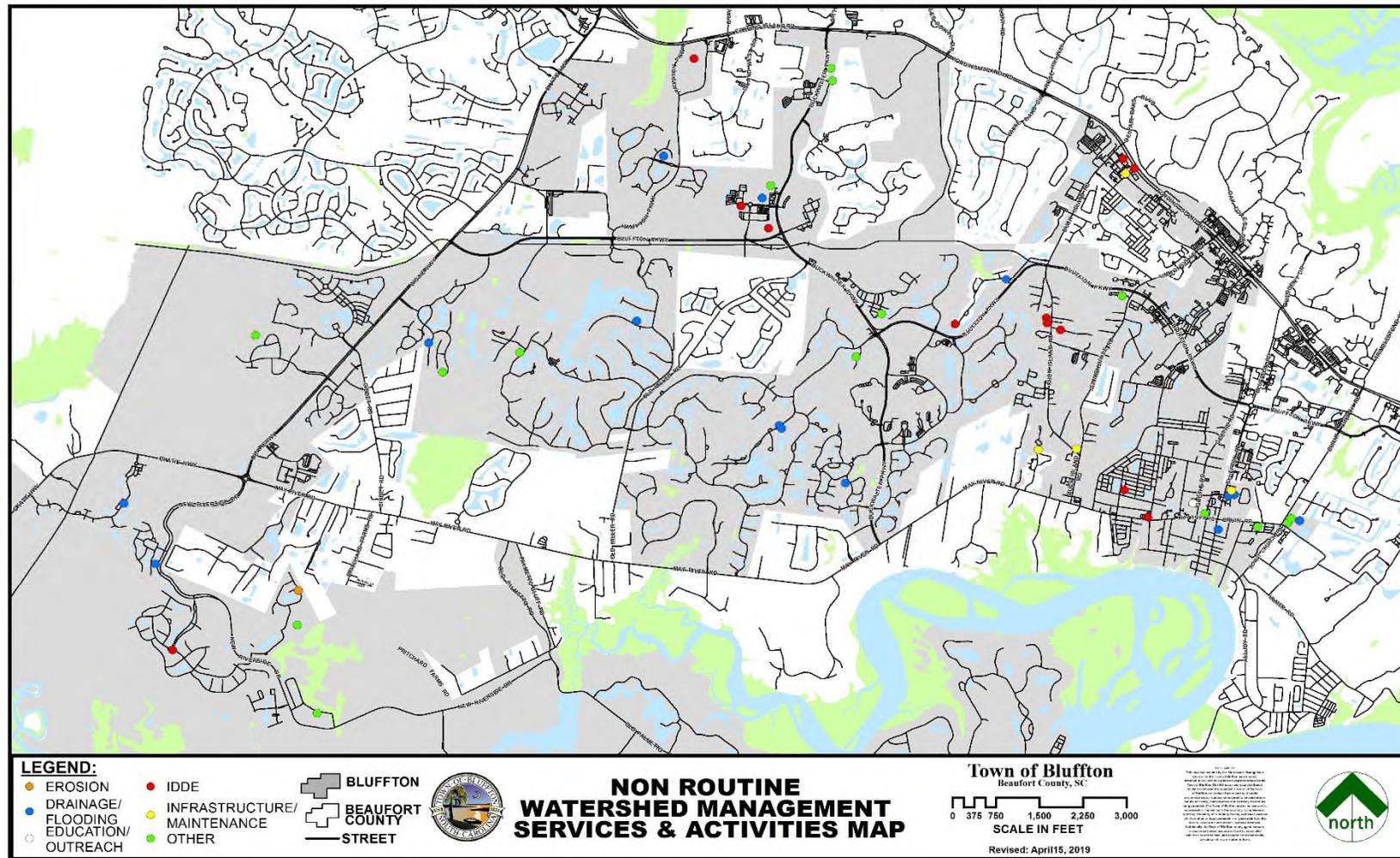
	Plan Reviews MS4 Reviews	Sureties	Certificate of Construction Compliance Inspections	Pre-Construction Meetings	Pre-Clearing Inspections	Post Construction BMP Inspections	Pre-Application Meetings	Total Plan Review Hours
FY 2019 YTD Totals	179	41	46	42	34	27	53	603 Hrs.
FY 2018 Totals	242	59	50	32	32	88	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)



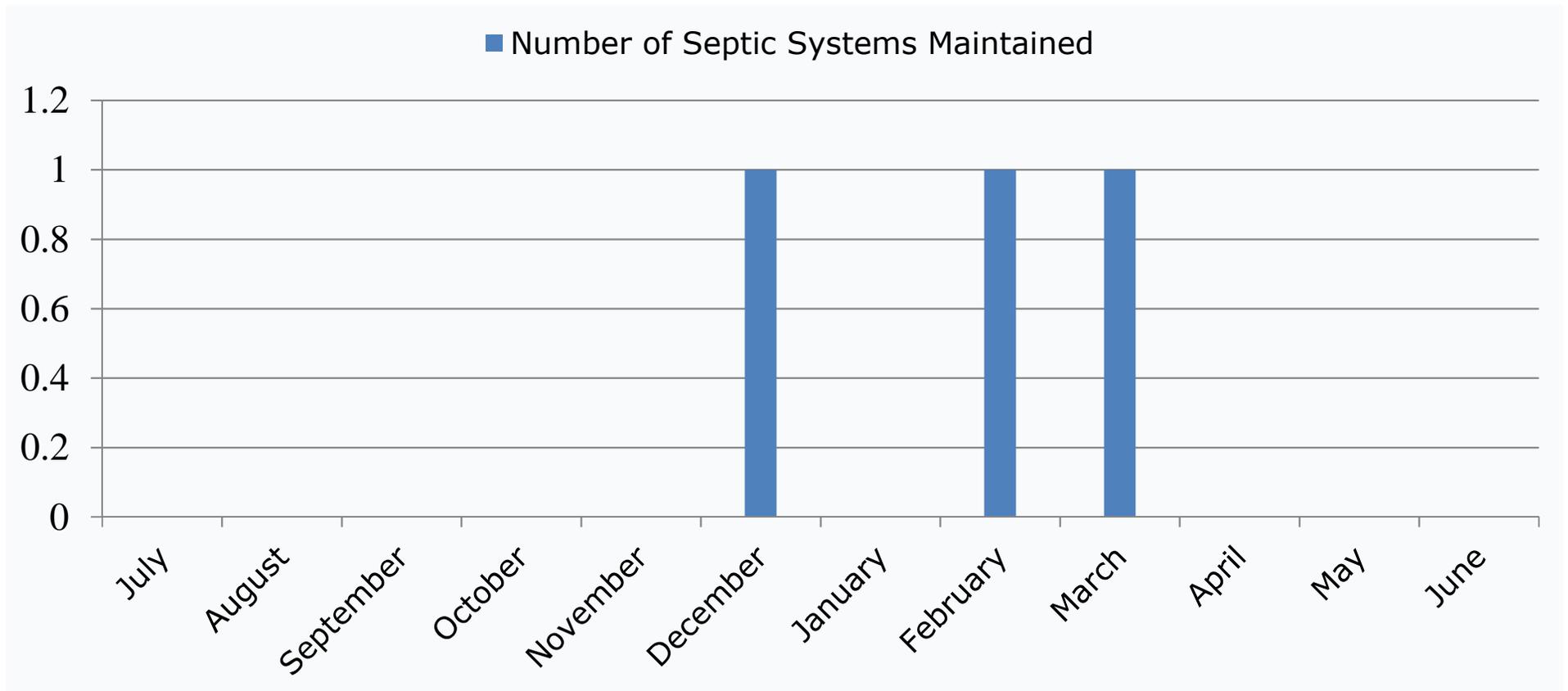
	Number of Drainage Concerns Investigated	Number of Meetings
FY 2019 YTD Totals	47	39
FY 2018 Totals	48	75
FY 2017 Totals	72	80

Citizen Request for Watershed Mngt. Services & Activities Map



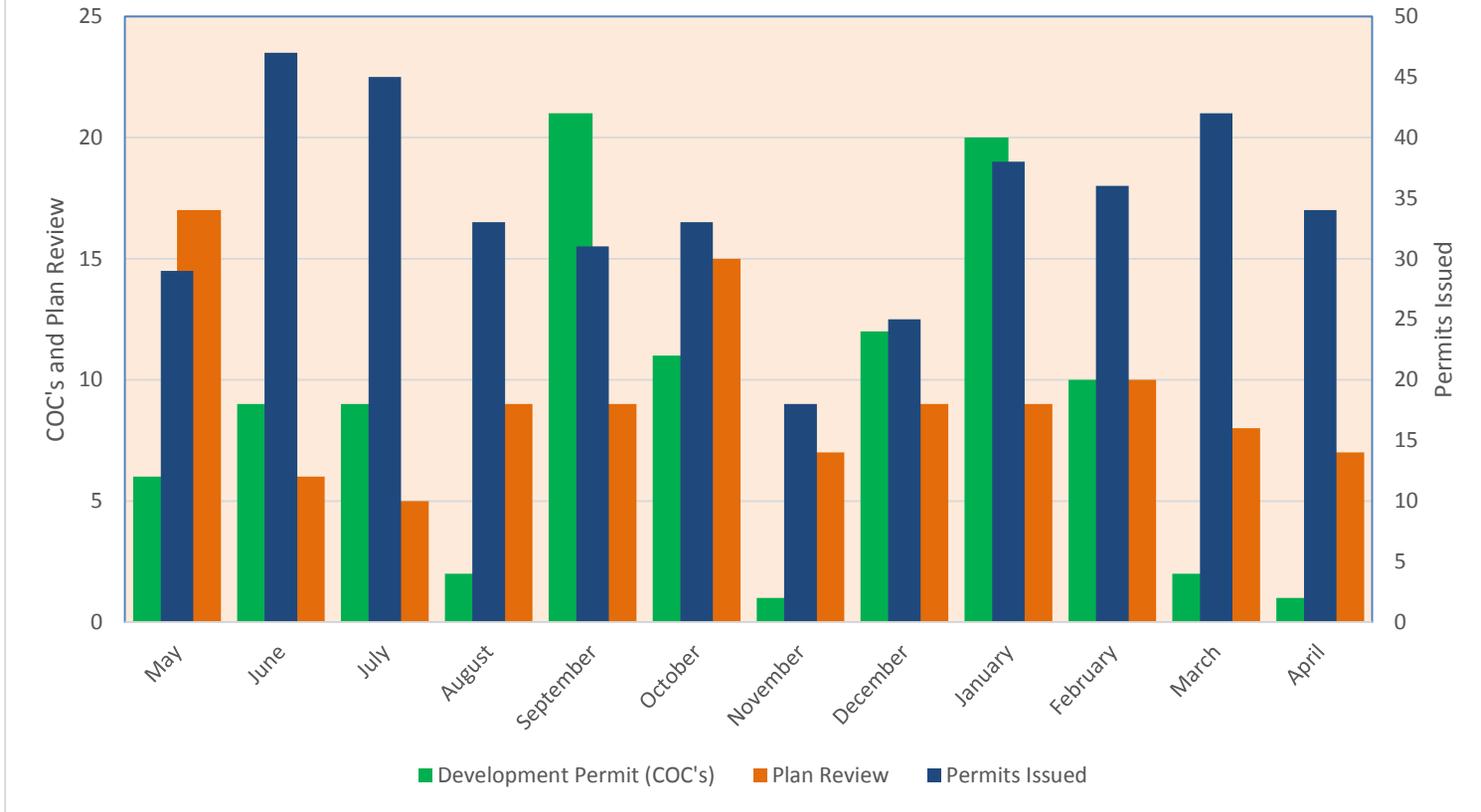
	Number of Citizen Requests Investigated	Number of Meetings
FY 2019 YTD Totals	49	52
FY 2018 Totals	75	79
FY 2017 Totals	53	82

Septic System Maintenance Assistance



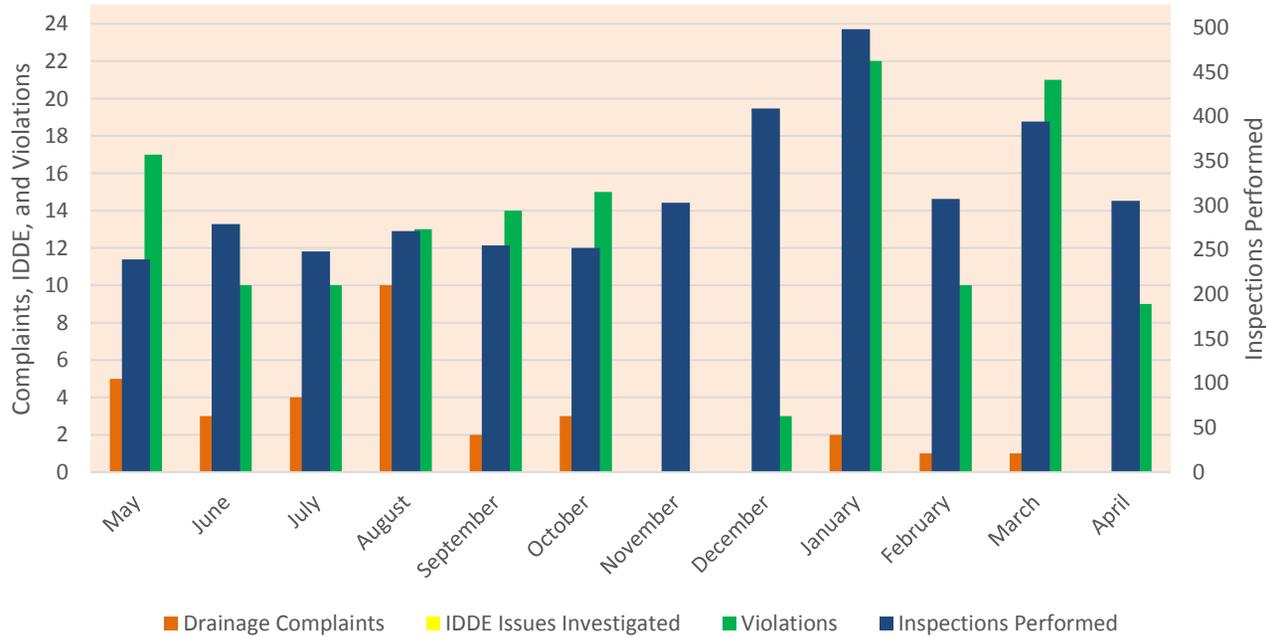
	Number of Septic Systems Maintained
FY 2019 YTD Totals	4
FY 2018 Totals	16
FY 2017 Totals	18

MS4 Minimum Control Measure #5 Stormwater Plan Review



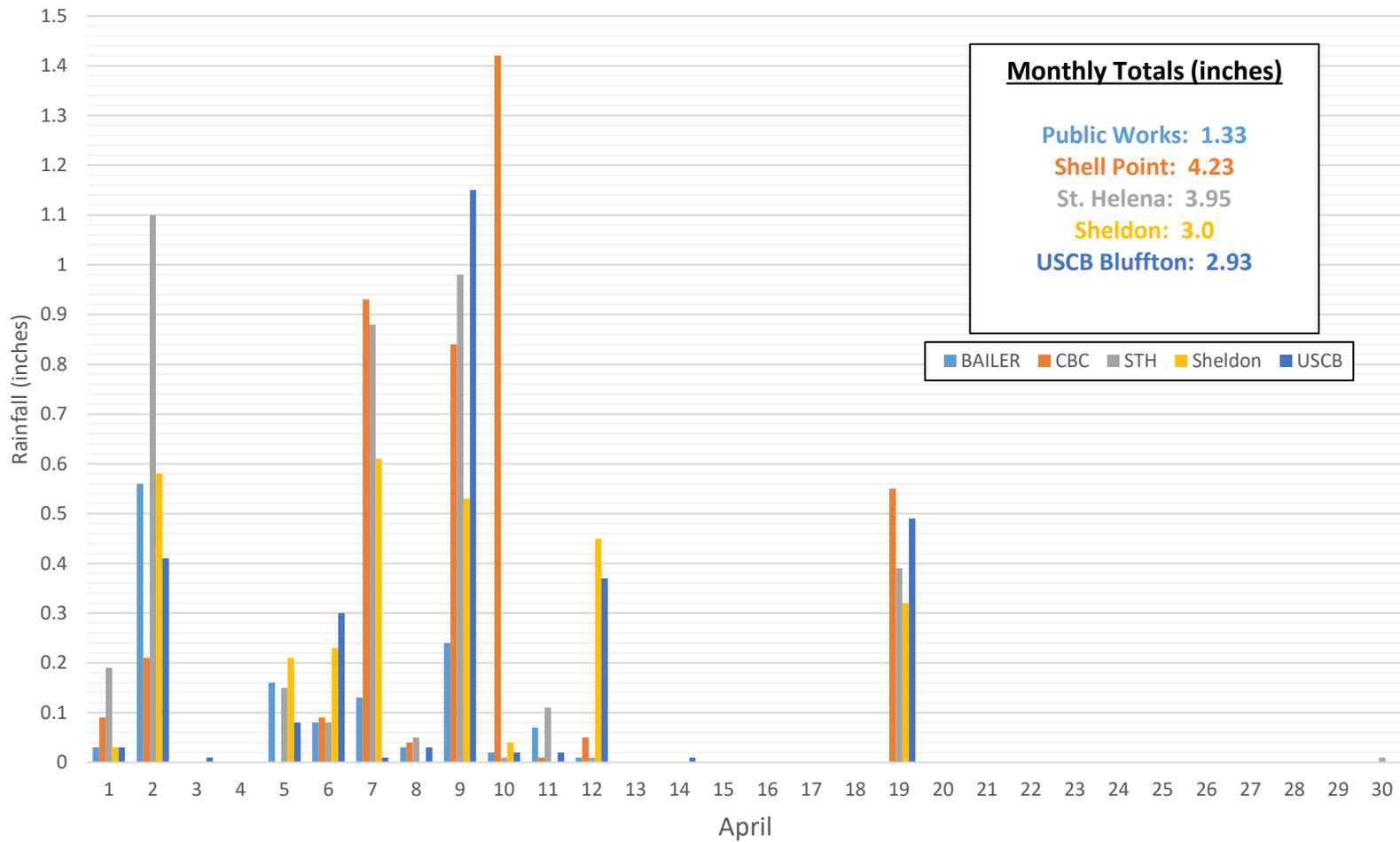
TYPE	May	June	July	August	September	October	November	December	January	February	March	April	Last 12 Months
Development Permit (COC's)	6	9	9	2	21	11	1	12	20	10	2	1	59
Plan Review	17	6	5	9	9	15	7	9	9	10	8	7	104
Permits Issued	29	47	45	33	31	33	18	25	38	36	42	34	236

MS4 Minimum Control Measure #4 Erosion Sediment Control Inspections



TYPE	May	June	July	August	September	October	November	December	January	February	March	April	Last 12 Months
Inspections Performed	239	279	248	271	255	252	303	409	498	307	394	305	3760
Drainage Complaints	5	3	4	10	2	3	0	0	2	1	1	0	27
IDDE Issues Investigated	1	0	1	2	1	2	0	1	0	1	0	1	10
Violations	17	10	10	13	14	15	0	3	22	10	21	9	79

Beaufort County Weather Stations Daily Rainfall Amounts - April 2019





MEMORANDUM

Date: May 10, 2019

To: Stormwater Management Utility Board

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

Re: **Maintenance Project Report**

This report will cover seven major projects and ten minor projects. The Project Summary Reports are attached.

