



BEAUFORT COUNTY  
STORMWATER MANAGEMENT UTILITY BOARD AGENDA  
Wednesday, March 13, 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 – February 13, 2018 ([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. FY20 Budget ([backup](#))
6. NEW BUSINESS
  - A. FY18 Actuals ([backup](#))
7. PUBLIC COMMENT
8. NEXT MEETING AGENDA
  - A. April 10, 2019 ([backup](#))
9. ADJOURNMENT

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

February 13, 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 2/18/2019

### **Board Members**

#### **Present**

Don Smith  
Marc Feinberg  
Allyn Schneider  
William Bruggeman  
Patrick Mitchell

#### **Absent**

James Fargher

### **Ex-Officio Members**

#### **Present**

Neil Desai  
Kim Jones  
Van Willis  
Scott Liggett

#### **Absent**

### **Beaufort County Staff**

Eric Larson  
Melissa Allen  
Patricia Wilson  
Carolyn Wallace

### **Visitors**

Dr. Alan Warren, USCB Lab  
Lamar Taylor, City of Beaufort  
Steve Andrews, Andrew's Engineering

#### **1. Meeting called to order – Don Smith**

##### **A. Agenda – Approved with Addition**

- Addition to New Business – (Item D - FY 2020 Budget)

##### **B. December 12, 2018 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/2019/021319.pdf>

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

In reference to item 2A (Regionalization) the baseline report has been completed. A meeting will take place later in the month [February] to compare and contrast jurisdictions. Currently seeking input from the development community. Mr. Billy Bruggeman asked if there is much response. Mr. Larson explained this is the second time that it was sent out (first time was before Christmas) and responses are going directly to Bill Hodgins. He noted the deadline for feedback is in a few days [February 15].

In reference to Board Appointments (Item 7), Mr. Larson indicated that County Council is considering a recommendation for the District 6 seat and introduced Neil Desai as the new Ex-Officio member for City of Beaufort.



**B. Monitoring Update – Eric Larson**

Please reference the report, no additional updates.

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

Please reference the report, no additional updates.

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

Items #1 (Evergreen Project) and #7 (Alljoy) will be discussed during New Business.

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

Please reference the report, no additional updates.

**F. Regional Coordination – Eric Larson**

Item #5 will be discussed during the budget presentation (New Business – FY2020 Budget).

**G. Municipal Reports – Eric Larson**

Please reference the report, no additional updates.

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

Mr. Larson shared the “That’s My Truck” coloring contest event video. In reference to item #7 (System Mapping), the County is nearly done with this effort and will be done by fall. Mapping affects the budget [operations and maintenance of systems]. The County will be partnering with the Town of Port Royal and City of Beaufort to map their systems.

Mr. Don Smith asked if this will help with flooding and flood insurance requirements. Mr. Larson commented that this would be the first step in doing a hydrology model, which will help define watersheds and conveyance and identify choke points.

In reference to #11, the MS4 Annual Report was submitted to DHEC which included updates to monitoring plan and management plan.

**I. Maintenance Projects Report – Eric Larson**

Mr. Larson pointed out the Huspah Court South project, which was done as concession to receive an easement. That was the effort to satisfy a need to acquire an easement to the marsh and even though the easement was “free,” that is what it cost [\$31,895.47].

Mr. Marc Feinberg commented about educating the public on who is responsible [to maintain ditches]. Ms. Kim Jones shared that the Town of Bluffton gets that question constantly, especially from private communities. Mr. Larson noted that the Clemson program does provide education and will go to neighborhood POA meetings and hand out a brochure. He explained that he just attended a neighborhood meeting on Saturday and the topic was ditch maintenance.

**5. Unfinished Business –**

**A. Voting for Stormwater Manager Utility Board Chairman and Vice Chairman – A** motion was made for William Bruggeman as the Chairman and Allyn Schneider for the Vice Chairman. The motion was approved 5/0.

## 6. New Business

**A. *Evergreen Project Award*** – Mr. Larson explained that interviews were held the first week of January and the recommendation is for Andrew's Engineering to do the project. The project will be funded out of CIP funds and by a grant match. The recommendation will go to Natural Resources Committee next week and is for design services and construction administration.

A motion was made to recommend this [award the contract to Andrew's Engineering]. The motion was approved 5/0.

**B. *Alljoy Regional Study*** – Mr. Larson explained that this would be a sub-watershed study in the Alljoy area, as there are concerns of localized flooding during rain events and also due to high tide. He commented that it is similar to the Mossy Oaks situation. This study would help identify choke points and he anticipates a solution will be a small stormwater pond with a pump station to a larger pond.

Discussion took place about the following topics:

- The process. It would include an engineering study, engineering, land acquisition and construction.
- How many calls the County has received regarding this issue. Mr. Larson explained the County has received several calls (it is a hot spot when it rains).
- If not Stormwater's responsibility to fix then who? Mr. Larson commented it should be rephrased to say should stormwater (utility revenue) fund the project. The flooding and complexity, as well as costs are above and beyond anything in current budget. Land acquisition is what is inflating the cost. Encourage CC to find other ways to fund the project.
- Discussion for the need to be very specific when making a decision (if stormwater issue or flooding issue) of who should or how the project should be funded.
- As the Stormwater Manager, what is the opinion on this issue? Mr. Larson commented that something needs to be done, but being funded by the utility will have a large impact on the revenue and rates and that is what is concerning.
- Description of Alljoy Area. – It is unincorporated, fairly dense, several repetitive loss properties (1 approved FEMA grant for elevation), approximately 600 acres area with two outfalls that is tidally influenced and predominantly state roads.
- Discussion about the Master Plan and will this project (if approved) give rise to other similar issues where the County would have to compare priorities.
- The study would help identify when and why flooding happens, how often, and assist in making decisions on how to make forward (funding sources, etc).
- Discussion about Emergency Management (proactive steps) and Disaster Recovery roles (mitigation and buy out programs).
- Mr. Larson explained that all of the study and estimates so far has been done by him and are assumptions.
- Discussion about other conditions to consider such as sea level rise.
- How many homes are/would be affected? There are 27 homes that have been identified.
- How many complaints has the County received? There are three properties that are consistently reporting
- The need to identify all properties below FEMA flood level (elevation projects). Have to approach from a grant perspective.

- This proposal would allow the County to select a firm from concept to construction drawings. \$250,000 would be the cost for the whole thing, estimate it may be about \$100,000 to get conceptual out of the way, it will require a lot of field work and modeling.
- There was a push from County Council to look at the Alljoy area. Mr. Larson's recommended approach is to solve the problem and not put a band-aid on it as that will only push the problem from one place to another.
- What is the major factor here? If it is tide, how is that a stormwater "problem?" There is a conveyance problem, elevation problem, and it is mostly state ROW.
- The proposed fees assume that there is no other participation than the County.

A motion was made to proceed with the minimum study to define the problem. Discussion: Mr. Bruggeman commented the need to define if it is a tide problem or stormwater problem. Mr. Larson noted that funding a study doesn't mean the Utility will need to fund the entire project. Comments were made that if the County was to apply for a grant that a study would be needed. The motion was approved 5/0.