Major Project:

- **Bellinger Bluff Road Channel – Bluffton (SWUD 4):** This project improved 1,100 feet of drainage system. The scope of work included grubbing and clearing 1,100 feet of workshelf, constructing and cleaning out 1,100 feet of channel, removing a blockage from flowline and handseeding for erosion control. The total cost was **\$72,245.08**.
- **Huspah Drive and Fire Station Lane Channel - Sheldon (SWUD 5):** This project improved 2,960 feet of drainage system. The scope of work included grubbing and clearing 1,085 of workshelf, Bush hogging 1,330 feet of workshelf, reconstructing 75 feet of workshelf, cleaning out 1,630 feet of channel, installing 1 access pipe, 1 access gate, jetting 1 crossline pipe and hydroseeding for erosion control. The total cost was **\$44,777.29**.
- **Dolphin Point Drive – Lady’s Island (SWUD 7):** This project improved 500 feet of drainage system. The scope of work included grubbing and clearing 460 workshelf, cleaned out 500 feet of channel, installing 2 access pipes, rip rap and hydroseeding for erosion control. The total cost was **\$25,847.97**.
- **Halifax Drive – St Helena Island (SWUD 8):** This project improved 4,775 feet of drainage system. The scope of work included cleaning out 4,775 feet of roadside ditch, jetting 1 access pipe, 2 crossline pipes and 9 driveway pipes. The total cost was **\$18,757.55**.
- **Cape Jasmine Street – Bluffton (SWUD 4):** This project improved 5,275 feet of drainage system. The scope of work included cleaning out 5,275 feet of roadside ditch, jetting 44 driveway pipes, 3 crossline pipes and hydroseeded for erosion control. The total cost was **\$17,817.34**.
- **Dolphin Point Drive – Lady’s Island (SWUD 7):** This project improved 3,706 feet of drainage system. The scope of work included cleaning out 3,706 feet of roadside ditch and jetting 4 driveway pipes. The total cost was **\$17,798.01**.

Minor or Routine Projects:

- **Port Royal Island Bush Hog – Port Royal Island (SWUD 6):** This project improved 107,243 feet of drainage system. The scope of work included bush hogging 105,780 feet of channel and 1,463 feet of roadside ditch. The total cost was **\$62,149.56.**
- **St Helena Island Bush Hog – St Helena Island (SWUD 8):** This project improved 57,049 feet of drainage system. The scope of work included bush hogging 55,543 feet of channel and 1,506 feet of roadside ditch. The total cost was **\$35,963.90.**
- **Sheldon Bush Hog – Sheldon (SWUD 5):** This project improved 75,560 of drainage system. The scope of work included bush hogging 75,560 feet of channel. The total cost was **\$35,182.12.**
- **Gibson Drive – Town of Hilton Head (SWUD 3):** This project improved 312 feet of drainage system. The scope of work included cleaning out 4 catch basins, installing 120 feet of channel pipe, jetting 2 crossline pipes, 8 feet of channel pipe and 184 feet of roadside pipe, installing rip rap and hydroseeding for erosion control. The total cost was **\$12,193.59.**
- **Milledge Village Road – Port Royal Island (SWUD 9):** This project improved 4,554 feet of drainage system. The scope of work included cleaning out 4,262 feet of roadside ditch, 1 catch basin, jetting 31 driveways, 2 crossline pipes, 292 feet of roadside pipe, hydroseeded for erosion control. The total cost was **\$10,952.46.**
- **Seigler Road Channel 1 – Sheldon (SWUD 5):** This project improved 150 feet of drainage system. The scope of work included cleaning out 150 feet of channel, replacing 1 flap gate and installing rip rap for erosion control. The total cost was **\$8,586.39.**
- **Port Royal Island Valley Drains – Port Royal Island (SWUD 6):** This project improved 10,102 feet of drainage system. The scope of work included cleaning out 10,102 feet of valley drains. The total cost was **\$6,968.24.**
- **Lady’s Island Vacuum Truck– Lady’s Island (SWUD 7):** This project improved 156 feet of drainage system. The scope of work included cleaning out 3 catch basins, jetting 25 driveway pipes, 11 crossline pipes and 156 feet of channel pipe. The total cost was **\$6,867.74.**
- **Port Royal Island Vacuum Truck – Port Royal Island (SWUD 9):** This project improved 262 feet of drainage system. The scope of work included cleaning out 1 catch basin, jetting 6 crossline pipes, 5 driveway pipes, 1 access pipe, 164 feet of channel pipe and 98 feet of roadside pipe. The total cost was **\$6,093.26.**
- **Browns Island Road – Sheldon (SWUD 5):** The project improved 893 feet of drainage system. The scope of work included cleaning out 398 feet of roadside ditch, 495 of channel, jetting 1 driveway pipe and 2 crossline pipes. The total cost was **\$5,184.05.**



Beaufort County Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Bellinger Bluff Road Channel

Activity: Drainage Improvement

Duration: 12/18/17-03/08/18

Narrative Description of Project:

Project improved 1,100 L.F. of drainage system. Grubbed and cleared 1,100 L.F. of workshelf. Removed blockage from flowline. Constructed and cleaned out 1,100 L.F. of channel. Handseeded for erosion control.

2018-004 / Bellinger Bluff

	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AUDIT / Audit Project	2.0	\$43.58	\$0.00	\$0.00	\$0.00	\$0.00	\$43.58
CCO / Channel - cleaned out	50.0	\$1,127.10	\$367.38	\$68.66	\$0.00	\$543.20	\$2,106.34
CCON / Channel - constructed	339.0	\$7,756.23	\$1,791.68	\$789.05	\$0.00	\$3,795.10	\$14,132.06
DEBREM / Debris Removal - Jobsite	115.0	\$2,683.45	\$566.67	\$86.33	\$0.00	\$1,497.30	\$4,833.75
HAND / HANDSEDED	15.0	\$338.91	\$11.52	\$160.58	\$0.00	\$163.59	\$674.60
HAUL / Hauling	307.0	\$6,658.64	\$2,703.53	\$4,291.32	\$0.00	\$2,713.79	\$16,367.28
LM / Loading Materials	297.0	\$6,573.75	\$2,451.44	\$1,016.16	\$0.00	\$3,001.13	\$13,042.48
PL / Project Layout	20.0	\$469.80	\$84.83	\$126.42	\$0.00	\$266.30	\$947.35
RB / Remove blockage from flowline	40.0	\$861.45	\$137.39	\$32.67	\$0.00	\$393.70	\$1,425.21
RMTRW / Remove trees - Workshelf	100.0	\$2,291.30	\$627.13	\$127.13	\$0.00	\$1,158.50	\$4,204.06
STAGING / Staging Materials/Equipment	40.0	\$1,126.70	\$36.00	\$22.88	\$0.00	\$543.20	\$1,728.78
STBY / Stand By	8.0	\$197.60	\$75.36	\$41.22	\$0.00	\$131.76	\$445.94
UTLOC / Utility locates	1.5	\$37.05	\$6.03	\$10.40	\$0.00	\$19.85	\$73.33
WSGRB / Workshelf - Grubbed	169.0	\$3,963.24	\$1,883.59	\$488.93	\$0.00	\$2,298.87	\$8,634.63
WSL / Workshelf - Level	50.0	\$1,143.00	\$223.64	\$1,673.76	\$0.00	\$545.30	\$3,585.70
2018-004 / Bellinger Bluff Sub Total	1,553.50	\$35,271.80	\$10,966.19	\$8,935.51	\$0.00	\$17,071.58	\$72,245.08
Grand Total	1,553.50	\$35,271.80	\$10,966.19	\$8,935.51	\$0.00	\$17,071.58	\$72,245.08

Before



During



After



Project: Bellinger Bluff Road Channel

Activity: Drainage Improvement

Project #: 2018-004

Township/SW Dist: Bluffton/4

Completed: March 2018



Grubbed and cleared 1,100 LF of workshelf. Constructed and cleaned out 1,100 LF of channel. Handseeded for erosion control.

Removed blockage from flowline.

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: 02/17/19

File: C:\project summaries map\Bellinger Bluff Road Channel_2018-004



Beaufort County Public Works
Stormwater Infrastructure
 Project Summary

Project Summary: Huspah Drive and Fire Station Lane Channel

Activity: Routine/Preventive Maintenance

Duration: 03/21/18-08/01/18

Narrative Description of Project:

Project improved 2,960 L.F. of drainage system. Grubbed and cleared 1,085 L.F. of workshelf. Bush hogged 1,330 L.F. of workshelf. Reconstructed 75 L.F. of workshelf. Cleaned out 1,630 L.F of channel. Installed (1) access pipe and (1) access gate. Jetted (1) crossline pipe. Hydroseeded for erosion control.

2018-005 / Huspah Drive/ Fire Station Lane

	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AGI / Access Gate - Installed	9.0	\$200.55	\$11.52	\$52.67	\$0.00	\$129.30	\$394.04
APINS / Access pipe - installed	40.0	\$806.40	\$203.08	\$385.14	\$0.00	\$376.50	\$1,771.12
AUDIT / Audit Project	2.0	\$43.58	\$0.00	\$0.00	\$0.00	\$0.00	\$43.58
CCO / Channel - cleaned out	167.0	\$3,750.83	\$942.29	\$277.41	\$0.00	\$2,170.87	\$7,141.40
CLPJT / Crossline Pipe - Jetted	4.0	\$89.12	\$17.36	\$23.40	\$0.00	\$57.36	\$187.24
DEBREM / Debris Removal - Jobsite	80.0	\$1,842.60	\$1,201.43	\$131.52	\$0.00	\$829.50	\$4,005.05
HAUL / Hauling	214.0	\$4,872.79	\$1,926.39	\$6,443.37	\$0.00	\$2,110.91	\$15,353.46
HYDR / Hydroseeding	10.0	\$204.60	\$42.88	\$1,059.31	\$0.00	\$127.20	\$1,433.99
ONJV / Onsite Job Visit	3.0	\$161.46	\$10.80	\$6.24	\$0.00	\$56.16	\$234.66
PP / Project Preparation	30.0	\$645.30	\$38.40	\$18.17	\$0.00	\$266.70	\$968.57
RMTRW / Remove trees - Workshelf	60.0	\$1,443.20	\$549.63	\$128.62	\$0.00	\$821.80	\$2,943.25
STAGING / Staging Materials/Equipment	40.0	\$859.60	\$38.40	\$31.20	\$0.00	\$521.10	\$1,450.30
WSBH / Workshelf - Bush Hogged	44.0	\$1,022.71	\$541.98	\$105.32	\$0.00	\$570.68	\$2,240.69
WSDR / Workshelf - Dressed	15.0	\$334.15	\$99.20	\$22.90	\$0.00	\$214.65	\$670.90
WSGRB / Workshelf - Grubbed	60.0	\$1,398.30	\$565.10	\$96.77	\$0.00	\$687.40	\$2,747.57
WSL / Workshelf - Level	40.0	\$932.20	\$162.00	\$79.71	\$0.00	\$543.20	\$1,717.11
WSREP / Workshelf - Repair	30.0	\$721.60	\$282.55	\$59.31	\$0.00	\$410.90	\$1,474.36
2018-005 / Huspah Drive/ Fire Station Lane Sub Total	848.0	\$19,328.99	\$6,633.01	\$8,921.06	\$0.00	\$9,894.23	\$44,777.29
Grand Total	848.0	\$19,328.99	\$6,633.01	\$8,921.06	\$0.00	\$9,894.23	\$44,777.29



Project: Huspah Drive and Fire Station Lane Channel Map #1

Activity: Routine/ Preventive Maintenance

Project #: 2018-005

Township/SW Dist: Sheldon/5

Completed: August 2018



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



1 inch = 250 feet

Prepared By: BC Stormwater Management Utility

Date Print: 02/21/19

File: C:\es project summaries map/Huspah Drive/ Fire Station Lane Channel Map #1_2018-005

Project: Huspah Drive and Fire Station Lane Channel Map #2

Activity: Routine/ Preventive Maintenance

Project #: 2018-005

Township/SW Dist: Sheldon/5

Completed: August 2018



Legend	
	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: 02/21/19

File: C:\es project summaries map/Huspah Drive/ Fire Station Lane Channel Map #2_2018-005



Beaufort County Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Dolphin Point Drive

Activity: Routine/Preventive Maintenance

Duration: 04/12/18-06/25/18

Narrative Description of Project:

Project improved 500 L.F. of drainage system. Grubbed and cleared 460 L.F. of workshelf. Cleaned out 500 L.F. of channel. Installed (2) access pipes, rip rap and hydroseeded for erosion control.

2018-599 / Dolphin Point Drive

	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AUDIT / Audit Project	1.5	\$32.69	\$0.00	\$0.00	\$0.00	\$0.00	\$32.69
CCO / Channel - cleaned out	80.0	\$1,864.40	\$383.39	\$96.88	\$0.00	\$1,086.40	\$3,431.07
DEBRIS / Debris Removal	77.0	\$1,782.96	\$299.73	\$69.05	\$0.00	\$1,043.14	\$3,194.88
HAUL / Hauling	102.0	\$2,256.66	\$932.58	\$2,158.25	\$0.00	\$1,233.49	\$6,580.98
HYDR / Hydroseeding	32.0	\$754.74	\$84.32	\$2,820.91	\$0.00	\$435.96	\$4,095.93
UTLOC / Utility locates	1.0	\$24.70	\$0.00	\$0.00	\$0.00	\$13.23	\$37.93
WDR / Wash down road	4.0	\$89.12	\$17.36	\$20.32	\$0.00	\$57.36	\$184.16
WSDR / Workshelf - Dressed	38.0	\$990.31	\$123.47	\$102.43	\$0.00	\$513.04	\$1,729.25
WSGRB / Workshelf - Grubbed	120.0	\$2,796.60	\$536.29	\$504.04	\$0.00	\$1,629.60	\$5,466.53
WSL / Workshelf - Level	26.0	\$613.12	\$59.60	\$68.61	\$0.00	\$353.22	\$1,094.55
2018-599 / Dolphin Point Drive Sub Total	481.5	\$11,205.30	\$2,436.74	\$5,840.50	\$0.00	\$6,365.44	\$25,847.97
Grand Total	481.5	\$11,205.30	\$2,436.74	\$5,840.50	\$0.00	\$6,365.44	\$25,847.97

Before



During



After





Project: Dolphin Point Drive

Activity: Routine/ Preventive Maintenance

Project #: 2018-599

Township/SW Dist: Lady's Island/7

Completed: June 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:03/29/19

File:C:\project summaries map\Dolphin Point Drive_2018-599



Beaufort County Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Halifax Drive

Activity: Routine/Preventive Maintenance

Duration: 07/19/18-08/14/18

Narrative Description of Project:

Project improved 4,775 L.F. of drainage system. Cleaned out 4,775 L.F. of roadside ditch. Jetted (1) access pipe, (2) crossline pipes and (9) driveway pipes.

2019-502 / Halifax Drive	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Cost	Total Cost
AUDIT / Audit Project	1.5	\$32.69	\$0.00	\$0.00	\$0.00	\$0.00	\$32.69
DPJT / Driveway Pipe - Jetted	24.0	\$546.72	\$459.84	\$67.11	\$0.00	\$354.36	\$1,428.03
HAUL / Hauling	91.5	\$2,110.69	\$1,102.44	\$368.65	\$0.00	\$529.90	\$4,111.68
PL / Project Layout	18.0	\$549.66	\$23.04	\$16.26	\$0.00	\$246.54	\$835.50
STBY / Stand By	10.0	\$228.80	\$191.60	\$22.90	\$0.00	\$148.50	\$591.80
PS / Push up soil	10.0	\$204.60	\$114.06	\$80.13	\$0.00	\$127.20	\$525.99
RSDCL / Roadside Ditch - Cleanout	220.0	\$6,611.30	\$1,309.14	\$275.10	\$0.00	\$2,998.40	\$11,193.94
UTLOC / Utility locates	1.0	\$24.70	\$0.00	\$0.00	\$0.00	\$13.23	\$37.93
2019-502 / Halifax Drive Sub Total	376.0	\$10,309.15	\$3,200.12	\$830.15	\$0.00	\$4,418.13	\$18,757.55
Grand Total	376.0	\$10,309.15	\$3,200.12	\$830.15	\$0.00	\$4,418.13	\$18,757.55

Before



During



After



Project: Halifax Drive Map #1

Activity: Routine/ Preventive Maintenance

Project #: 2019-502

Township/SW Dist: St. Helena Island/8

Completed: August 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:03/04/19
File:C:\project summaries map/Halifax Road Map #1 2019-502

Project: Halifax Drive Map #2

Activity: Routine/
Preventive
Maintenance

Project #:
2019-502

Township/SW Dist:
St. Helena Island/8

Completed:
August 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

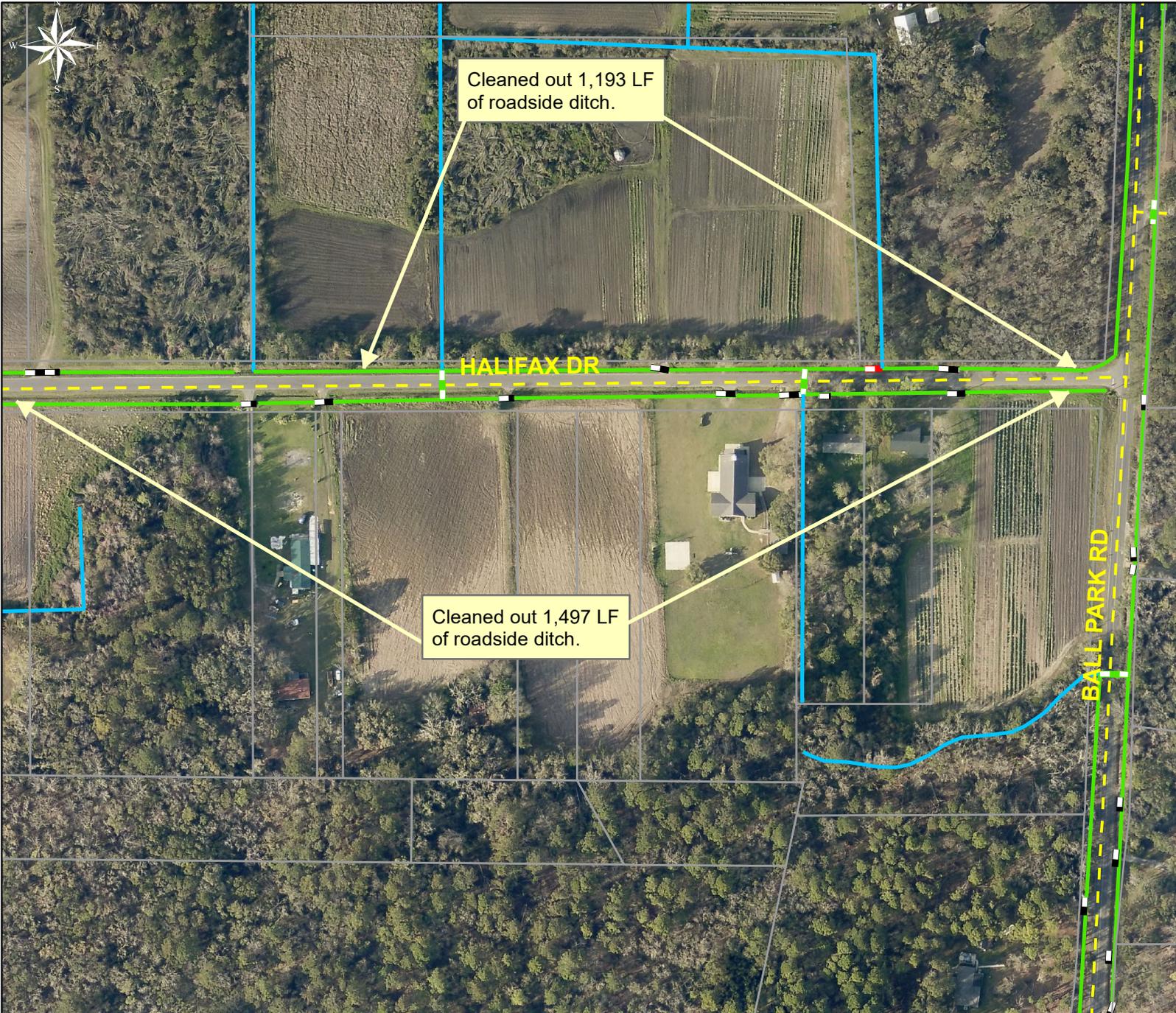
0 50 100 200 300 400
Feet

1 inch = 210 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/04/19

File: C:\project summaries map\Halifax Road Map #2 2019-502



Project: Halifax Drive Map #3

Activity: Routine/ Preventive Maintenance

Project #: 2019-502

Township/SW Dist: St. Helena Island/8

Completed: August 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: 03/04/19

File: C:\project summaries map\Halifax Road Map #3 2019-502

Project: Halifax Drive Map #4

Activity: Routine/ Preventive Maintenance

Project #: 2019-502

Township/SW Dist: St. Helena Island/8

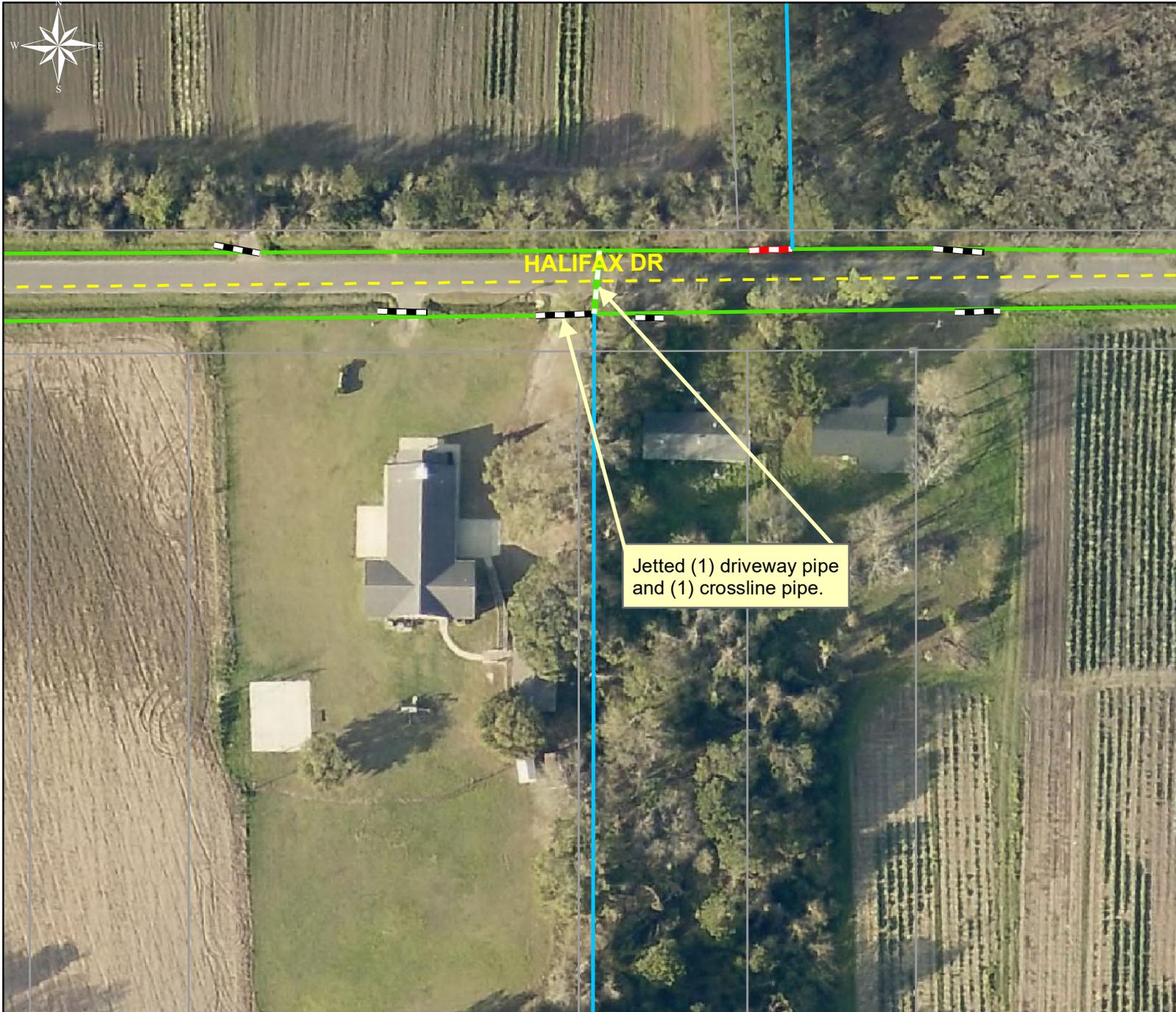
Completed: August 2018



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 = 250 feet



Project: Halifax Drive Map #5

Activity: Routine/ Preventive Maintenance

Project #: 2019-502

Township/SW Dist: St. Helena Island/8

Completed: August 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 = 83 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/04/19

File: C:\project summaries map\Halifax Road Map #5 2019-502



Beaufort County Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Cape Jasmine Street, Spirea Lane, Abelia Lane, Zinnia Lane

Activity: Routine/Preventive Maintenance

Duration: 02/11/18-02/28/19

Narrative Description of Project:

Project improved 5,275 L.F. of drainage system. Cleaned out 5,275 L.F. of roadside ditch. Jetted (44) driveway pipes and (3) crossline pipes. Hydroseeded for erosion control.

2019-549 / Cape Jasmine St., Spirea Ln., Abelia Ln., Zinnia Ln.

	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AUDIT / Audit Project	1.5	\$32.69	\$0.00	\$0.00	\$0.00	\$0.00	\$32.69
DPJT / Driveway Pipe - Jetted	42.0	\$935.76	\$804.72	\$156.52	\$0.00	\$602.28	\$2,499.28
HAUL / Hauling	73.0	\$1,625.71	\$1,033.68	\$333.76	\$0.00	\$1,052.66	\$4,045.81
HYDR / Hydroseeding	15.0	\$326.30	\$42.88	\$1,655.62	\$0.00	\$148.50	\$2,173.30
RSDCL / Roadside Ditch - Cleanout	254.0	\$5,453.98	\$1,075.19	\$291.95	\$0.00	\$2,234.25	\$9,055.37
UTLOC / Utility locates	0.5	\$10.90	\$0.00	\$0.00	\$0.00	\$0.00	\$10.90
2019-549 / Cape Jasmine St., Spirea Ln., Abelia Ln., Zinnia Ln. Sub Total	386.0	\$8,385.33	\$2,956.47	\$2,437.85	\$0.00	\$4,037.69	\$17,817.34
Grand Total	386.0	\$8,385.33	\$2,956.47	\$2,437.85	\$0.00	\$4,037.69	\$17,817.34

Before



During



After





Project : Cape Jasmine Street, Spirea Lane, Abelia Lane and Zinnia Lane Map #1

Activity: Routine/ Preventive Maintenance

Project #: 2019-549

Township/SW Dist: Bluffton/4

Completed: February 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 60 120 240 360 480 Feet

1 inch = 250 feet

Prepared By: BC Stormwater Management Utility

Date Print:04/04/19

File:C:\project summaries map\Cape Jasmine Street and Spirea Lane Map #1_2019-549



Project : Cape Jasmine Street, Spirea Lane, Abelia Lane and Zinnia Lane Map #2

Activity: Routine/ Preventive Maintenance

Project #: 2019-549

Township/SW Dist: Bluffton/4

Completed: February 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 60 120 240 360 480 Feet

1 inch = 250 feet

Prepared By: BC Stormwater Management Utility

Date Print: 04/04/19

File: C:\project summaries map\Cape Jasmine Street and Spirea Lane Map #2_2019-549



Beaufort County Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Dolphin Point Drive

Activity: Routine/Preventive Maintenance

Duration: 12/04/17-02/05/19

Narrative Description of Project:

Project improved 3,706 L.F. of drainage system. Cleaned out 3,706 L.F. of roadside ditch. Jetted (4) driveway pipes.

2019-534 / Dolphin Point Drive

	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
CLJS / Cleaned up jobsite	12.0	\$258.96	\$10.80	\$3.36	\$0.00	\$128.79	\$401.91
DEBREM / Debris Removal - Jobsite	6.0	\$133.66	\$7.20	\$8.96	\$0.00	\$85.86	\$235.68
DPJT / Driveway Pipe - Jetted	14.0	\$311.92	\$268.24	\$38.60	\$0.00	\$200.76	\$819.52
HAUL / Hauling	118.0	\$2,517.23	\$1,732.32	\$478.24	\$0.00	\$1,168.02	\$5,895.81
RSDCL / Roadside Ditch - Cleanout	274.0	\$5,913.96	\$1,164.56	\$256.52	\$0.00	\$2,935.71	\$10,270.75
STBY / Stand By	3.0	\$66.81	\$42.48	\$0.00	\$0.00	\$43.26	\$152.55
2019-534 / Dolphin Point Drive Sub Total	428.0	\$9,224.33	\$3,225.60	\$785.68	\$0.00	\$4,562.40	\$17,798.01
Grand Total	428.0	\$9,224.33	\$3,225.60	\$785.68	\$0.00	\$4,562.40	\$17,798.01

Before



During



After

(No Pictures Available)

Project: Dolphin Point Drive Map #1

Activity: Routine/ Preventive Maintenance

Project #: 2019-534

Township/SW Dist: Lady's Island/7

Completed: February 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



1 inch = 100 feet

Prepared By: BC Stormwater Management Utility
 Date Print: 04/11/19
 File: C:\project summaries map\Dolphin Point Drive Map #1_2019-534

Project: Dolphin Point Drive Map #2

Activity: Routine/ Preventive Maintenance

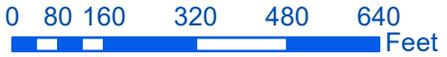
Project #: 2019-534

Township/SW Dist: Lady's Island/7

Completed: February 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



1 inch = 330 feet



Beaufort County Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Port Royal Island Bush Hog

Activity: Routine/Preventive Maintenance

Duration: 05/21/18-01/03/19

Narrative Description of Project:

First Rotation: 05/21/18-01/03/19 Project improved 107,243 L.F. of drainage system. Bush hogged 105,780 L.F. of channel and 1,463 L.F. of roadside ditch. This project consisted of the following areas: Parris Island Landing (493 L.F.), Shell Point Park (1,430 L.F.), Hale Drive (1,930 L.F.), LH Nelson Drive (3,673 L.F.), St Pauls Church Road (6,025 L.F.), Castle Rock Road (143 L.F.), Quarter Horse Road (807 L.F.), Clydesdale Circle (514 L.F.), East Manor (670 L.F.), Providence Road (2,754 L.F.), Harding Street (274 L.F.), Walker Circle (880 L.F.), VFW Fairground (870 L.F.), Elderberry Drive (231 L.F.), Donaldson Camp Road (120 L.F.), Broad River Boulevard (587 L.F.), Pinewood Circle (3,344 L.F.), Leo Green Road (1,380 L.F.), Chesterfield Lake Drive (187 L.F.), Possum Hill Road (843 L.F.) Burton Wells Pond (2,811 L.F.), Burton Wells Road (9,500 L.F.), Public Works Complex (5,416 L.F.) Schein Loop (6,490 L.F.), Pine Grove Road (1,924 L.F.), Brilliant Lane (546 L.F.), Murray Drive (132 L.F.), Franklin Drive (3,076 L.F.), Arnold Lane (1,959 L.F.), Deloach Avenue (680 L.F.), Powell Drive (2,598 L.F.), County Shed Road (1,018 L.F.), Mamie Frazer Lane (574 L.F.), Peace Haven Drive (278 L.F.), Roseida Road (1,910 L.F.), Laurel Bay Road (798 L.F.), Shanklin Road (4,407 L.F.), Zehm Lane (2,000 L.F.), Mroz Road (1,084 L.F.), Fire Station (600 L.F.), Bay Pines Road (2,040 L.F.), Parker Drive (9,789 L.F.), Hobcaw Drive (2,790 L.F.), Island Tank Road (441 L.F.), Poppy Hill Road (4,071 L.F.), Huron Drive (926 L.F.), Plantation Drive (548 L.F.), Gamecock Way (2,556 L.F.), Smalls Road (1,943 L.F.), Ihly Farm Road (4,851 L.F.), Chisholm Hill Road (1,912 L.F.) and Greenleaf Lane (420 L.F.)

2019-301 / Port Royal Island Bush Hog

	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AUDIT / Audit Project	2.0	\$43.58	\$0.00	\$0.00	\$0.00	\$0.00	\$43.58
CBH / Channel- bushhogged	1289.0	\$27,136.52	\$13,931.50	\$3,474.99	\$0.00	\$16,313.36	\$60,856.37
HAUL / Hauling	17.0	\$373.79	\$450.32	\$185.13	\$0.00	\$240.38	\$1,249.62
2019-301 / Port Royal Island Bush Hog Sub Total	1308.0	\$27,553.89	\$14,381.82	\$3,660.11	\$0.00	\$16,553.74	\$62,149.56
Grand Total	1,308.0	\$27,553.89	\$14,381.82	\$3,660.11	\$0.00	\$16,553.74	\$62,149.56

Before



During



After





Beaufort County Public Works
Stormwater Infrastructure
Project Summary

Project Summary: St Helena Island Bush Hog

Activity: Routine/Preventive Maintenance

Duration: 12/06/18-03/06/19

Narrative Description of Project:

Second Rotation: 12/06/18-03/06/19 Project improved 57,049 L.F. of drainage system. Bush hogged 55,543 L.F. of channel and 1,506 L.F. of roadside ditch. This project consisted of the following areas: Orange Grove Road (1,826 L.F.), Faith Memorial Church (1,481 L.F.), Thompson Estate Circle (1,168 L.F.), James D Washington Road (396 L.F.), Jack Johnson Road (404 L.F.), Bridgewood Road (1,850 L.F.), Storyteller Road (610 L.F.), Sycamore Hill Drive (1,484 L.F.), David Green Road (1,336 L.F.), Toomer Road (3,306 L.F.), Capers Island Road (544 L.F.), Scott Ball Field (1,814 L.F.), Scott Hill Road (6,012 L.F.), Candy Johnson Drive (646 L.F.), Peaches Hill Circle (7,958 L.F.), No Man Land Road (1,430 L.F.), Cuffy Drop Off Center (700 L.F.), Adam Church (268 L.F.), Wiggfall Road (330 L.F.), Tombee Road (1,708 L.F.), Archer Fields Lane (1,829 L.F.), Kelis Lane (4,793 L.F.), Ephraim Road (1,660 L.F.), White Sands Circle (5,350 L.F.), Shiney Road (900 L.F.), Ladson Road (1,250 L.F.), Nathan Pope Road (3,366 L.F.) and Penn Center Road (2,630 L.F.)