**C. Annual MS4 Report** – The annual report was submitted and the revised monitoring and management plans were included in it. All MCM components are implemented, the program is fully staffed and operational, all ordinances are in place and inspections are increasing in volume. Mr. Feinberg asked if the County receives feedback on the report. Mr. Larson and Ms. Jones responded that they don't [haven't in the past] receive any.

**D. FY 2020 Budget** – Mr. Larson provided two memos that were prepared for the SWIC members [per IGA]. One memo was a financial summary of the last complete year of billing (for the utility). The other memo was the projected management fees for TY19 and projected cost shares for FY20. [The memos are attached.](#)

Mr. Larson explained that he wanted to provide a preview of the budget as he is working to update the five year plan for the utility. This is being presented a year early, as the management plan is complete and the capital project list and funding needs have changed.

The significant changes to staff would be an additional Inspector (plan reviewer), Assistant Stormwater Manager, Assistant Superintendent (data manager for infrastructure operations and maintenance), and second vac-truck crew. Addition of a specialty piece of equipment, Grade-All, which is a truck with a backhoe. The goal is to become proactive instead of reactive.

CIP Projects currently underway are in either the design or construction phase. New projects are those that were identified or renewed in master plan, but have not been started (regional ponds stormwater ponds for water quality).

Additional CIP to consider are projects that weren't in the master plan, but have been brought up to look at. Graves/Pepper Hall numbers were estimated by researching similar subdivisions. Alljoy numbers are estimates of the cost to do the study, design a pond with a pump, as well as elevation/land acquisition. May River sanitary sewer extension estimates are based on an older BJWSA study.

The proposed draft budget shows the next five years. Debt service is for the \$5 million borrowed in 2017 with another borrow anticipated for 2022.

The proposed stormwater fees increased rate is to \$100 starting next fiscal year and an alternative to wait 2 years to increase fees and then increase it to \$109. The recommended proposal is \$100/year, starting next year.

Proposed stormwater fees to account for additional capital improvement projects added to the budget were shared, and there were four different scenarios. The scenarios show the County may need to potentially double stormwater fees or find other funding sources. Mr. Larson was asked to look at the costs and see if the utility could fund these projects (sanitary sewer).

Discussion took place about:

- BJWSA and how they own and maintain once it is built, but they do not fund extensions.
- The priorities of Capital Projects and explaining how their costs are broken out over several years by phases.
- Discussion about debt service.
- Question and discussion about percent of stormwater fee to taxes.
- Comment about providing better education to the citizens on what they stormwater fee is for.

[The draft budget presentation is attached.](#)

## **7. Public Comment(s) –**

Mr. Marc Feinberg thanked Mr. Smith, as it is his last board meeting.

Mr. Scott Liggett also honored Mr. Smith by sharing that has served since its inception in 2001. He commented that Mr. Smith never lost sight of the core mission to provide advice to Council or committees and has worked hard to generate opinions or advice. He mentioned that great strides have been made in areas such as flood reduction, storm readiness, land acquisition, and public education. Mr. Liggett thanked Mr. Smith for his service as a member and Chairman of the board. He also presented the award for his service.

Mr. Smith commented that it has been rewarding and he is proud of what the utility has done over the years.

## **8. Next Meeting Agenda – Approved with Addition.**

Addition to Unfinished Business – FY20 Budget

## **9. Meeting Adjourned**



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



**MEMORANDUM**

**TO:** Stormwater Implementation Committee (SWIC) Members

**FROM:** Eric W. Larson, Beaufort County Stormwater Utility Manager

**SUBJECT:** FY 17-18 Stormwater Utility Financial Summary

**DATE:** February 13, 2019

The following analysis serves as the end of year financial report provided each year as required by IGA Section 5.04(e). Administration has issued the final, audited Comprehensive Annual Financial Report (CAFR) for fiscal year (FY) 18.

In Tax Year (TY) 2017, Beaufort County, the Town of Port Royal, and the City of Beaufort continued their method of billing to “option E” as defined in the 2015 Rate Study. The Town of Hilton Head Island switched to Option E as well. The Town of Bluffton elected to remain with the previous rate structure, option A. The 2015 Rate Study explains how GIS information for impervious area and parcel acreage is used to determine billable units, based on the standard of 4,906 sq. ft. per SFU or IA. SWU fees are determined by Utility staff and reported to the County Auditor’s office for inclusion in the annual property tax notice.

A spreadsheet is attached providing detailed information per account:

	TY 2017 Total Billed	TY 2017 Total Collected	TY 2017 Billed Units	TY 2017 Collected Units	Collection Rates	TY 2017 Mgt. fees paid
Port Royal	\$ 395,283	\$ 226,980	7,044 IA 3,882 Acct.	# 3,767 Acct.	57.4% 97.0%	\$19,099
Beaufort, City	\$ 1,277,268	\$ 880,964	13,548 IA 6,439 Acct.	# 6,428 Acct.	69.0% 99.8%	\$32,847
HHI	\$ 4,845,352	\$ 4,805,127	33,240 IA 38,193 Acct.	# 37,696 Acct.	99.2% 98.7%	\$153,800
Bluffton	\$ 1,427,856	\$ 1,406,853	14,570 SFU* 12,154 Acct.	14,356 SFU* 12,001 Acct.	98.5% 98.7%	\$41,918
Unincorp. BC	\$ 4,842,993	\$ 4,641,983	53,877 IA 64,516 Acct.	# 62,197 Acct.	95.8% 96.4%	\$732,456
Total	\$12,788,752	\$ 11,961,907				\$980,120

#### In Arrears

A spreadsheet is attached which provides a complete accounting of all accounts in arrears, including a summary of actions taken to attempt collection. The following table summarizes the total number of accounts and fees in arrears for each jurisdiction.

	Accounts in arrears	Fees in arrears
Port Royal	124	\$167,935.89
Beaufort, City	85	\$407,345.20
HHI	402	\$26,841.15
Bluffton	242	\$6,346.30
Unincorp. BC	2,232	\$144,050.74
Total	3,085	\$752,519.28

#### Credits

A spreadsheet is attached which provides a complete accounting of all accounts receiving credits on SWU fees. The following table summarizes the total number of accounts and amount of credits given for each jurisdiction.

	Accounts with credits	Credit Amount
Port Royal	0	\$0
Beaufort, City	1	\$1,379
HHI	2	\$58,533
Bluffton	2	\$2,733
Unincorp. BC	498	\$100,389
Total	503	\$163,034

#### Adjustments

A spreadsheet is attached which provides a complete accounting of all accounts receiving adjustments on SWU fees after the initial billing for TY 17. The following table summarizes the total number of accounts for each jurisdiction.

	Accounts with adjustments
Port Royal	8
Beaufort, City	1
HHI	98
Bluffton	3
Unincorp. BC	111
Total	221

END




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**MEMORANDUM**

**TO:** Stormwater Implementation Committee (SWIC) Members

**FROM:** Eric W. Larson, Beaufort County Stormwater Utility Manager 

**SUBJECT:** FY 19-20 (TY 19) Utility Management Fee Proposed Budget and Rates

**DATE:** February 13, 2019

This is the third year for the revised annual management fee budget proposal format. If you desire, you can compare the two years by reviewing the fiscal year FY 18-19 tax year (TY 18) budget proposal. The updated rate model, attached by reference to this memo, is intended to replace this analysis by presenting previous year's actual numbers and projecting the Management fee annually once the actuals are added to the spreadsheet. Please note only the billable units have been updated in the model; the individual City and Town budgets were not provided to the County and therefore the Summary Tabs for each jurisdiction will not be a valid representation of your revenue and expenses. Of significant note for TY 19 will be the anticipated change to Option E by the Town of Bluffton. This change redistributed the management fee and cost shares to all jurisdictions within the County.

The scope of services to be provided by the Utility are defined by the IGA, specifically Section 5.04. Those services have been provided by the County staff to the municipalities for many years and will continue in fiscal year (FY) 20.

The final but unaudited collections for TY 17 have been inputted into the model along with the final billed units for TY 18. With this information input in the model, the distribution of cost shares and "percent of the whole" has shifted to reflect the most equitable method of cost sharing going into FY 19/20.

	TY 2017 Total Billed	TY 2017 Total Collected	TY 2017 Billed_Units (actual)	TY 2017 Collected Units	Collection Rates
Port Royal	\$ 395,283	\$ 226,980	7,044 IA 3,882 Acct.	# 3,767 Acct.	57.4% 97.0%
Beaufort, City	\$ 1,277,268	\$ 880,964	13,548 IA 6,439 Acct.	# 6,428 Acct.	69.0% 99.8%
HHI	\$ 4,845,352	\$ 4,805,127	33,240 IA 38,193 Acct.	# 37,696 Acct.	99.2% 98.7%
Bluffton	\$ 1,427,856	\$ 1,406,853	14,570 SFU* 12,154 Acct.	14,356 SFU* 12,001 Acct.	98.5% 98.7%
Unincorp. BC	\$ 4,842,993	\$ 4,641,983	53,877 IA 64,516 Acct.	# 62,197 Acct.	95.8% 96.4%
Total	\$12,788,752	\$ 11,961,907			

\*Under Option A, the SFU are based on total dollar amount billed/collected divided by the SFU rate, not from the analysis of the Impervious Layer.

# Under Option E, our current accounting system and SWU fee reporting software will not easily determine the exact collected billable units for IA and GA. Much like Option A, a percentage based on dollar amounts collected is assumed for projection of collection rates for billable units for the upcoming year.

	Billable Unit in TY 2018 (actual)	Calculated Growth Rate (TY17 to TY18)	Billable Units for TY 2019	Distribution for FY 19/20 – B.C. only ^	Distribution for FY 19/20 – NoB only ^
Port Royal	3,838 Acct.	0.987%	3,794 Acct.	3.00%	5.07%
Beaufort, City	6,499 Acct.	1.009%	6,560 Acct.	5.18%	8.77%
HHI	38,255 Acct.	1.002%	38,317 Acct.	30.28%	N/A
Bluffton	12,782 Acct.	1.052%	13,442 Acct.	10.62%	N/A
Unincorp. BC	64,467 Acct.	0.999%	64,418 Acct.	50.92%	86.16%
Total			126,532 Acct.	100 %	100 %

^ Based on TY 2019 projected billable acct. units for all jurisdictions within Beaufort County only.

The following cost shares are proposed for FY 20:

- 1) Public Education and Outreach - \$90,000. This is a continuation of the MOA for PE/PO and our contract with Clemson University. Distribution will be by the FY 19/20 percentages. Those jurisdictions using the Option E rate structure will pay this cost share as part of the Management fee.
- 2) Water Quality Monitoring North of the Broad River – \$120,000. This cost share is only for the County, Port Royal, and City of Beaufort. This is a continuation of the MOA for monitoring and our contract with USCB Lab. Distribution will be by the FY 19/20 percentages. These jurisdictions are using the Option E rate structure and will pay this cost share as part of the Management fee.
- 3) Regional Stormwater Standards Development – \$179,554. There is regional effort to standardize development standards throughout Beaufort County and Jasper County. With the cooperation of all political entities involved, a consultant was hired to study our region and provide recommendation for guidelines in future development and redevelopment standards. The project will be complete in the fall of 2019. This cost will be shared with the counties of Beaufort and Jasper, the cities of Beaufort and Hardeeville, and the towns of Bluffton, Hardeeville, and Port Royal and the cost-share will be based on population. The cost-share for the participating jurisdictions using the Option E rate structure is being remitted through the FY 19 management fee. For all other partners involved, it is important to budget any unspent funds for FY 20 to pay remaining invoices after June 30, 2019. Town of Bluffton and Jasper County jurisdictions will be billed for the expenses.

Cost Shares	PE/PO	Monitoring	Regional Development (From FY 19)
Port Royal	\$2,700	\$6,084	\$13,669 *
Beaufort, City	\$4,662	\$10,524	\$14,374 *
HHI	\$27,252	N/A	N/A
Bluffton	\$9,558	N/A	\$20,203
Unincorp. BC	\$45,828	\$103,392	\$105,303*
Yemassee	N/A	N/A	N/A
Unincorp, Jasper	N/A	N/A	\$19,889
Hardeeville	N/A	N/A	\$6,116
Ridgeland	N/A	N/A	N/A
Total	\$90,000	\$120,000	\$179,554

\* collected in full in FY 19 via the Mgt. fee.



The proposed Management budget for FY 19-20 is \$444,291. The following is a breakdown summary of major budget categories:

Salaries, Fringe, Training = \$407,389

Capital Equipment, Depreciation, Insurance, Repairs = \$10,772

Cost Shares = \$210,000 (not included in Management budget)

Office Supplies, Operational Expenses = \$8,630

Professional & Non-Prof. Services = \$5,000

Aerial Photography (budgeted annually, expended every 2 years) = \$12,500

Based upon the number of billable units, distribution percentages, and the Management budget, the following Management fee per billable unit and total Management fee has been estimated.

Mgt. Fee	Billable Units For TY 2019	Rate <sup>(1)</sup>	Total Mgt. Budget	Total Mgt. Budget w/ PE/PO & Monitoring Cost Shares (\$)
Port Royal	3,794 Acct.	\$5.83 / Acct.	\$13,322	\$22,106
Beaufort, City	6,560 Acct.	\$5.83 / Acct.	\$23,034	\$38,220
HHI	38,317 Acct.	\$4.23 / Acct.	\$134,543	\$161,795
Bluffton	13,442 SFU	\$4.23 / Acct.	\$47,199	\$56,757
Unincorp. BC	64,418 Acct.	\$19.00 / Acct. <sup>(2)</sup>	\$226,193	\$375,413
Total			\$444,291	\$654,291

\$ - Note that due to the lack of rounding within the Excel Spreadsheet "rate model" these values do differ slightly (\$10 or less) from the model.

<sup>(1)</sup> Without regional standards project cost share added

<sup>(2)</sup> Beaufort County has elected to fund its Regulatory program on a per account basis, therefore, the cost share amounts do not change the account fixed fee being proposed like it does other jurisdictions.