2019-300A / St Helena Island Bush Hog

	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AUDIT / Audit Project	1.5	\$32.69	\$0.00	\$0.00	\$0.00	\$0.00	\$32.69
CBH / Channel- bushhogged	765.0	\$17,069.03	\$6,150.66	\$1,587.01	\$0.00	\$10,849.95	\$35,656.64
HAUL / Hauling	3.0	\$66.81	\$103.92	\$60.58	\$0.00	\$43.26	\$274.57
2019-300A / St Helena Island Bush Hog Sub Total	769.5	\$17,168.52	\$6,254.58	\$1,647.59	\$0.00	\$10,893.21	\$35,963.90
Grand Total	769.5	\$17,168.52	\$6,254.58	\$1,647.59	\$0.00	\$10,893.21	\$35,963.90

Before



During



After





Beaufort County Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Sheldon Bush Hog

Activity: Routine/Preventive Maintenance

Duration: 12/04/18-03/05/19

Narrative Description of Project:

Second Rotation: 12/04/18-03/05/19 Project improved 75,560 L.F. of drainage system. Bush hogged 75,560 L.F. of channel. This project consisted of the following areas: Old Dawson Acres (1,871 L.F.), Browns Island Road (3,159 L.F.), Gum Tree Lane(2,639 L.F.), Stroup Lane (1,671 L.F.), Hunt Ter (3,288 L.F.), Middlefield Circle (6,573 L.F.), Coker Lane (1,696 L.F.), Oakhurst Road (1,282 L.F.), Spann Circle (1,802 L.F.), Coakley Drive (681 L.F.), Dan Drive (810 L.F.), Honeybee Island Road (690 L.F.), Wimbee Landing Road (11,464 L.F.), Paige Point Bluff (567 L.F.), Mitchell Road (8,620 L.F.), Priester Road (1,484 L.F.), Robinson Hill Road (2,312 L.F.), Johnson Road (4,013 L.F.), Archie Sumpter Road (1,523 L.F.), George Williams Lane (2,197 L.F.), Cuthbert Farm Road (1,615 L.F.), William A Campbell Road (403 L.F.), Fire Station Lane (428 L.F.), Huspah Drive (3,295 L.F.), Huspah Court S (2,251 L.F.), Huspah Court N (765 L.F.), Bailey Road (1,817 L.F.), Nix Road (1,116 L.F.), Bailey Circle (889 L.F.) and Lightsey Road (4,639 L.F.)

2019-303A / Sheldon Bush Hog	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
CBH / Channel- bushhogged	726.0	\$15,366.29	\$9,064.15	\$1,717.12	\$0.00	\$8,454.31	\$34,601.87
HAUL / Hauling	6.0	\$133.62	\$207.84	\$130.48	\$0.00	\$86.52	\$558.46
2019-303A / Sheldon Bush Hog Sub Total	733.0	\$15,521.70	\$9,271.99	\$1,847.60	\$0.00	\$8,540.83	\$35,182.12
Grand Total	733.0	\$15,521.70	\$9,271.99	\$1,847.60	\$0.00	\$8,540.83	\$35,182.12

Before



During



After





Beaufort County Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Gibson Drive

Activity: Routine/Preventive Maintenance

Duration: 04/19/18-05/08/18

Narrative Description of Project:

Project improved 312 L.F. of drainage system. Cleaned out (4) catch basins. Installed 120 L.F. of channel pipe. Jetted (2) crossline pipes, 8 LF of channel pipe and 184 L.F. of roadside pipe. Installed rip rap and hydroseeded for erosion control.

2018-006 / Gibson Drive

	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
CPI / Channel Pipe - Installation	120.0	\$2,559.50	\$371.40	\$1,723.90	\$0.00	\$1,357.20	\$6,012.00
CPJ / Channel Pipe - Jetted	16.0	\$356.48	\$69.44	\$72.60	\$0.00	\$229.44	\$727.96
HAUL / Hauling	45.0	\$1,075.05	\$423.90	\$954.76	\$0.00	\$710.40	\$3,164.11
HYDR / Hydroseeding	15.0	\$328.13	\$30.44	\$985.30	\$0.00	\$148.50	\$1,492.36
RRI / Rip Rap - Installed	20.0	\$433.43	\$60.40	\$47.92	\$0.00	\$214.65	\$756.39
UTLOC / Utility locates	0.5	\$12.35	\$0.00	\$0.00	\$0.00	\$6.62	\$18.97
2018-006 / Gibson Drive Sub Total	217.5	\$4,786.72	\$955.58	\$3,784.48	\$0.00	\$2,666.80	\$12,193.59
Grand Total	217.5	\$4,786.72	\$955.58	\$3,784.48	\$0.00	\$2,666.80	\$12,193.59

Before

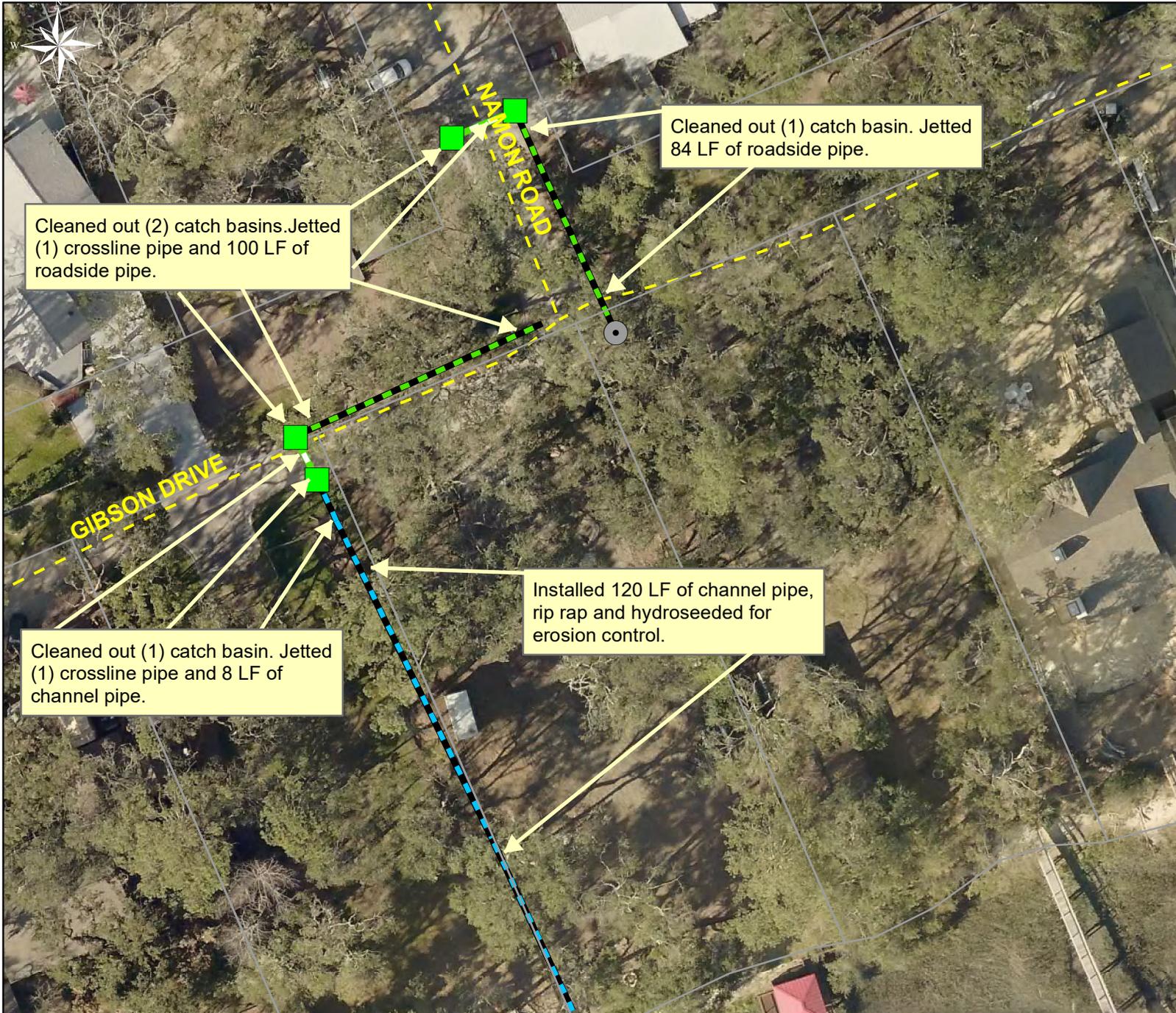


During



After





Project: Gibson Drive

Activity: Routine/ Preventive Maintenance

Project #: 2018-006

Township/SW Dist: TOHHI/3

Completed: May 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 = 50 feet

Prepared By: BC Stormwater Management Utility

Date Print:04/02/19

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Beaufort County Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Milledge Village Road

Activity: Routine/Preventive Maintenance

Duration: 01/09/19-02/06/19

Narrative Description of Project:

Project improved 4,554 L.F. of drainage system. Cleaned out 4,262 L.F. of roadside ditch and (1) catch basin. Jetted (31) driveway pipes, (2) crossline pipes and 292 L.F. of roadside pipe. Hydroseeded for erosion control.

2019-542 / Milledge Village Road

	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AUDIT / Audit Project	1.5	\$32.69	\$0.00	\$0.00	\$0.00	\$0.00	\$32.69
CLPJT / Crossline Pipe - Jetted	25.5	\$566.93	\$498.16	\$95.72	\$0.00	\$364.61	\$1,525.42
DPJT / Driveway Pipe - Jetted	20.0	\$445.60	\$383.20	\$74.80	\$0.00	\$286.80	\$1,190.40
HAUL / Hauling	34.0	\$713.51	\$481.44	\$109.76	\$0.00	\$230.72	\$1,535.43
HYDR / Hydroseeding	6.0	\$133.66	\$46.26	\$1,575.90	\$0.00	\$85.86	\$1,841.68
RSDCL / Roadside Ditch - Cleanout	111.0	\$2,454.91	\$763.06	\$152.77	\$0.00	\$1,456.11	\$4,826.85
2019-542 / Milledge Village Road Sub Total	198.0	\$4,347.30	\$2,172.12	\$2,008.95	\$0.00	\$2,424.10	\$10,952.46
Grand Total	198.0	\$4,347.30	\$2,172.12	\$2,008.95	\$0.00	\$2,424.10	\$10,952.46

Before



During



After





Project: Milledge Village Road Map #1

Activity: Routine/ Preventive Maintenance

Project #: 2019-542

Township/SW Dist: Port Royal Island/9

Completed: February 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

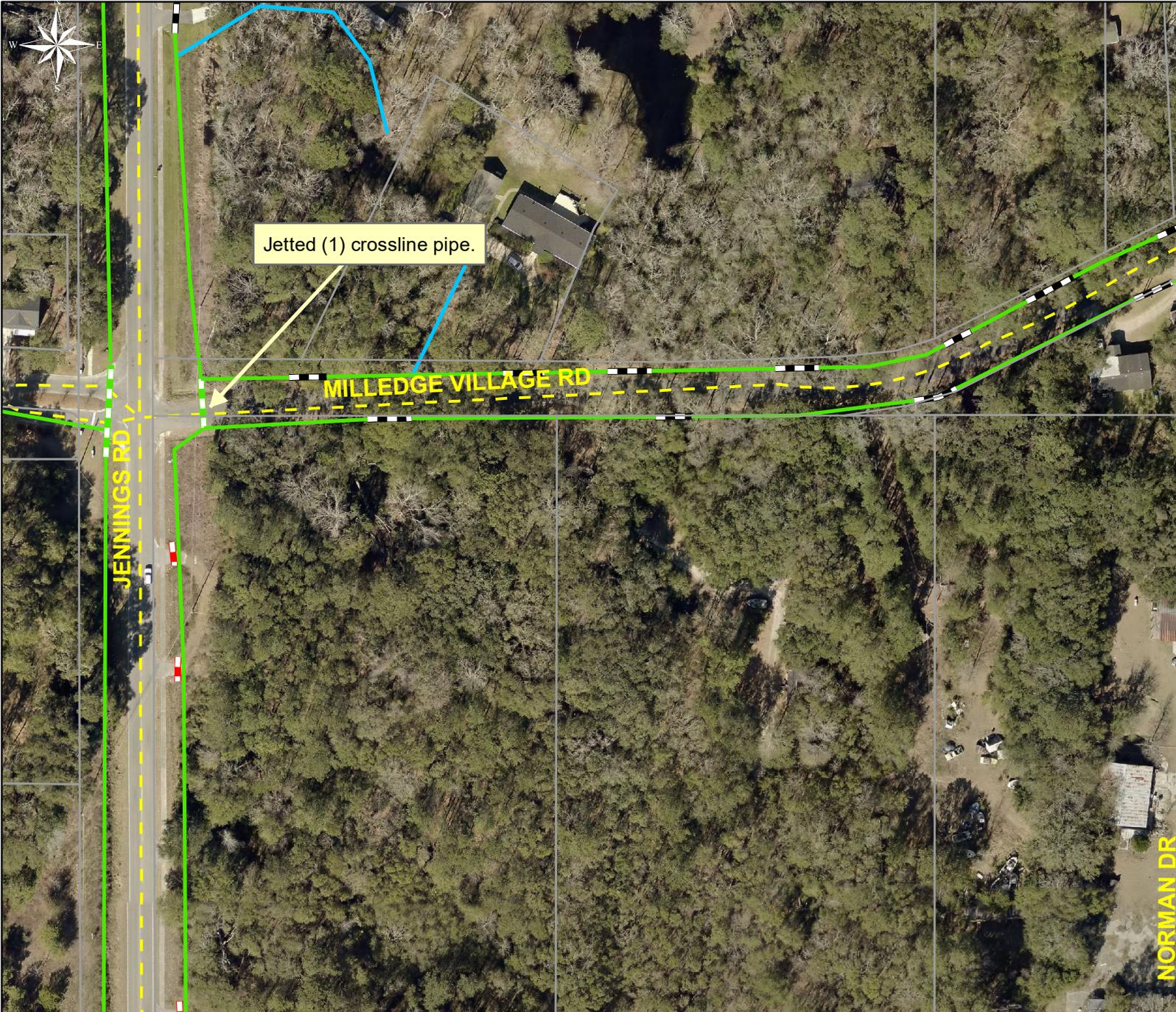


1 inch = 310 feet

Prepared By: BC Stormwater Management Utility

Date Print: 04/02/19

File: C:\project summaries map\Milledge Village Road Map #1_2019-542



Project: Milledge Village Road Map #2

Activity: Routine/ Preventive Maintenance

Project #: 2019-542

Township/SW Dist: Port Royal Island/9

Completed: February 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



1 inch = 130 feet

Prepared By: BC Stormwater Management Utility

Date Print: 04/02/19

File: C:\project summaries map\Milledge Village Road Map #2_2019-542



Project: Milledge Village Road Map #3

Activity: Routine/ Preventive Maintenance

Project #: 2019-542

Township/SW Dist: Port Royal Island/9

Completed: February 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 50 100 200 300 400 Feet

1 inch = 210 feet

Prepared By: BC Stormwater Management Utility

Date Print: 04/02/19

File: C:\project summaries map\Milledge Village Road Map #3_2019-542



Beaufort County Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Seigler Road Channel #1

Activity: Routine/Preventive Maintenance

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

Narrative Description of Project:

Project improved 150 L.F. of drainage system. Cleaned out 150 L.F. of channel. Replaced (1) flap gate. Installed rip rap for erosion control.