**Per Section 4.01 of the IGA, prior to April 1, 2019, please submit in writing your jurisdiction's approval of the Management fee for TY 19 within FY 19-20.**

END



# STORMWATER 5 YEAR PLAN UPDATE

BEAUFORT COUNTY STORMWATER DEPARTMENT AND UTILITY  
MANAGEMENT BUDGET PROPOSAL

FY 2020 – FY 2025

# SIGNIFICANT CHANGES

- ADDITION OF AN ASSISTANT STORMWATER MANAGER
- ADDITION OF A PLAN REVIEWER / MS4 INSPECTOR
- ADDITION OF AN ASSISTANT SUPERINTENDENT
- ADDITION OF SECOND VAC TRUCK CREW
  - DECISION TO KEEP THE OLD VAC TRUCK,
  - HIRE A 2-MAN CREW, AND
  - EVENTUAL PURCHASE OF A SECOND NEW VAC TRUCK IN FY 2023
- GRAD-ALL PURCHASE
- WHY? – COMPLETION OF PRIMARY SW INVENTORY SHOWS DRAMATICALLY MORE INFRASTRUCTURE
- ADDITION OF NEW CIP PROJECTS FROM 2018 MASTERPLAN UPDATE

# CAPITAL PROJECTS CURRENTLY UNDERWAY

- BREWER MEMORIAL PARK - \$562,000
- FACTORY CREEK PHASE I – NO ADDITIONAL COSTS
- FACTORY CREEK PHASE II - NO ADDITIONAL COSTS
- SALT CREEK SOUTH - \$2.1 MIL.
- SHANKLIN ROAD (AKA ROSEIDA ROAD) - \$3.5 MIL.
- MOSSY OAKS TASK FORCE - \$220,000
- EVERGREEN REGIONAL POND & 319 GRANT - \$697,000

# NEW CAPITAL PROJECTS FROM 2018 MASTERPLAN

- CAMP ST. MARY REGIONAL POND - \$3.9 MIL.
- ROCK SPRINGS CREEK - \$431,000
- SAWMILL BRANCH REGIONAL - \$1.1 MIL.
- LUCY POINT CREEK REGIONAL - \$439,000
- ALBERGOTTI CREEK REGIONAL - \$602,000

# ADDITIONAL CIP TO CONSIDER

- GRAVES / PEPPER HALL COST SHARE OF SW DESIGN & CONSTRUCTION - \$1.7 MIL. (EST.)
- ALLJOY REGIONAL WATERSHED STUDY - \$950,000 (EST.)
- ACQUISITIONS AND/OR STRUCTURE ELEVATIONS - \$9.7 MIL. (EST.)
- MAY RIVER WATERSHED SANITARY SEWER EXTENSIONS
  - GAS. BLUFF / STONEY CREEK - \$8 MIL. (EST.)
  - CAHILL BRANCH - \$ 2 MIL. (EST.)
  - PRITCHARDVILLE - \$10.5 MIL. (EST.)
  - ALLJOY - \$12.5 MIL. (EST.)

# PROPOSED BUDGET - DRAFT

	FY 20	FY 21	FY 22	FY 23	FY 24
Expenses					
SWU Mgt.	\$ 444,291	\$ 450,414	\$ 459,302	\$ 469,484	\$ 480,185
SWU Reg.	\$ 1,057,436	\$ 1,006,642	\$ 1,002,025	\$ 945,839	\$ 1,009,402
SWU O&M	\$ 4,041,160	\$ 4,208,455	\$ 4,306,992	\$ 4,400,074	\$ 4,451,797
Capital Equipment	\$ 683,940	\$ 657,000	\$ 855,000	\$ 639,100	\$ 415,000
Capital Projects	\$ 1,916,638	\$ 2,958,871	\$ 2,074,528	\$ 2,084,984	\$ 1,806,369
Debt Service	\$ 188,268	\$ 188,268	\$ 393,277	\$ 536,522	\$ 533,581
Total	\$ 8,331,733	\$ 9,469,650	\$ 9,091,125	\$ 9,076,003	\$ 8,696,333
Revenues					
Beginning Balance	\$ 5,876,948	\$ 4,276,370	\$ 1,660,500	\$ 4,620,065	\$ 2,729,346
Reserve	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
SWU Fees (all)	\$ 5,731,155	\$ 5,853,779	\$ 6,050,690	\$ 6,185,283	\$ 6,327,545
Bonds			\$ 5,000,000		
Total	\$ 12,608,103	\$ 11,130,150	\$ 13,711,190	\$ 11,805,348	\$ 10,056,890
Net	\$ 4,276,370	\$ 1,660,500	\$ 4,620,065	\$ 2,729,346	\$ 1,360,557

# PROPOSED SWU FEE – DRAFT PREFERRED ALTERNATE

Budget Alt. #1	FY 20	FY 21	FY 22	FY 23	FY 24	
Admin.	\$ 19	\$ 19	\$ 19	\$ 19	\$ 19	
IA (1)	\$ 71	\$ 71	\$ 71	\$ 71	\$ 71	
GA (2)	\$ 10	\$ 10	\$ 10	\$ 10	\$ 10	
total (3)	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 500
Bond			\$ 5,000,000 (4)			\$ 5,000,000
(1) Based on 4,906 sq.ft. per billable unit			(4) Current CIP has an add. \$4.5mil in new projects			
(2) Based on a declining block method						
(3) Typical Tier II SFR on 2 acres or less						



# PROPOSED SWU FEE – DRAFT ALTERNATE #2

Budget Alt. #2	FY 20	FY 21	FY 22	FY 23	FY 24	
Admin.	\$ 12	\$ 12	\$ 19	\$ 19	\$ 19	
IA (1)	\$ 65	\$ 65	\$ 80	\$ 80	\$ 80	
GA (2)	\$ 10	\$ 10	\$ 10	\$ 10	\$ 10	
total (3)	\$ 87	\$ 87	\$ 109	\$ 109	\$ 109	\$ 501
Bond			\$ 5,000,000 (4)			\$ 5,000,000
(1) Based on 4,906 sq.ft. per billable unit			(4) Current CIP has an add. \$4.5mil in new projects			
(2) Based on a declining block method						
(3) Typical Tier II SFR on 2 acres or less						

(ASSUMES COST SHARES WITH OTHER JURISDICTIONS)

Budget Alt. #3a *	FY 20	FY 21	FY 22	FY 23	FY 24	
Admin.	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20	
IA (1)	\$ 85	\$ 85	\$ 85	\$ 85	\$ 85	
GA (2)	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20	
total (3)	\$ 125	\$ 125	\$ 125	\$ 125	\$ 125	\$ 625
Bond		\$ 2,000,000	\$ 4,000,000	\$7,000,000	\$ 8,000,000	\$ 21,000,000
(1) Based on 4,906 sq.ft. per billable unit						
(2) Based on a declining block method						
(3) Typical Tier II SFR on 2 acres or less						
* adds to CIP: Pepper Hall cost share, Alljoy Flood Control, 50% of May River San. Sewer projects						

(ASSUMES COST SHARES WITH OTHER JURISDICTIONS)

Budget Alt. #3b *	FY 20	FY 21	FY 22	FY 23	FY 24	
Admin.	\$ 12	\$ 19	\$ 19	\$ 19	\$ 20	
IA (1)	\$ 65	\$ 65	\$ 75	\$ 80	\$ 85	
GA (2)	\$ 10	\$ 10	\$ 15	\$ 20	\$ 20	
total (3)	\$ 87	\$ 94	\$ 109	\$ 119	\$ 125	\$ 534
Bond		\$ 6,000,000	\$ 6,000,000	\$ 7,000,000	\$ 7,000,000	\$ 26,000,000
(1) Based on 4,906 sq.ft. per billable unit						
(2) Based on a declining block method						
(3) Typical Tier II SFR on 2 acres or less						
* adds to CIP: Pepper Hall cost share, Alljoy Flood Control, 50% of May River San. Sewer projects						

Budget Alt. #4a *	FY 20	FY 21	FY 22	FY 23	FY 24	
Admin.	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20	
IA (1)	\$ 105	\$ 105	\$ 105	\$ 105	\$ 105	
GA (2)	\$ 25	\$ 25	\$ 25	\$ 25	\$ 25	
total (3)	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 750
Bond		\$ 2,000,000	\$ 5,000,000	\$10,000,000	\$13,000,000	\$ 30,000,000
(1) Based on 4,906 sq.ft. per billable unit						
(2) Based on a declining block method						
(3) Typical Tier II SFR on 2 acres or less						
* adds to CIP: Pepper Hall cost share, Alljoy Flood Control, 100% of May River San. Sewer projects						

Budget Alt. #4b *	FY 20	FY 21	FY 22	FY 23	FY 24	
Admin.	\$ 12	\$ 19	\$ 19	\$ 19	\$ 20	
IA (1)	\$ 65	\$ 65	\$ 80	\$ 80	\$ 105	
GA (2)	\$ 10	\$ 10	\$ 20	\$ 20	\$ 25	
total (3)	\$ 87	\$ 94	\$ 119	\$ 119	\$ 150	\$ 569
Bond		\$ 10,000,000	\$ 10,000,000	\$11,000,000	\$12,000,000	\$ 43,000,000
(1) Based on 4,906 sq.ft. per billable unit						
(2) Based on a declining block method						
(3) Typical Tier II SFR on 2 acres or less						
* adds to CIP: Pepper Hall cost share, Alljoy Flood Control, 100% of May River San. Sewer projects						

# RECOMMENDATIONS

- ADOPT A RATE INCREASE IN FY 20 AND REMAIN LEVEL FOR 5 YEARS, OR
- DELAY RATE INCREASE AND RAMP FEE INCREASES OVER 5 YEARS

AND

- COMMIT TO ADDING SOME OR ALL OF THE ADDITIONAL CIP PROJECTS TO PLAN, OR
- RECOMMEND TO COUNTY COUNCIL TO SEEK OTHER FUNDING SOURCES FOR THESE PROJECTS



**BEAUFORT COUNTY  
STORMWATER UTILITY**

**120 Shanklin Road**

**Beaufort, South Carolina 29906**

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



March 13, 2019

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

Utility Update

1. Southern Lowcountry Regional Board (SoLoCo)
  - a) Nothing new to report.
  - b) See Regionalization below.
2. Regionalization
  - a) Regional Stormwater Design Standard and Model Ordinance Project – Project partners met with the consultant in two half day sessions to go over public comments and review key concepts of the model ordinance and design manual. The consultant is now drafting each document and should have a draft ready in April.
  - b) Regionalization of programs – This is pending additional discussion after the Reg. SW Std. is completed. County staff has completed research involving contacting several regional programs across the southeast and Midwest to establish a summary of options for the framework of a potential organization. This research also reviewed South Carolina law looking for options available to set up the authority to create a regional agency. Staff is now working on a recommendations memo to compliment the research. Results will be presented at a future date.
3. Annual Financial report from the Municipalities – Per the Intergovernmental Agreements for the Utility, each year on September 30<sup>th</sup>, the City and Towns are required to submit a summary of revenue and expenditures for the previous fiscal year.
  - a) Beaufort County – Report to be provided at the meeting under New Business.
  - 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. 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 visit to the Naval Hospital is still pending. A summary of the Parris Island tour is drafted and staff is working on a summary of the MCAS visit from last fall.
  - b) Living shorelines – Scheduled for April's meeting.
  - c) Other ideas?

5. FY 2020 Budget – The draft budget has been submitted to County Council in advance of the Council retreat on March 13 and 14. The Board will be asked to take action on a recommendation of the budget during Unfinished Business.
6. County Council retreat – March 13 and 14, 2019, 9a-4p TH, 9a-2p F, at Buckwalter Recreation Center. Eric Larson will be presenting the CIP and SW Budget / rate increase Friday morning.
7. Military installation and other State and Federal properties SWU fees – Administration is in communication with Counsel for the military about the delinquent fees. Administration and County Council is considering action on this issue.
8. Delinquent accounts - Staff will be meeting with the Assessor's Office and Treasurer on March 29<sup>th</sup> to discuss ideas to increase collections.
9. Board Appointments
  - a) County Council has appointed Mr. James Clark to represent Stormwater District 6.
  - b) Appointment for Stormwater District 5 is pending.
10. Assistant Stormwater Manager – An offer has been made to a candidate and is pending acceptance.

#### Monitoring Update

1. Lab Update (From Dr. Alan Warren and Lab Manager Danielle Mickel)
  - 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.
  - a) Oak Marsh Subdivision – Council approved deleting the special purpose tax district established in 2001 during a meeting last May 2018. In that action they assumed ownership of the roads and drainage easements. Staff has found issue with the ability to maintain one of the ditches. Staff is researching the history of the encroachments within the easement and preparing a report for Council consideration of an amendment of that agreement from May.
2. Complaints – Staff continually works numerous drainage related complaints each month.



3. Alljoy subwatershed flooding – Staff is updating the draft RFQ based on comments from the SWUB and County Council Natural Resources Committee last month. Release of the RFQ is pending further discussion at the County Council Retreat March 13-14, 2019. Funding of the study is still pending a SWU fee rate adjustment for FY 20.
4. Factory Creek Watershed Regional Detention Basin “Phase I” & Academy Park Subdivision (Design Cost \$49,873, Tree Mitigation Cost \$18,200 & \$18,200, Construction Cost by the Developer) – No additional update at this time.
5. Factory Creek Watershed Regional Detention Basin “Phase II” (Design Cost = \$63,390, Tree Mitigation Cost is pending, Construction Cost by the Developer) – No additional update at this time.
6. Graves Property / Pepper Hall Public / private partnership – No additional update at this time.
7. Whitehall property purchase – County Council was briefed by the Interim County Administrator on the legal issues surrounding the land purchase deal with the developer. No update on stormwater related issues at this time.
8. US 278 “super street” widening on Jenkins Island (Windmill Harbor area) – County Council has instructed Engineering Capital Projects staff to “scale back” the safety project on Jenkins island and move forward with construction, even though future US 278 bridge corridor plans are uncertain. “Scaling back” includes deleting the underground storage (including infiltration, peak control, and water quality treatment) from the project. Cost savings estimates and SCDOT approval are pending.

#### 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 - No update at this time.
  - b) Brewer Memorial – Permit applications have been submitted to SCDOT and SCDHEC. The local SW permit has been issued.
2. Evergreen Regional Pond 319 grant project – (Design=\$89,286, Construction=\$590,000. Grant=\$229,124) – Design is underway.