2019-550 / Seigler Road Channel #1

	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Overhead Cost	Total Cost
AUDIT / Audit Project	1.0	\$21.79	\$0.00	\$0.00	\$0.00	\$0.00	\$21.79
FLAPGATR / Flap Gate - Replaced	42.0	\$952.42	\$152.92	\$3,149.63	\$0.00	\$435.26	\$4,690.23
HAUL / Hauling	33.0	\$810.94	\$404.16	\$1,032.40	\$0.00	\$368.62	\$2,616.12
RRI / Rip Rap - Installed	12.0	\$276.96	\$40.13	\$65.62	\$0.00	\$163.52	\$546.23
STAGING / Staging Materials/Equipment	20.0	\$455.15	\$38.40	\$14.08	\$0.00	\$204.40	\$712.03
2019-550 / Seigler Road Channel #1 Sub Total	108.0	\$2,517.26	\$635.61	\$4,261.72	\$0.00	\$1,171.80	\$8,586.39
Grand Total	108.0	\$2,517.26	\$635.61	\$4,261.72	\$0.00	\$1,171.80	\$8,586.39

(No Picture Available)

Project: Seigler Road Channel #1

Activity: Routine/ Preventive Maintenance

Project #: 2019-550

Township/SW Dist: Sheldon/5

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



1 inch = 390 feet

Prepared By: BC Stormwater Management Utility
 Date Print: 04/08/19
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Beaufort County Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Port Royal Island Valley Drains

Activity: Routine/Preventive Maintenance

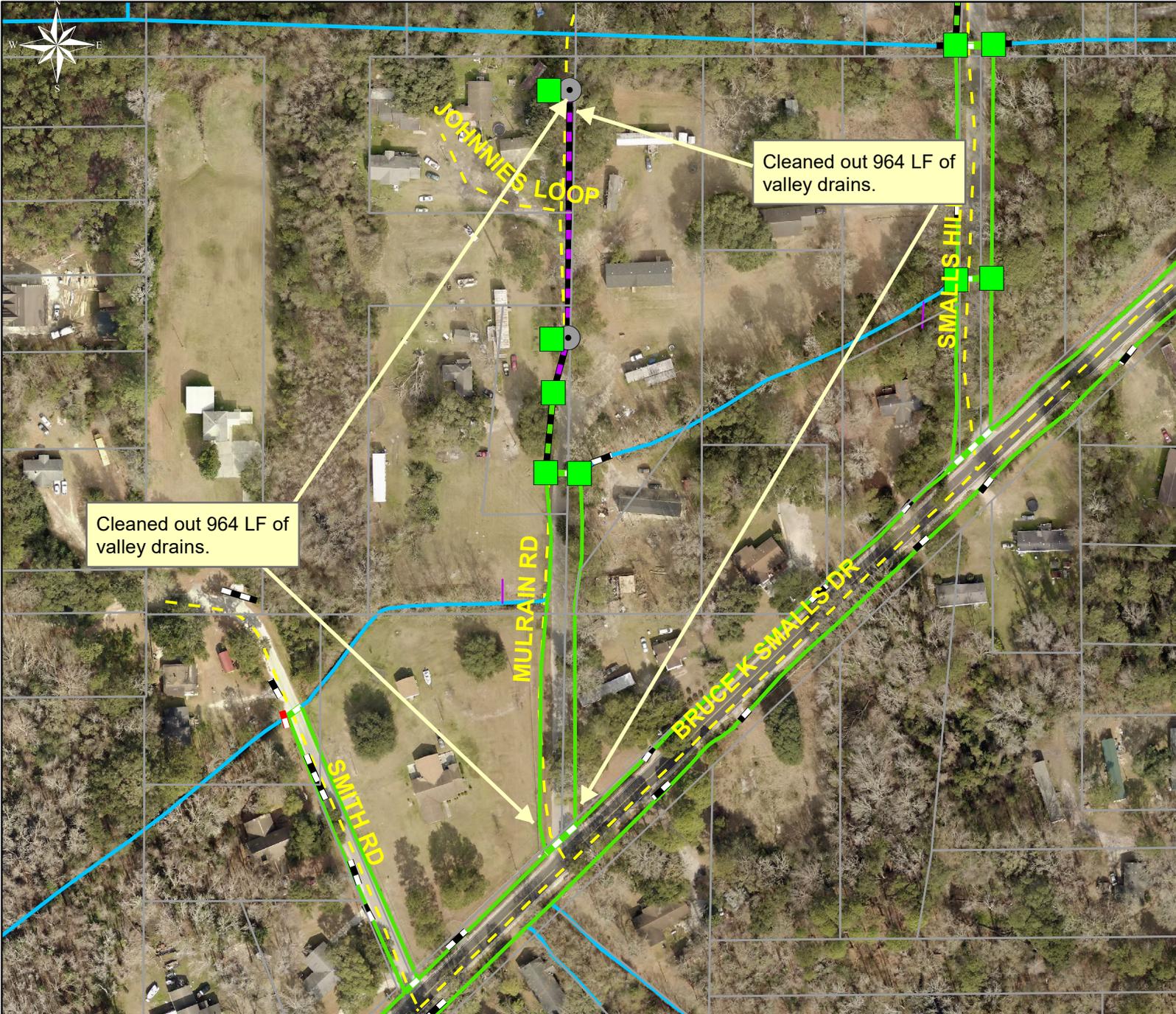
Duration: 11/19/18-11/29/18

Narrative Description of Project:

Project improved 10,102 L.F. of drainage system. Cleaned out 10,102 L.F. of valley drains. This project consisted of the following areas: Mulrain Road (1,928 L.F.), Smalls Drive (1,470 L.F.), Poppy Hill Road (4,254 L.F.), Donaldson Camp Road (2,450 L.F.)

2019-314 / Port Royal Island Valley Drains	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
COVD / Cleaned Out Valley Drains	136.0	\$2,949.21	\$508.91	\$202.65	\$0.00	\$1,460.73	\$5,121.50
HAUL / Hauling	38.0	\$826.51	\$538.08	\$128.70	\$0.00	\$331.66	\$1,824.95
2019-314 / Port Royal Island Valley Drains Sub Total	175.0	\$3,797.51	\$1,046.99	\$331.35	\$0.00	\$1,792.39	\$6,968.24
Grand Total	175.0	\$3,797.51	\$1,046.99	\$331.35	\$0.00	\$1,792.39	\$6,968.24

(No Pictures Available)



Project: Port Royal
Island Valley
Drains- Mulrain
Road Map #1

Activity: Routine/
Preventive
Maintenance

Project #:
2019-314

Township/SW Dist:
Port Royal Island/6

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 40 80 160 240 320
Feet

1 inch = 170 feet

Prepared By: BC Stormwater Management Utility

Date Print: 04/01/19

File: C:\project summaries map\Port Royal Island Valley Drains- Mulrain Road Map #1_2019-314



Project: Port Royal
Island Valley
Drains- Smalls
Drive Map #2

Activity: Routine/
Preventive
Maintenance

Project #:
2019-314

Township/SW Dist:
Port Royal Island/6

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 = 140 feet

Prepared By: BC Stormwater Management Utility

Date Print:04/01/19

File:C:\project summaries map\Port Royal Island Valley Drains- Smalls Drive Map #2_2019-314



Project: Port Royal
Island Valley
Drains- Poppy
Hill Road Map #3

Activity: Routine/
Preventive
Maintenance

Project #:
2019-314

Township/SW Dist:
Port Royal Island/6

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

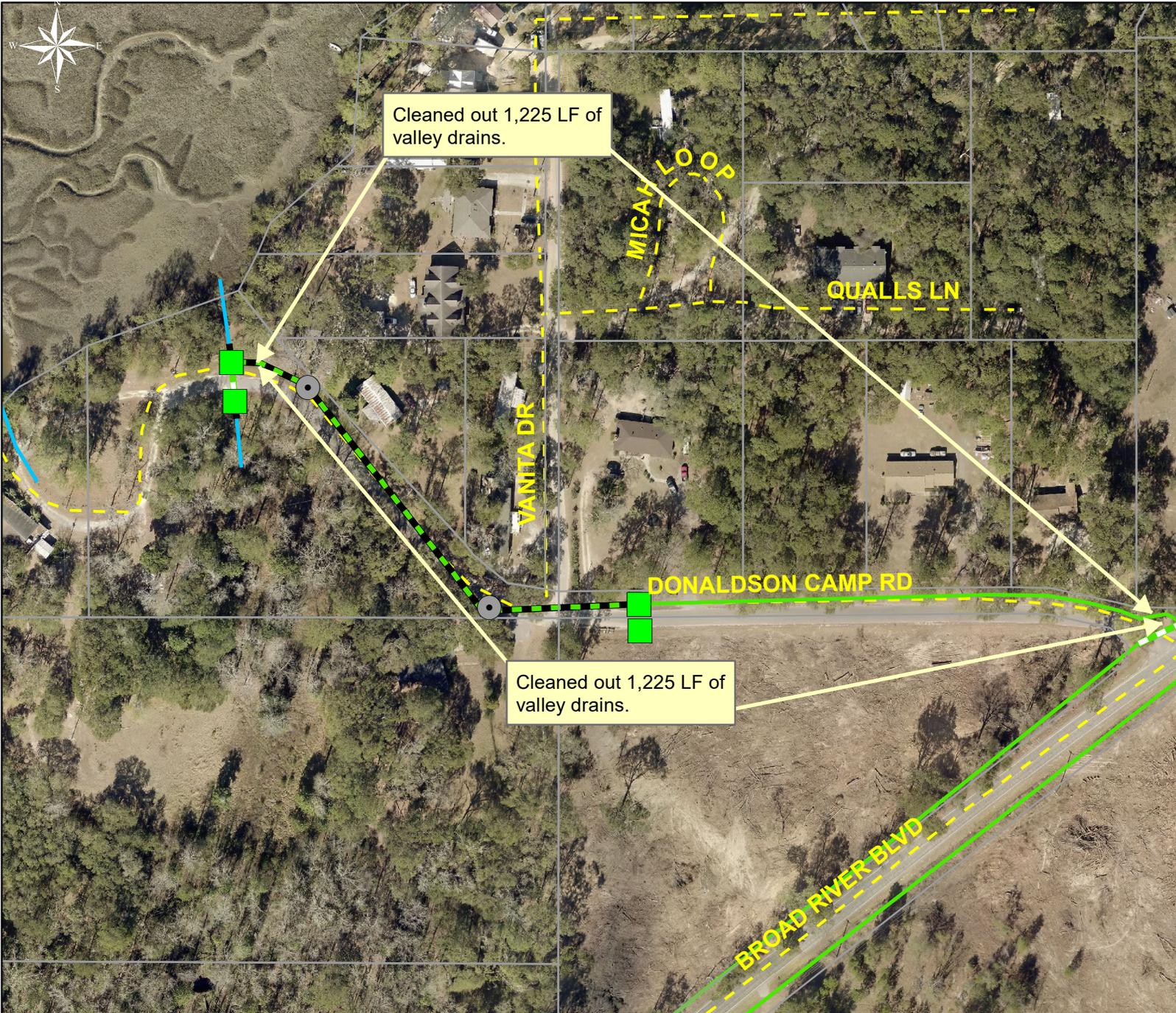
Prepared By: BC Stormwater Management Utility

Date Print:04/01/19

File:C:\project summaries map\Port Royal Island Valley Drains-Poppy Hill Road Map #3_2019-314

0 80 160 320 480 640
Feet

1 inch = 330 feet



Project: Port Royal
Island Valley
Drains- Donaldson
Camp Road Map #4

Activity: Routine/
Preventive
Maintenance

Project #:
2019-314

Township/SW Dist:
Port Royal Island/6

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 = 160 feet

Prepared By: BC Stormwater Management Utility

Date Print: 04/01/19

File: C:\project summaries map\Port Royal Island Valley Drains-Donaldson Camp Road Map #4_2019-314



Beaufort County Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Lady's Island Vacuum Truck
 Dolphin Point Drive, Quiet Cove Way, Katelens Way, Arum Circle North,
 Braeburn Lane, Rivers Court, Gator Lane, Gadwall Drive E, Southern Magnolia
 Drive

Activity: Routine/Preventive Maintenance
Duration: 07/30/18-12/19/18

Narrative Description of Project:

This project improved 156 L.F. of drainage system. Cleaned out (3) catch basins. Jetted (25) driveway pipes, (11) crossline pipes and 156 L.F. of channel pipe.

2019-307 / Lady's 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	16.0	\$356.48	\$306.56	\$36.84	\$0.00	\$229.44	\$929.32
CLPJT / Crossline Pipe - Jetted	44.0	\$980.32	\$665.20	\$214.11	\$0.00	\$630.96	\$2,490.59
CPJ / Channel Pipe - Jetted	8.0	\$178.24	\$153.28	\$36.72	\$0.00	\$114.72	\$482.96
DPJT / Driveway Pipe - Jetted	44.0	\$980.32	\$843.04	\$126.02	\$0.00	\$630.96	\$2,580.34
SD / Soft Digging	6.0	\$133.68	\$114.96	\$28.06	\$0.00	\$86.04	\$362.74
2019-307 / Lady's Island Vacuum Truck Sub Total	119.0	\$2,650.83	\$2,083.04	\$441.75	\$0.00	\$1,692.12	\$6,867.74
Grand Total	119.0	\$2,650.83	\$2,083.04	\$441.75	\$0.00	\$1,692.12	\$6,867.74

Before



During



After





Jetted (22) driveway pipes.

Project: Lady's Island Vacuum Truck-Dolphin Point Dr Map #1

Activity: Routine/ Preventive Maintenance

Project #: 2019-307

Township/SW Dist: Lady's Island/7

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 25 50 100 150 200 Feet

1 inch = 100 feet

Prepared By: BC Stormwater Management Utility

Date Print:03/14/19

File:C:\project summaries map/Lady's Island Vacuum Truck-Dolphin Point Dr Map #1_2019-307



Project: Lady's Island Vacuum Truck- Quiet Cove Way Map #2

Activity: Routine/ Preventive Maintenance

Project #: 2019-307

Township/SW Dist: Lady's Island/7

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: 03/12/19

File: C:\project summaries map\Lady's Island Vacuum Truck- Quiet Cove Way Map #2_2019-307



Project: Lady's Island Vacuum Truck- Katelyns Way Map #3

Activity: Routine/ Preventive Maintenance

Project #: 2019-307

Township/SW Dist: Lady's Island/7

Completed: December 2018

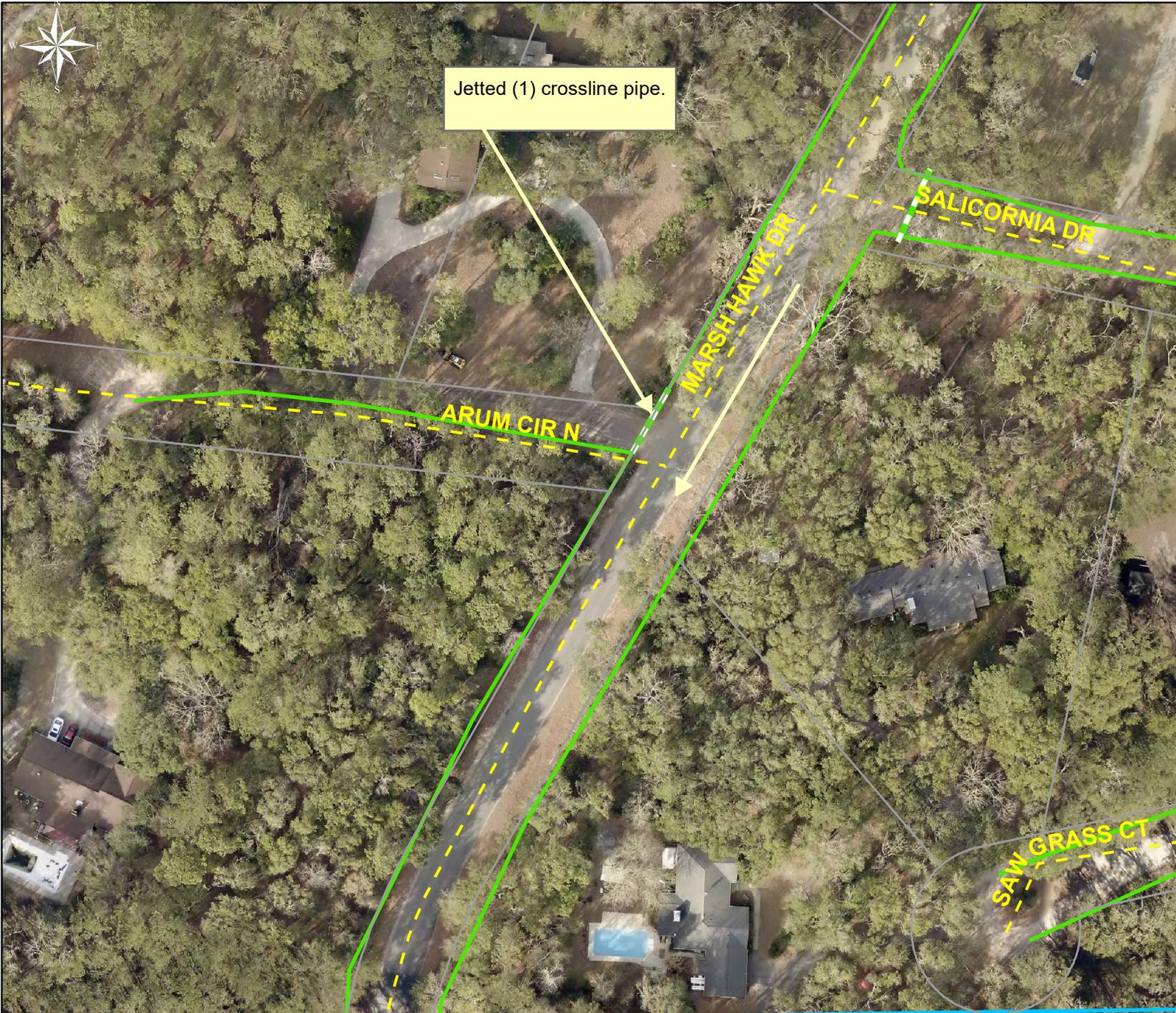
Legend

Drainage Type

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

0 25 50 100 150 200 Feet
1 inch = 100 feet

Prepared By: BC Stormwater Management Utility
Date Print:03/14/19
File:C:\project summaries map\Lady's Island Vacuum Truck-Katelyns Way Map #3_2019-307