#### 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.

#### Municipal Reports

1. Town of Hilton Head Island (From Jeff Netzing, 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.](#)
  - ii. County Staff did not attend the monthly May River WAPAC meeting in February.
3. City of Beaufort (From Neil Desai, Asst. Public Works Director)
  - i. [See attached report.](#)
4. Town of Port Royal (From Van Willis, Town Manager and Tony Maglione, consultant)
  - i. No information was available at the time of this report.

#### MS4 Report

1. Plan Review – [See the attached chart](#) for Beaufort County Stormwater staff plan review workload for the past 12 months.
2. Stormwater Permits – [See the attached chart](#) for Beaufort County Stormwater permits issued for the past 12 months.
3. Monthly Inspection summary - [See the attached chart](#) for Beaufort County Stormwater staff inspection, complaint, IDDE, and violations summary for the past 12 months.
4. Weather Station data. [See attached chart.](#)
5. Public Education – Lowcountry Stormwater Partners (LSP), via Carolina Clear, continues to work on several initiatives towards public education and outreach. No updates are available at this time.
6. MS4 Statewide General permit – No update at this time.
7. Statewide General permit for Construction – No update at this time.

## 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. At present, very little is known about the number and species of fish in Crystal Lake, let alone how many fish are caught and consumed. Thus, the proposed work detailed herein assumes that edible fish can be caught in sufficient numbers for tissue analysis. Once such analysis has been conducted, tissue contaminant levels can be compared 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

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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

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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)

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

### **In-situ Water Parameters**

Dissolved Oxygen

Turbidity

Specific Conductivity

Salinity

pH

Temperature

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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)

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

**UPDATE:** Antony from Bold and Gold is arriving on March 12, 2019 bringing required pump 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. Immediately prior to the evacuation of water, Beaufort County is to plug the pipe. 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.

## **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:**

- 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.

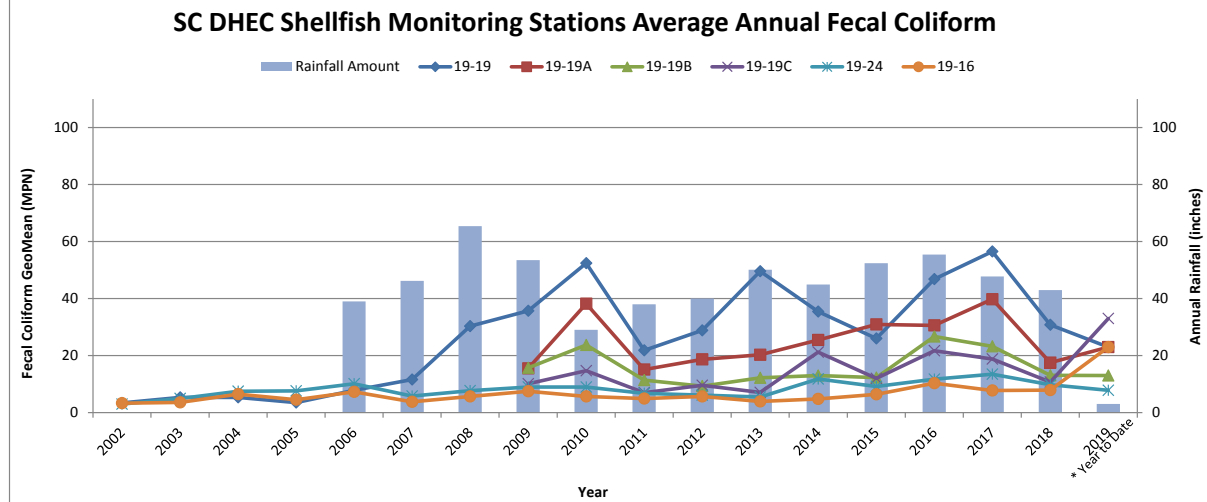


	19-19				19-19A				19-19B				19-19C				19-24				19-16			
	2016	2017	2018	2019	2016	2017	2018	2019	2016	2017	2018	2019	2016	2017	2018	2019	2016	2017	2018	2019	2016	2017	2018	2019
	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)	Fecal Coliform (MPN)
December	79.0	1600.0	79.0		23.0	920.0	49.0		49.0	540.0	33.0		33.0	240.0	46.0		7.8	220.0	23.0		23.0	49.0	21.0	
November	33.0	49.0	49.0		13.0	33.0	13.0		7.8	7.8	23.0		14.0	31.0	17.0		13.0	2.0	17.0		33.0	2.0	7.8	
October	NS	22.0	79.0		NS	49.0	23.0		NS	33.0	7.8		NS	23.0	7.8		NS	6.8	7.8		NS	2.0	2.0	
September	23.0	17.0	49.0		110.0	7.8	23.0		23.0	11.0	13.0		13.0	4.5	17.0		4.5	2.0	17.0		7.8	1.8	17.0	
August	NS	79.0	70.0		NS	70.0	23.0		NS	21.0	13.0		NS	33.0	4.5		NS	33.0	7.8		NS	33.0	17.0	
July	79.0	350.0	23.0		17.0	110.0	33.0		22.0	130.0	11.0		17.0	49.0	7.8		49.0	49.0	13.0		13.0	22.0	4.5	
June	79.0	23.0	11.0		130.0	49.0	23.0		70.0	13.0	23.0		110.0	17.0	7.8		33.0	7.8	4.5		23.0	4.5	1.8	
May	70.0	17.0	17.0		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	13.0		13.0	4.5	17.0		13.0	7.8	17.0		7.8	13.0	49.0		1.8	4.5	17.0	
March	33.0	350.0	22.0		33.0	11.0	21.0		33.0	33.0	4.5		17.0	13.0	11.0		11.0	13.0	7.8		7.8	33.0	9.3	
February	23.0	13.0	17.0		17.0	7.8	7.8		13.0	13.0	17.0		11.0	9.3	17.0		6.8	4.5	2.0		1.8	1.8	7.8	
January	110.0	95.0	13.0	23.0	33.0	79.0	2.0	23.0	49.0	31.0	4.5	13.0	17.0	49.0	2.0	33.0	7.8	27.0	1.8	7.8	17.0	33.0	4.5	23.0
Additional Samples																								
Additional Samples																								
Average Annual GeoMean	46.8	56.5	30.8	23.0	30.6	39.8	17.5	23.0	26.7	23.3	13.1	13.0	21.7	18.8	10.7	33.0	11.7	13.5	9.8	7.8	10.3	7.7	7.9	23.0
** Truncated GeoMetric Mean	37.0	44.0	42.0	40.0	30.0	36.0	29.0	26.0	16.0	20.0	20.0	17.0	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	199.0	89.0	133.0	115.0	112.0	69.0	83.0	71.0	66.0	65.0	57.0	56.0	56.0	29.0	37.0	44.0	49.0	21.0	29.0	30.0	32.0

NS = No Sample

AS = Additional Samples

\*\* Town staff calculations utilizing DHEC statistics

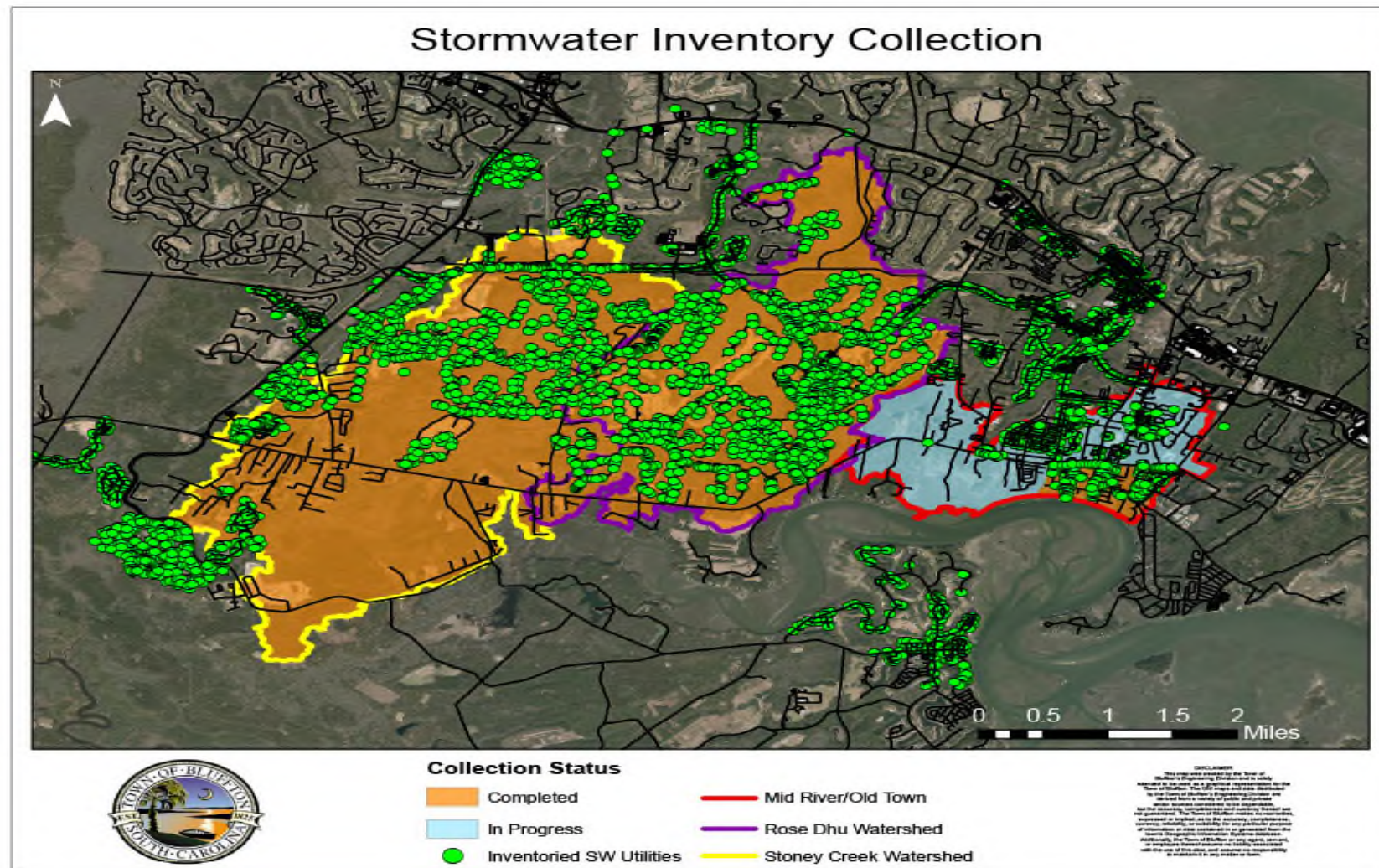


ACTIVITY - POLICY	STATUS
May River Watershed Action Plan Update	To be completed with direction and input from Water Quality Technical Advisory Committee, May River Watershed Advisory Committee, and Town Council, public and staff. Action Plan Update is a FY19-20 priority of WAPAC and Council. WAPAC scope direction provided 2/22/18 to include watershed health indicators of bacteria, biotic & abiotic parameters and social/cultural/economic indicators. Staff met with SCDHEC to confirm hybrid 5R and traditional watershed-based plan approach will be accepted. To be initiated at start of FY19 with anticipated completion in mid-FY20. <b>Based on initial quotes, staff has released a separate Request for Qualifications to complete MRWAP Water Quality Model, current project assessment, and proposed new projects.</b>
Sewer Connection & Extension Policy	<b>Completed 2018.</b> Council adopted the Sewer Connection & Extension Policy on 9/26/17. WAPAC proposed prioritization phases for sewer extension in Historic District for FY 19-23 and recommended revisions to Sewer Connection Ordinance on 2/22/18. Staff has initiated septic system maintenance education via outreach and with Lowcountry Stormwater Partners. Town Council considered WAPAC recommended amendments to Sewer Connection Program on 4/10/18. Will consider for 2nd & Final Reading upon Septic to Sewer Conversion Program establishment. Town Council Workshop of Septic to Sewer Conversion Program on 7/17/18. Ordinance and Program adoption completed 9/20/18.
ACTIVITY - PROJECTS	STATUS
Sanitary Sewer Extension	Buck Island/Simmons Road (BIS) Phases I, II, III and IV are completed. Toy Fields and Jason/Able are completed. 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." <b>Current project updates are included in Engineering Consent Agenda.</b>
May River 319 Grant Phase 1 - New Riverside Pond (Grant award of \$483,500 in 2009)	<b>Completed in 2013.</b> Per water quality tests, a statistically significant reduction in fecal coliform bacteria concentration exists pre-pond versus post-pond. However, bacteria levels re-load prior to discharging into the May River, leading to additional BMP installation of Filtrexx proprietary filter socks. Installed 12/12/17 to maintain bacteria reduction. Downstream failing septic system was located by Staff and reported to County & SCDHEC for remediation.
May River 319 Grant Phase 2 - Pine Ridge (Grant award of \$290,000 in 2011)	<b>Completed in 2016.</b> In post-construction monitoring phase to assess project efficacy.
May River 319 Grant Phase 3 - Town Hall Parking Retrofit (Grant award of \$231,350 in 2016)	EPA & DHEC permitted a workplan amendment for this grant award to include stormwater retrofits at Town Hall. <b>Current project updates are included in Engineering Consent Agenda.</b>
Stoney Creek Wetlands Restoration: Preliminary Design Phase	Wetlands restoration project with the goal to reduce stormwater volume reaching the May River. Conceptual design completed and approved by property owners. <b>Project on hold following Council direction on 5/31/17.</b>
May River Watershed Water Quality Model	2002 Palmetto Bluff Duck Pond Drainage area watershed model complete. Completed New Riverside BMP model for comparison to field observations. Rose Dhu Creek sub-watershed "Existing Conditions" portion of the Headwaters Water Quality Model initiated. <b>Based on quotes to complete the water quality model as part of Action Plan Update, a separate RFQ will be released.</b>