Project: Lady's Island Vacuum Truck- Arum Circle N Map #4

Activity: Routine/ Preventive Maintenance

Project #: 2019-307

Township/SW Dist: Lady's Island/7

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

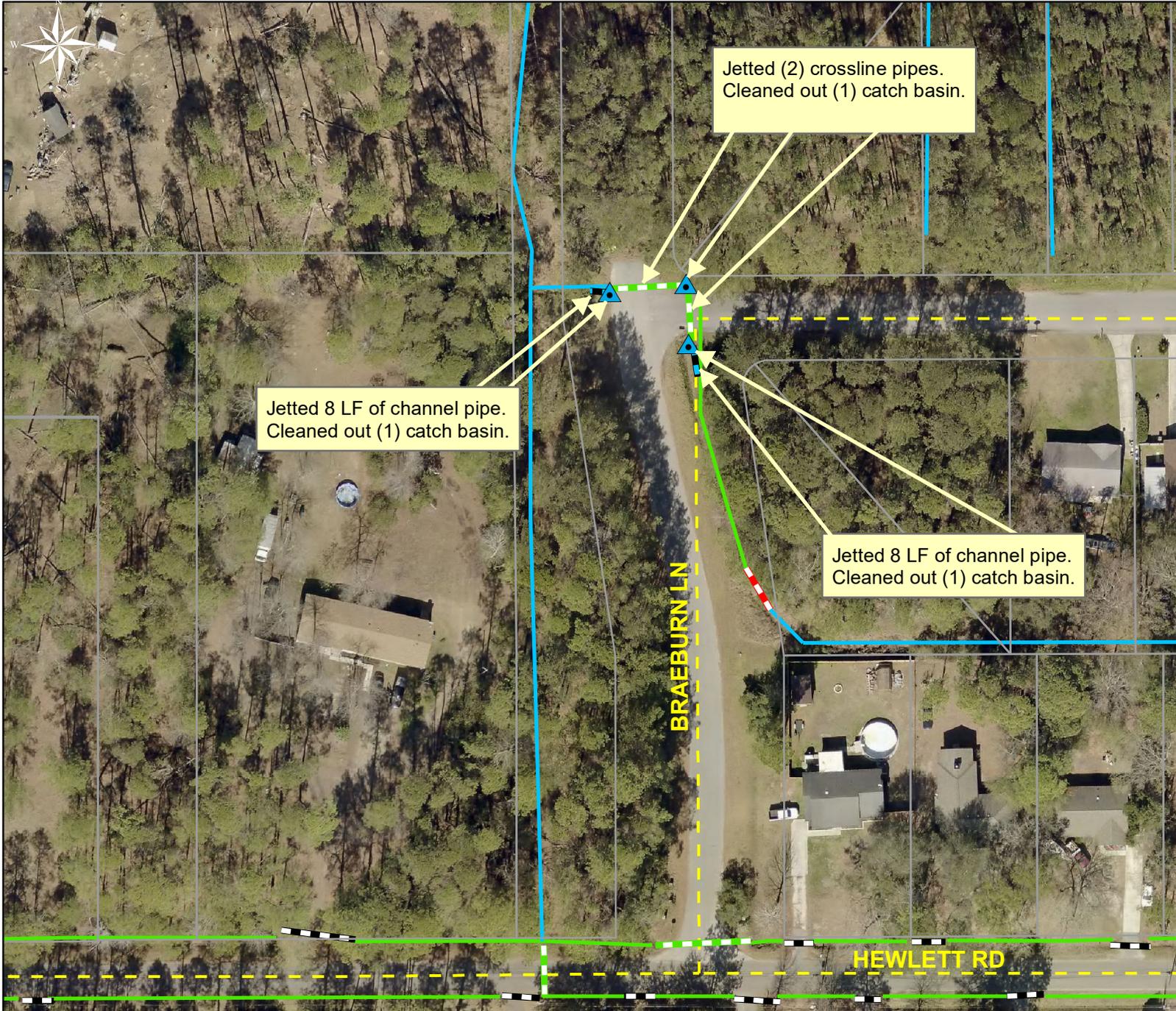
0 20 40 80 120 160 Feet

1 inch = 83 feet

Prepared By: BC Stormwater Management Utility

Date Print:03/14/19

File:C:\project summaries map\Lady's Island Vacuum Truck-Arum Circle N Map #4_2019-307



Project: Lady's Island Vacuum Truck- Braeburn Lane Map #5

Activity: Routine/ Preventive Maintenance

Project #: 2019-307

Township/SW Dist: Lady's Island/7

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:03/14/19

File:C:\project summaries map/Lady's Island Vacuum Truck-Braeburn Lane Map #5 2019-307



Project: Lady's Island Vacuum Truck- Rivers Court Map #6

Activity: Routine/ Preventive Maintenance

Project #: 2019-307

Township/SW Dist: Lady's Island/7

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: 03/14/19

File: C:\project summaries map\Lady's Island Vacuum Truck-Rivers Court Map #6 2019-307



Project: Lady's Island Vacuum Truck- Southern Magnolia Dr Map #7

Activity: Routine/ Preventive Maintenance

Project #: 2019-307

Township/SW Dist: Lady's Island/7

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: 03/14/19

File: C:\project summaries map\Lady's Island Vacuum Truck-Southern Magnolia Dr Map #7_2019-307



Project: Lady's
Island Vacuum
Truck- Gator
Lane Map #8

Activity: Routine/
Preventive
Maintenance

Project #:
2019-307

Township/SW Dist:
Lady's Island/7

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

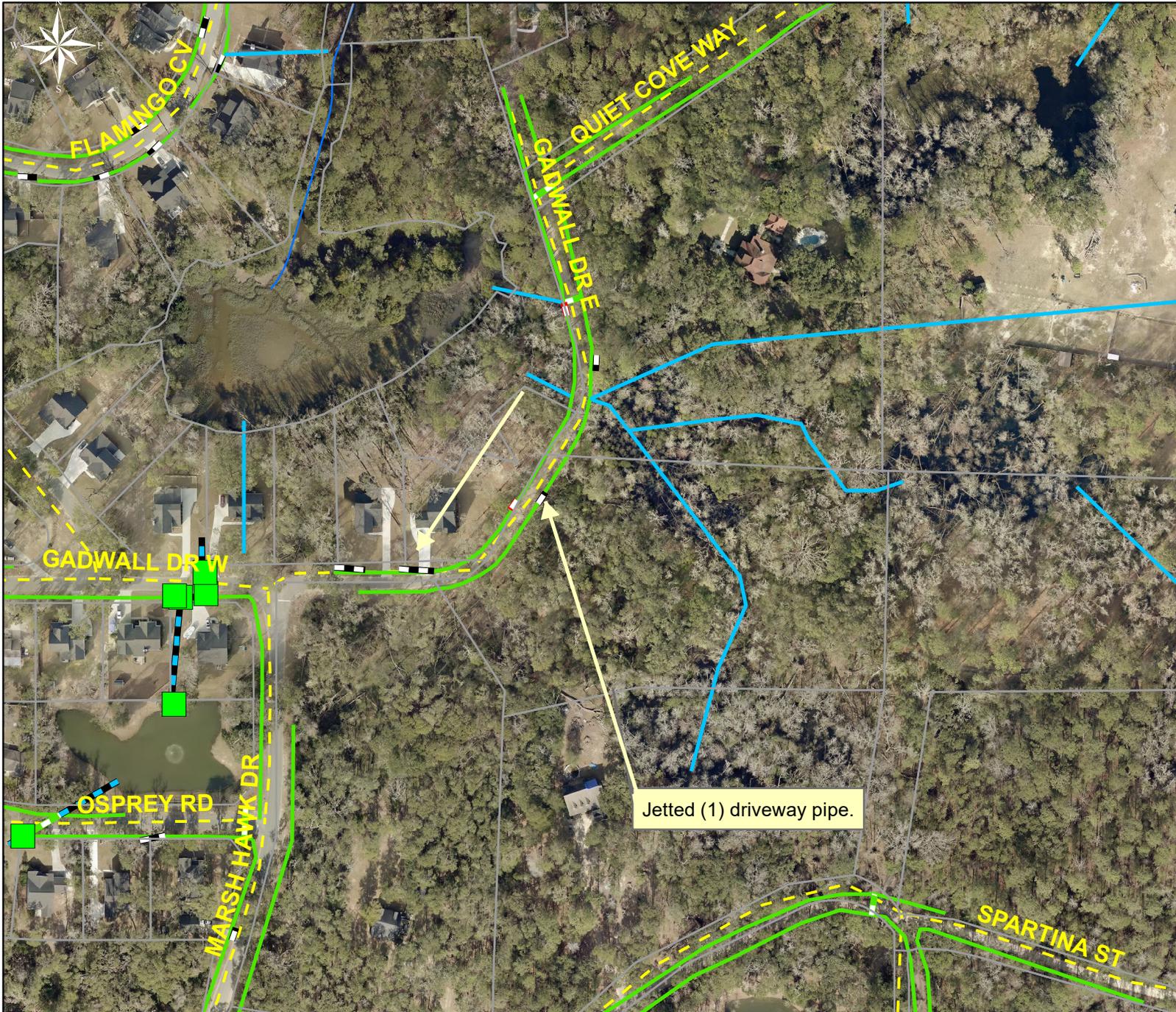
0 30 60 120 180 240
Feet

1 inch = 130 feet

Prepared By: BC Stormwater Management Utility

Date Print:03/14/19

File:C:\project summaries map\Lady's Island Vacuum Truck-Gator Lane Map #8_2019-307



Project: Lady's Island Vacuum Truck- Gadwall Drive E Map #9

Activity: Routine/ Preventive Maintenance

Project #: 2019-307

Township/SW Dist: Lady's Island/7

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

Jetted (1) driveway pipe.

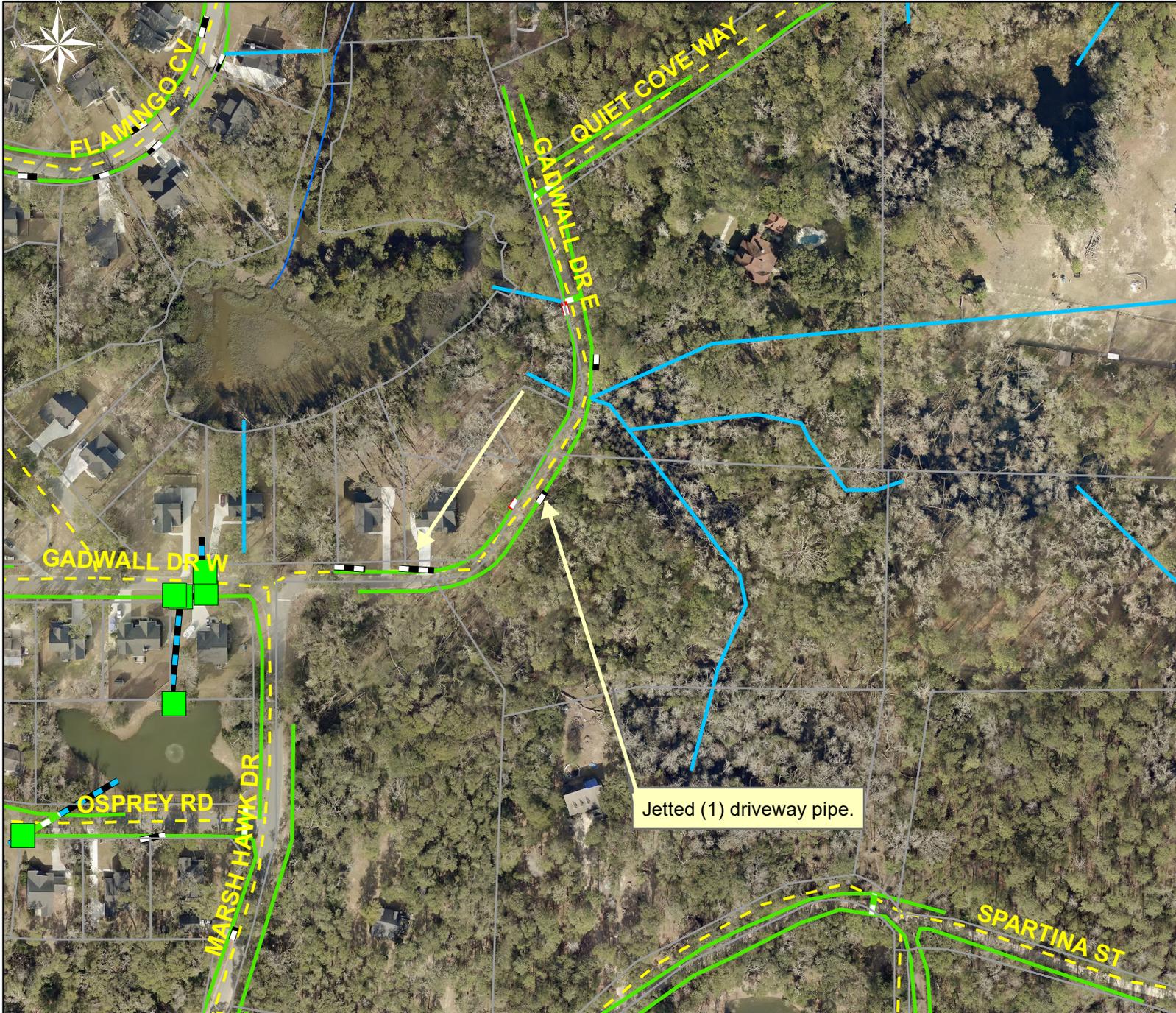


1 inch = 210 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/14/19

File: C:\project summaries map\Lady's Island Vacuum Truck-Gadwall Drive E Map #9_2019-307



Project: Lady's
Island Vacuum
Truck- Gadwall
Drive E Map #10

Activity: Routine/
Preventive
Maintenance

Project #:
2019-307

Township/SW Dist:
Lady's Island/7

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: 03/14/19

File: C:\project summaries map\Lady's Island Vacuum Truck-Gadwall Drive E Map #10_2019-307



Project: Lady's Island Vacuum Truck- Gator Lane Map #11

Activity: Routine/ Preventive Maintenance

Project #: 2019-307

Township/SW Dist: Lady's Island/7

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

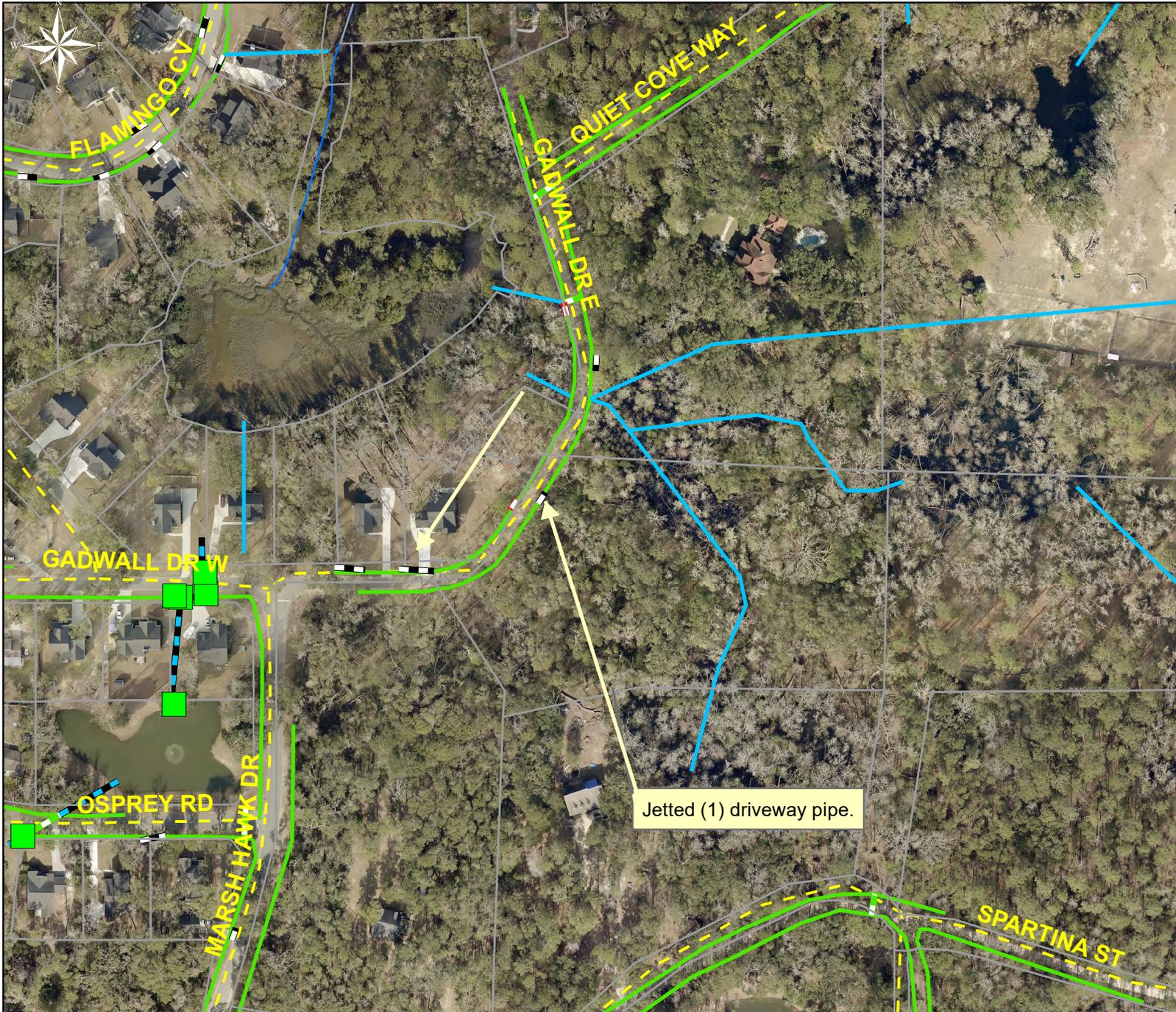
Prepared By: BC Stormwater Management Utility

Date Print:03/14/19

File:C:\project summaries map\Lady's Island Vacuum Truck-Gator Lane Map #11_2019-307

0 30 60 120 180 240 Feet

1 inch = 130 feet



Project: Lady's Island Vacuum Truck- Gadwall Drive E Map #12

Activity: Routine/ Preventive Maintenance

Project #: 2019-307

Township/SW Dist: Lady's Island/7

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

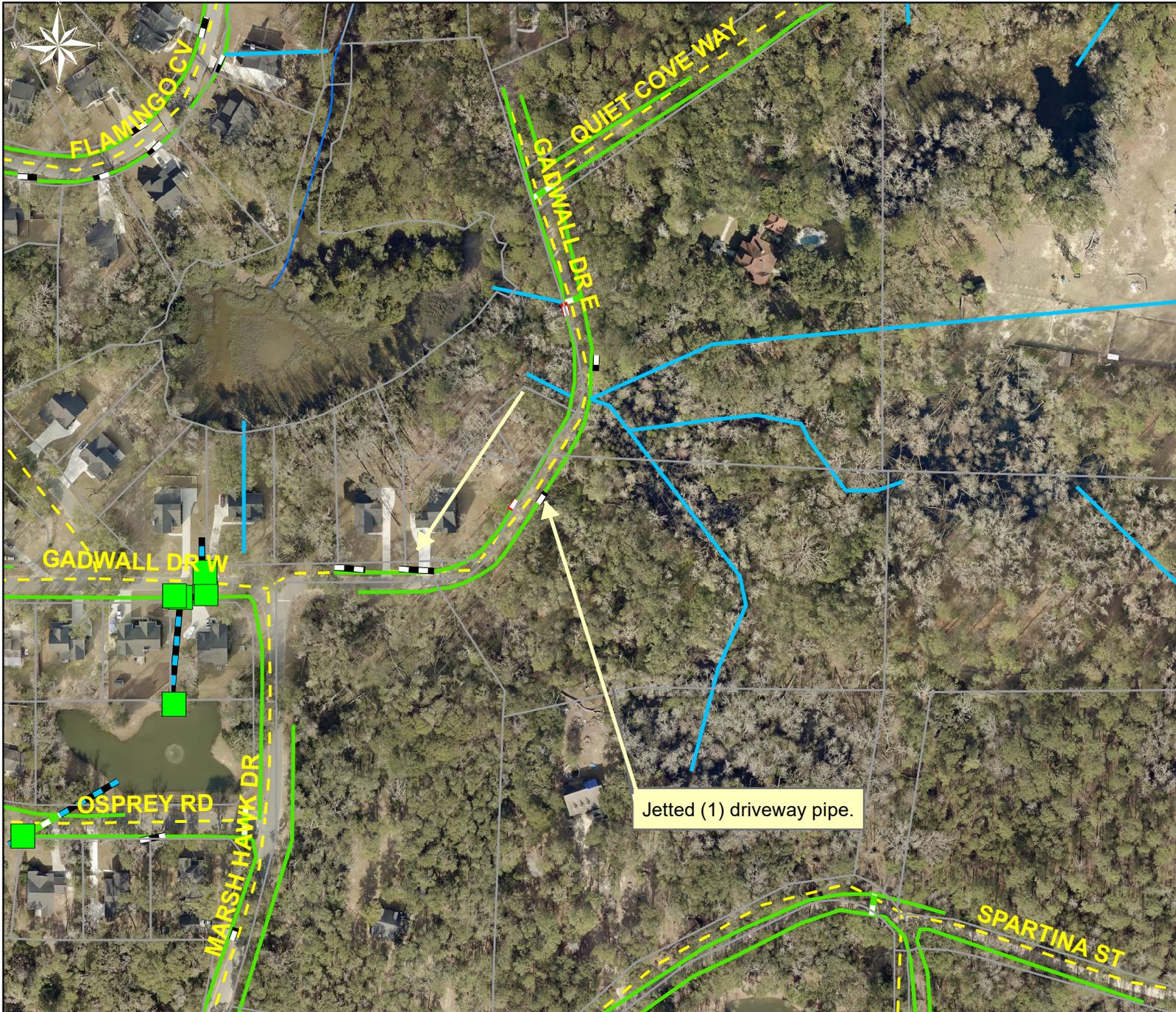


1 inch = 210 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/14/19

File: C:\project summaries map\Lady's Island Vacuum Truck-Gadwall Drive E Map #12_2019-307



Project: Lady's Island Vacuum Truck-Gadwall Drive E Map #13

Activity: Routine/ Preventive Maintenance

Project #: 2019-307

Township/SW Dist: Lady's Island/7

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



1 inch = 210 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/14/19

File: C:\project summaries map\Lady's Island Vacuum Truck-Gadwall Drive E Map #13_2019-307



Beaufort County Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Port Royal Island Vacuum Truck
 Shell Point Road, Polite Drive, Bayard Street, Biddie Lane, Summer Drive, Quail Drive, Hamrick Drive, Shanklin Road, Capehart Circle

Activity: Routine/Preventive Maintenance

Duration: 07/03/18-12/20/18

Narrative Description of Project:

Project improved 262 L.F. of drainage system. Cleaned out (1) catch basin. Jetted (6) crosslines pipes, (5) driveway pipes, (1) access pipe, 164 L.F. of channel pipe and 98 L.F. of roadside pipe.

2019-306 / Port Royal Island Vacuum Truck	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Cost	Total Cost
AUDIT / Audit Project	1.5	\$32.69	\$0.00	\$0.00	\$0.00	\$0.00	\$32.69
CBCO / Catch basin - clean out	12.0	\$274.56	\$229.92	\$36.84	\$0.00	\$178.20	\$719.52
CLPJT / Crossline Pipe - Jetted	20.0	\$445.60	\$383.20	\$105.21	\$0.00	\$286.80	\$1,220.81
CPJ / Channel Pipe - Jetted	30.0	\$668.40	\$574.80	\$78.31	\$0.00	\$430.20	\$1,751.71
DPJT / Driveway Pipe - Jetted	8.0	\$178.24	\$153.28	\$46.96	\$0.00	\$114.72	\$493.20
SPSWM / Special Project - SWM	10.0	\$222.80	\$191.60	\$27.02	\$0.00	\$143.40	\$584.82
TT / Travel Time	10.0	\$222.80	\$191.60	\$24.40	\$0.00	\$143.40	\$582.20
WDR / Wash down road	12.0	\$267.36	\$229.92	\$38.96	\$0.00	\$172.08	\$708.32
2019-306 / Port Royal Island Vacuum Truck Sub Total	103.5	\$2,312.45	\$1,954.32	\$357.70	\$0.00	\$1,468.80	\$6,093.26
Grand Total	103.5	\$2,312.45	\$1,954.32	\$357.70	\$0.00	\$1,468.80	\$6,093.26

Before



During



After





Project: Port Royal Island Vacuum Truck- Shell Point Road Map #1

Activity: Routine/ Preventive Maintenance

Project #: 2019-306

Township/SW Dist: Port Royal Island/9

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

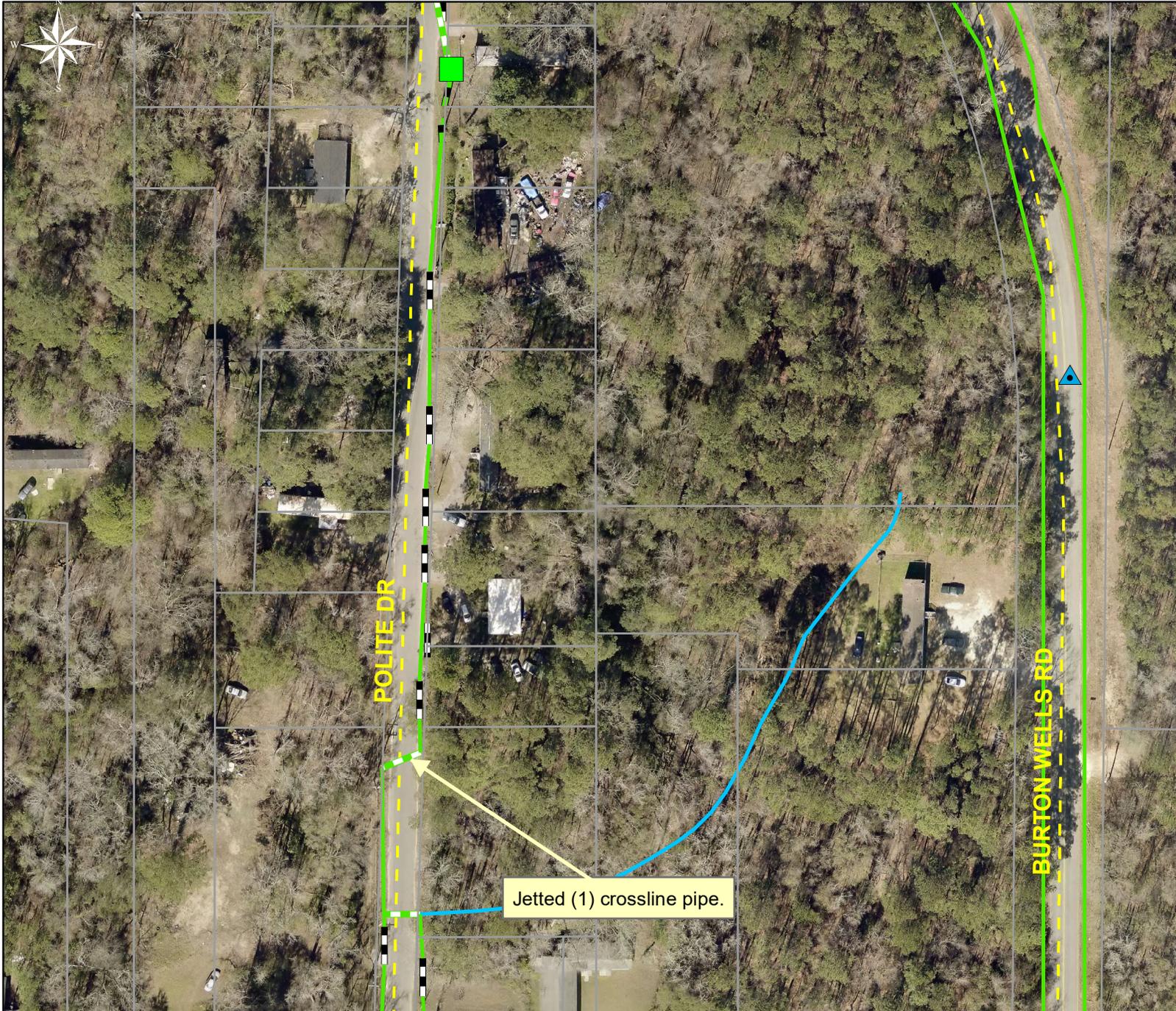


1 inch = 210 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/29/19

File: C:\project summaries map\Port Royal Island Vacuum Truck- Shell Point Road Map #1_2019-306



Project: Port Royal
Island Vacuum
Truck- Polite Drive
Map #2

Activity: Routine/
Preventive
Maintenance

Project #:
2019-306

Township/SW Dist:
Port Royal Island/9

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

Jetted (1) crossline pipe.

0 25 50 100 150 200
Feet

1 inch = 100 feet

Prepared By: BC Stormwater Management Utility

Date Print:03/29/19

File:C:\project summaries map\Port Royal Island Vacuum Truck- Polite Drive Map #2_2019-306

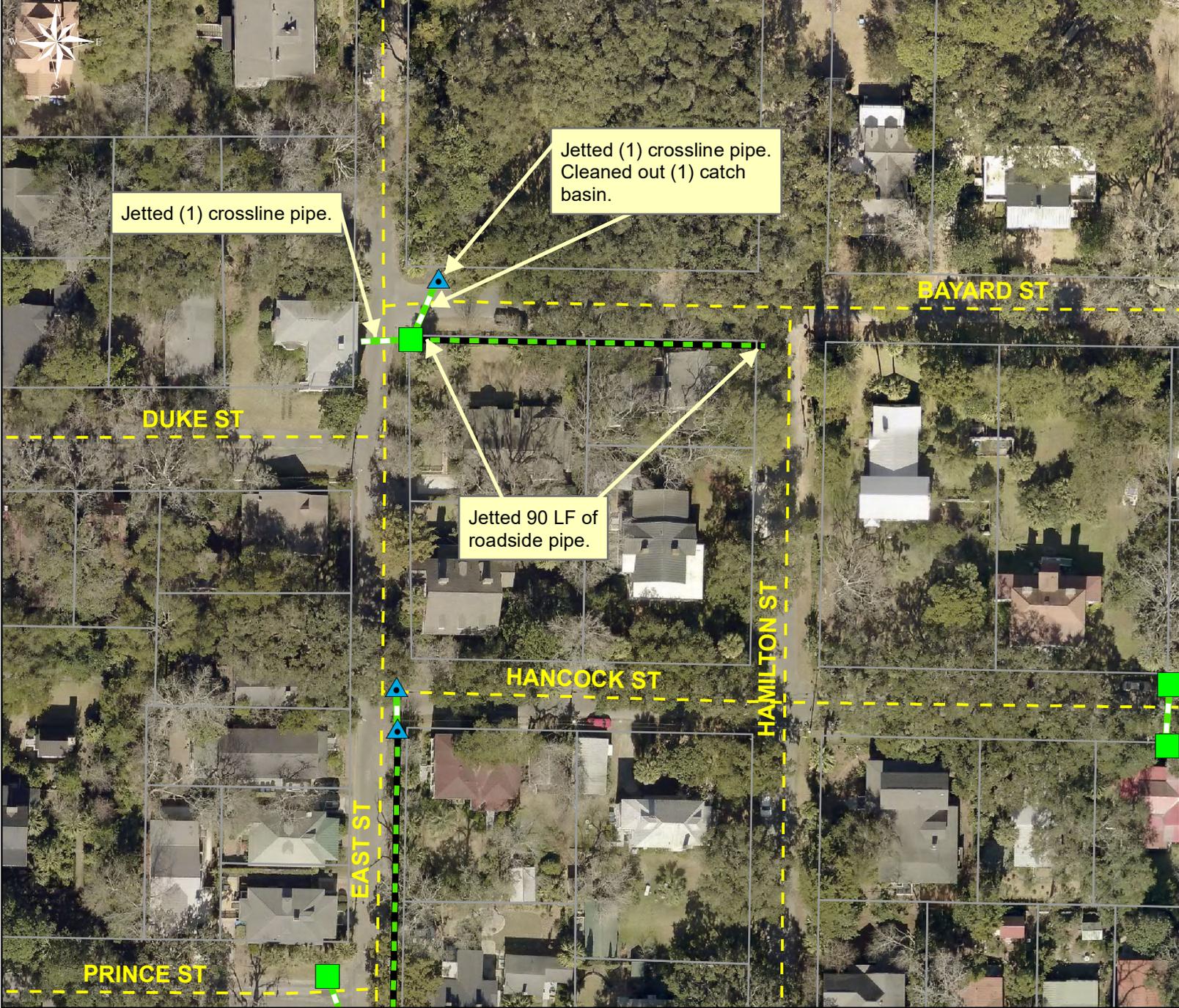
Project: Port Royal Island Vacuum Truck- Bayard Street Map #3

Activity: Routine/ Preventive Maintenance

Project #: 2019-306

Township/SW Dist: Port Royal Island/9

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



1 inch = 81 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/29/19

File: C:\project summaries map\Port Royal Island Vacuum Truck- Bayard Street Map #3_2019-306



Project: Port Royal
Island Vacuum
Truck- Biddie Lane
Map #4

Activity: Routine/
Preventive
Maintenance

Project #:
2019-306

Township/SW Dist:
Port Royal Island/9

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 = 27 feet**

Prepared By: BC Stormwater Management Utility

Date Print:03/29/19

File:C:\project summaries map\ Port Royal Island Vacuum Truck- Biddie Lane Map #4_2019-306



Project: Port Royal
Island Vacuum
Truck- Summer
Drive Map #5

Activity: Routine/
Preventive
Maintenance

Project #:
2019-306

Township/SW Dist:
Port Royal Island/9

Completed:
December 2018

Legend

Drainage Type

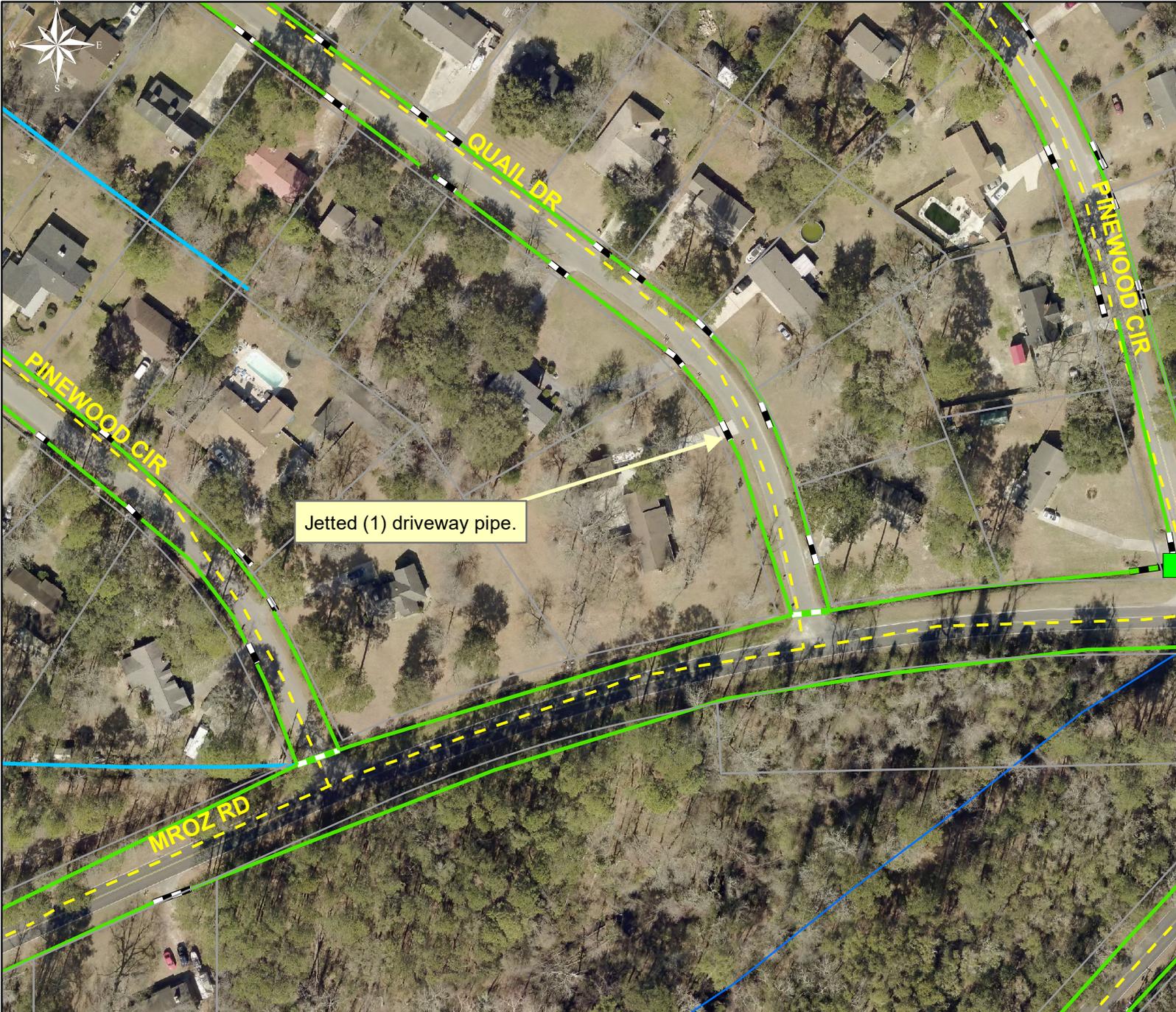
-  Access Pipe
-  Bleeder Pipe
-  Channel Pipe
-  Channel
-  Stream
-  Crossline Pipe
-  Driveway Pipe
-  Lateral
-  Lateral Pipe
-  River
-  Road Pipe
-  Roadside
-  Roadside Pipe

0 5 10 20 30 40
Feet

1 inch = 26 feet

Prepared By: BC Stormwater Management Utility
Date Print: 03/29/19

File: C:\project summaries map\Port Royal Island Vacuum Truck- Summer Lane Map #5_2019-306



Project: Port Royal Vacuum Truck-
Quail Drive
Map #6

Activity: Routine/
Preventive
Maintenance

Project #:
2019-306

Township/SW Dist:
Port Royal Island/9

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 30 60 120 180 240
Feet

1 inch = 130 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/29/19

File: C:\project summaries map\Quail Drive Map #6_2019-306



Project: Port Royal Vacuum Truck-Hamrick Drive Map #7

Activity: Routine/ Preventive Maintenance

Project #: 2019-306

Township/SW Dist: Port Royal Island/9

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

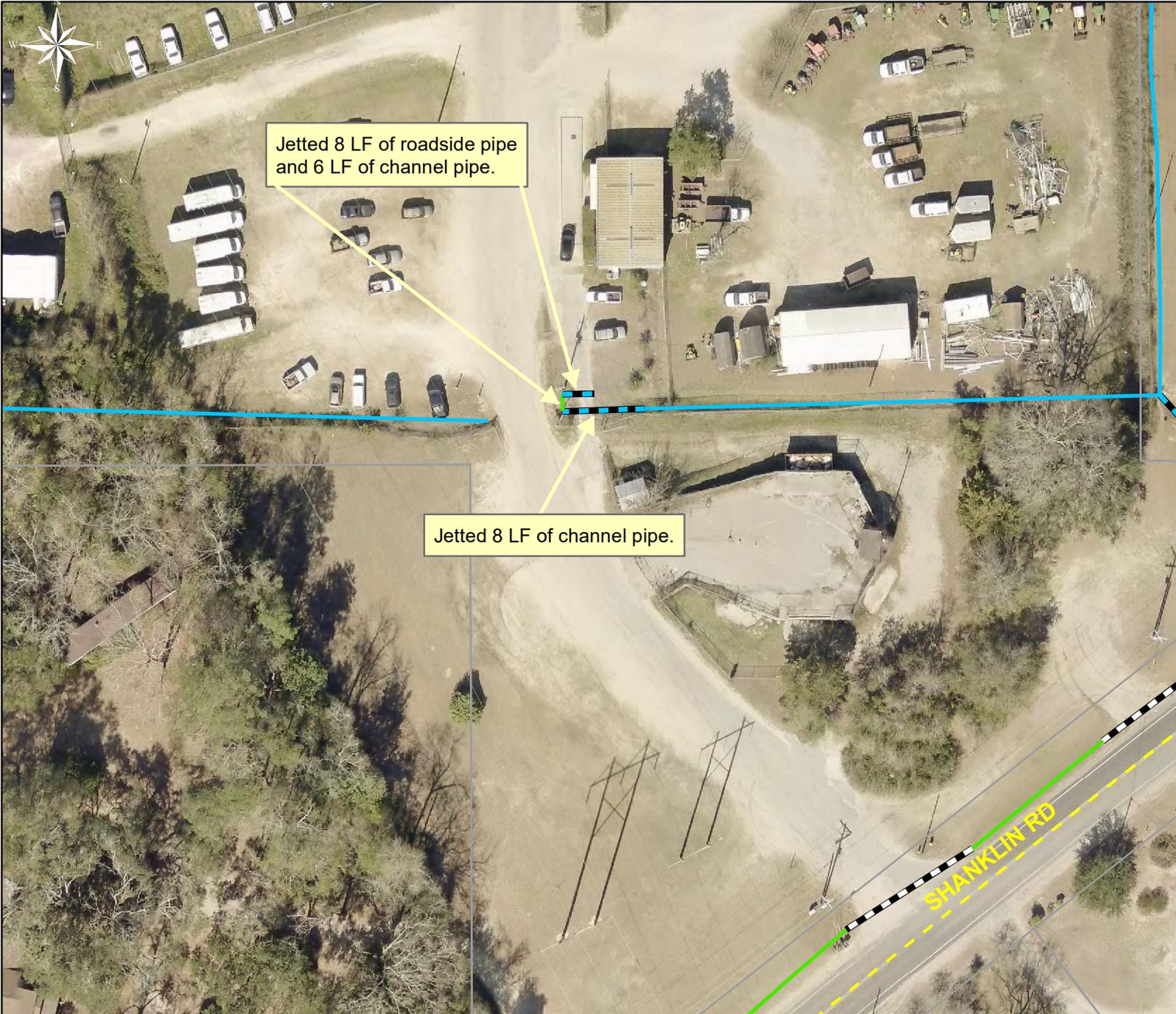
0 12.525 50 75 100 Feet

1 inch = 60 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/29/19

File: C:\project summaries map\Port Royal Vacuum Truck- Hamrick Drive Map #7_2019-306



Project: Port Royal
Island Vacuum
Truck- Shanklin
Road Map #8

Activity: Routine/
Preventive
Maintenance

Project #:
2019-306

Township/SW Dist:
Port Royal Island/9

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: 03/29/19

File: C:\project summaries map\Port Royal Island Vacuum Truck- Shanklin Road Map #8_ 2019-306



Beaufort County Public Works
Stormwater Infrastructure
Project Summary

Project Summary: Browns Island Road

Activity: Routine/Preventive Maintenance

Duration: 06/07/18-07/10/18

Narrative Description of Project:

Project improved 893 L.F. of drainage system. Cleaned out 398 L.F. of roadside ditch and 495 L.F. of channel. Jetted (1) driveway pipe and (2) crossline pipes.

2018-618 / Browns Island Road	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
CCO / Channel - cleaned out	45.0	\$1,082.40	\$230.99	\$68.56	\$0.00	\$616.35	\$1,998.30
DPJT / Driveway Pipe - Jetted	12.0	\$267.36	\$229.92	\$32.90	\$0.00	\$172.08	\$702.26
HAUL / Hauling	25.0	\$544.75	\$268.80	\$120.23	\$0.00	\$139.78	\$1,073.56
RSDCL / Roadside Ditch - Cleanout	30.0	\$694.95	\$211.52	\$42.61	\$0.00	\$420.10	\$1,369.18
UTLOC / Utility locates	0.5	\$12.35	\$0.00	\$0.00	\$0.00	\$6.62	\$18.97
2018-618 / Browns Island Road Sub Total	113.5	\$2,623.60	\$941.23	\$264.30	\$0.00	\$1,354.92	\$5,184.05
Grand Total	113.5	\$2,623.60	\$941.23	\$264.30	\$0.00	\$1,354.92	\$5,184.05

Before



During



After





Project: Browns Island Road Map #1

Activity: Routine/ Preventive Maintenance

Project #: 2018-618

Township/SW Dist: Sheldon/5

Completed: July 2018

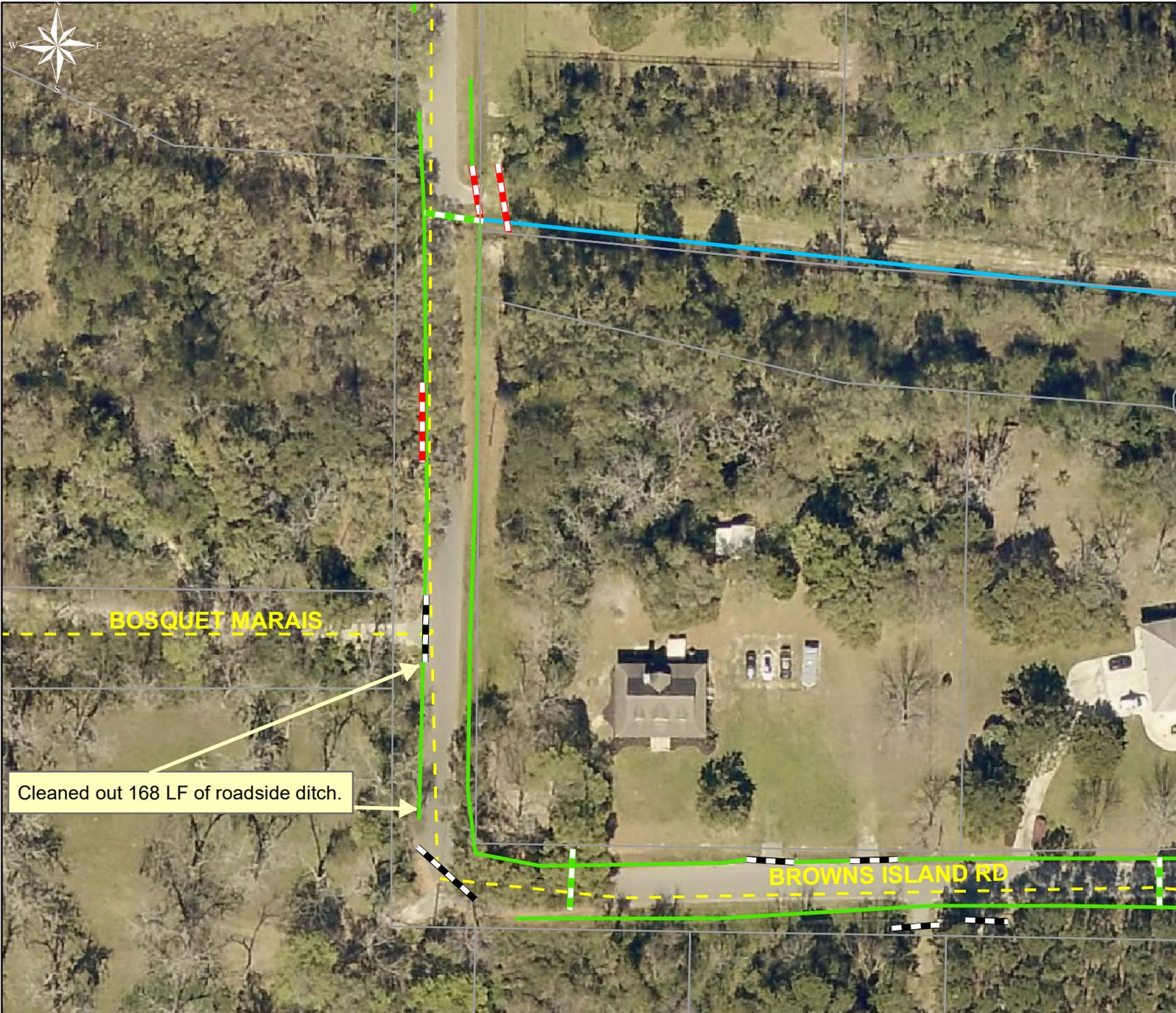
Legend

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



1 inch = 83 feet

Prepared By: BC Stormwater Management Utility
Date Print: 03/27/19
File: C:\project summaries map\Browns Island Rd Map #1_2018-618



Project: Browns Island Road Map #2

Activity: Routine/ Preventive Maintenance

Project #: 2018-618

Township/SW Dist: Sheldon/5

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



1 inch = 83 feet

Prepared By: BC Stormwater Management Utility
Date Print: 03/27/19
File: C:\project summaries map\Browns Island Road Map #2_2018-618



Project: Browns Island Road Map #3

Activity: Routine/ Preventive Maintenance

Project #: 2018-618

Township/SW Dist: Sheldon/5

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

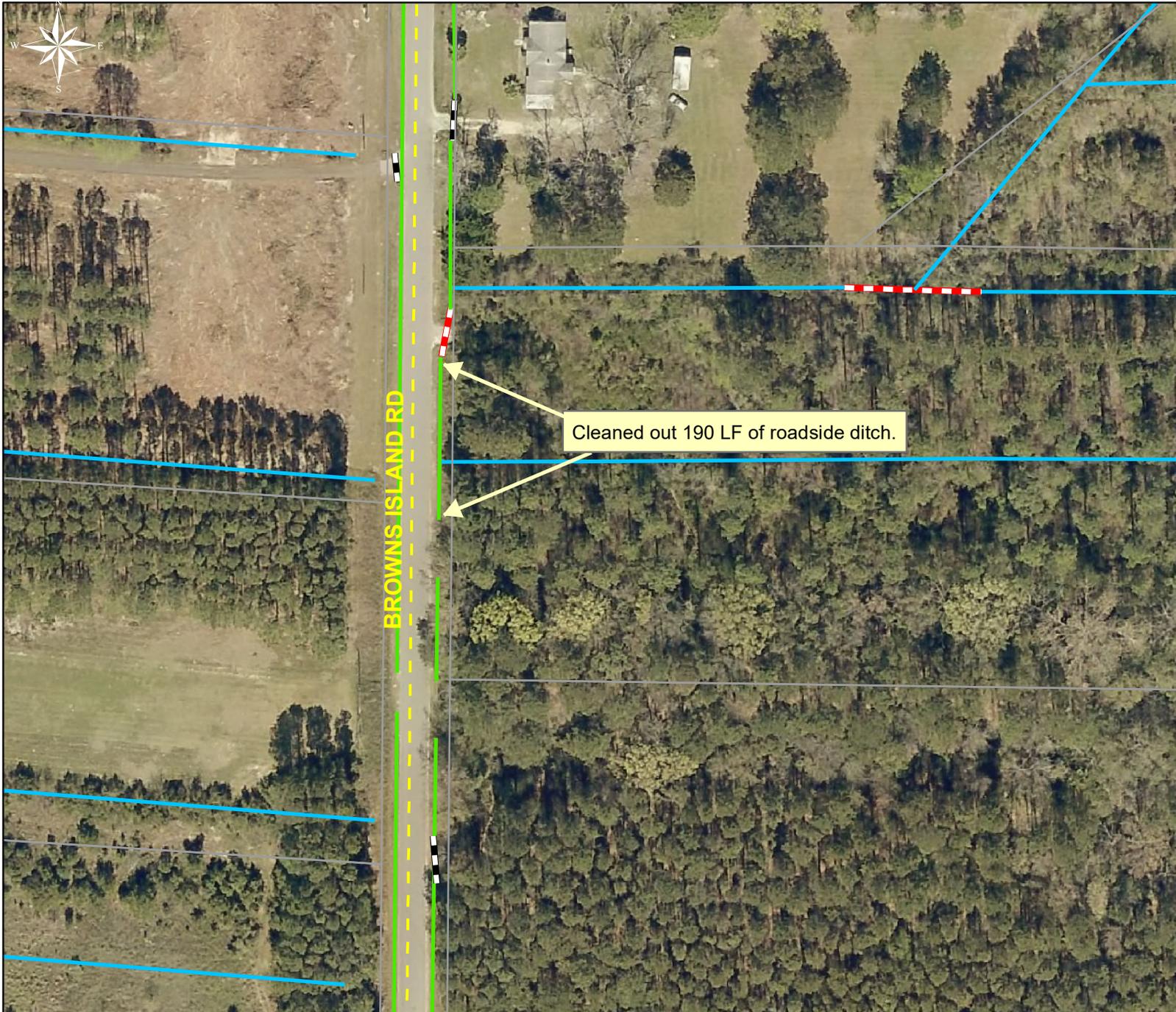


1 inch = 130 feet

Prepared By: BC Stormwater Management Utility

Date Print: 03/27/19

File: C:\project summaries map\Browns Island Road Map #3 2018-618



Project: Browns Island Road Map #4

Activity: Routine/ Preventive Maintenance

Project #: 2018-618

Township/SW Dist: Sheldon/5

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



1 inch = 100 feet

Prepared By: BC Stormwater Management Utility
 Date Print: 03/27/19
 File: C:\project summaries map\Browns Island Rd Map #4_2018-618



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
 - A. Special Presentation - TBD
7. PUBLIC COMMENT
8. NEXT MEETING AGENDA
 - A. July 10, 2019 ([backup](#))
9. ADJOURNMENT