ACTIVITY - FINANCIAL	STATUS
Additional Funding Opportunities	Exploring partnership opportunities with BJWSA for future sewer phases. WAPAC FY19-20 priority to assess Stormwater Utility Fee. <b>SWU Fee Rate Model Update has been completed by Raftelis with the recommendation to convert to Option E with increase of SWU fee. Staff is researching possibility to use 319 grant funds in support of sewer connections.</b>
ACTIVITY - PROGRAMS	STATUS
Public Outreach/Participation/Involvement (MS4 Minimum Control Measure #1 & 2)	Outreach and involvement efforts continue through county-wide partnership with Carolina Clear as Lowcountry Stormwater Partners - Neighbors for Clean Water, through local cleanups, civic group presentations, and the May River Watershed Action Plan Advisory Committee. <b>Current updates are included in Engineering Consent Agenda and Attachment 3.</b>
Infrastructure Mapping/GIS (MS4 Minimum Control Measure #3)	Data points continue to be collected with new development to meet MS4 requirements & populate water quality model. <b>Current updates are included in Engineering Consent Agenda Attachment 4a.</b>
Water Quality Monitoring Program (MS4 Minimum Control Measure #3)	<ol style="list-style-type: none"> <li>1. SCDHEC Shellfish monitoring results</li> <li>2. Fecal coliform bacteria "hot spot" concentrations</li> <li>3. Microbial Source Tracking of human sources of bacteria</li> <li>4. Illicit Discharge investigation and monitoring</li> <li>5. BMP efficacy monitoring</li> <li>6. MS4 monitoring</li> </ol> <b>Current updates are included in Engineering Consent Agenda Attachments 1, 4b, 4c, and 4d.</b>
Construction Site Stormwater Runoff Control Program (MS4 Minimum Control Measure #4)	Sediment and erosion control inspections with escalating enforcement response. <b>Current updates are included in Engineering Consent Agenda Attachment 5.</b>
Stormwater Plan Review & Related Activity Program (MS4 Minimum Control Measure #5)	SCDHEC delegated plan review-related activities. <b>Current updates are included in Engineering Consent Agenda Attachment 6.</b>
Ditch Inspection/Maintenance Program (MS4 Minimum Control Measure #6)	Continued coordination with SCDOT, Beaufort County and Town Public Works to inspect and maintain ditches within the Town's jurisdiction. <b>Current updates are included in Engineering Consent Agenda Attachment 7 and under "Public Works."</b>
Septic System Maintenance Program	FY18 funding is \$10,000 and administered by Growth Management via the Neighborhood Assistance Program (NAP). On-going assistance offered to Town residents regardless of financial status through Neighborhood Assistance Program. <b>Current updates, as reported by NAP, are included in Engineering Consent Agenda Attachment 9.</b>
Sewer Connection Program	<b>Completed 2018.</b> In FY18 Council allocated \$200,000 for a Sewer Connection Program as well as \$10,000 for assistance to connect income-qualified individuals to existing sanitary sewer as part of the Neighborhood Assistance Program. Council adopted the Sewer Connection & Extension Policy at 9/26/17 meeting. CIP projects were prioritized as part of FY19 Budgeting Process. Sewer Connection Ordinance 1st Reading 4/10/18. Septic to Sewer Conversion Program discussed at Council's Quarterly Workshop on 7/17/18. Second & final Ordinance changes and Program adoption completed at 9/20/18. <b>Staff is researching possibility to use 319 grant funds in support of sewer connections.</b>



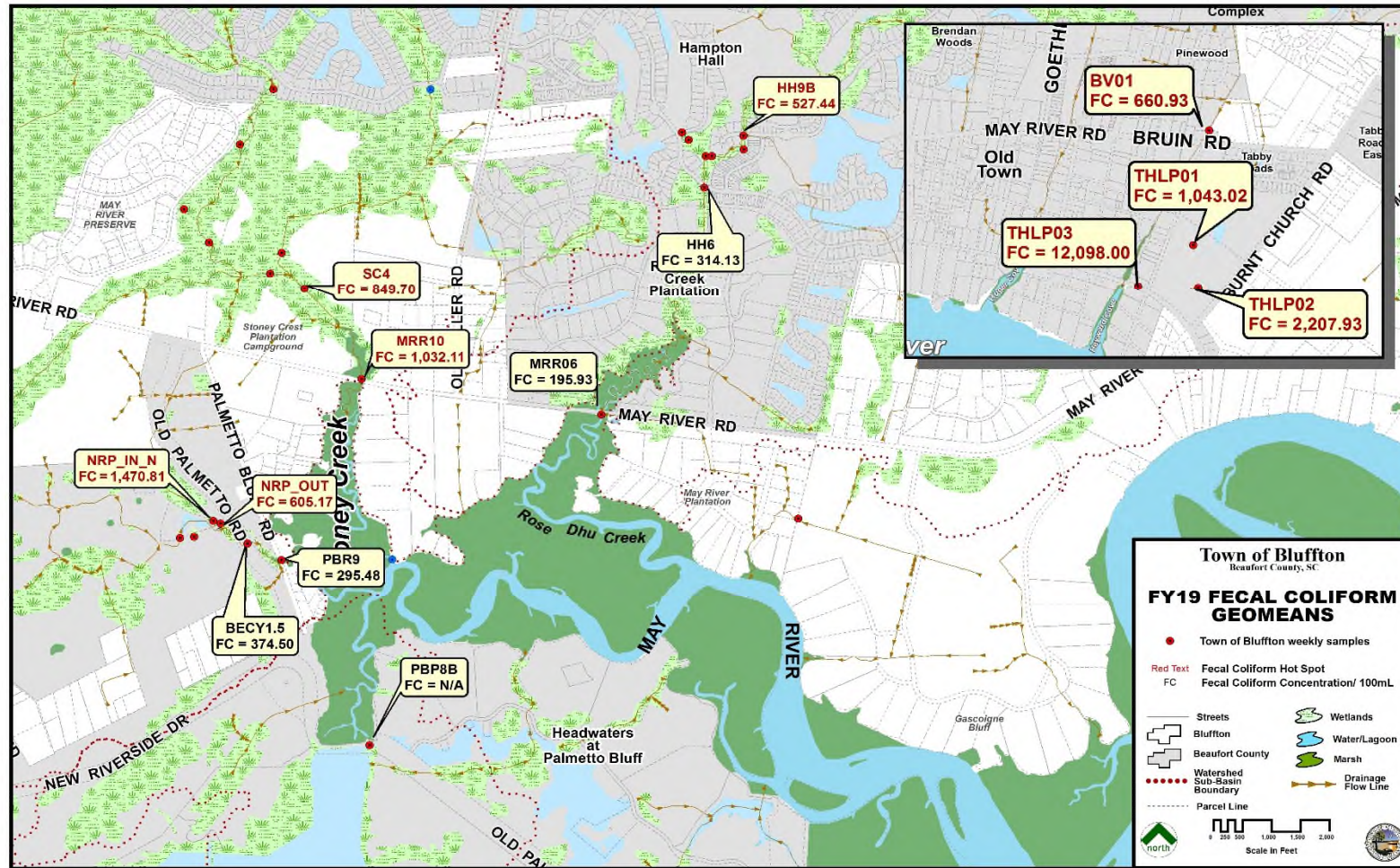
# MS4 Minimum Control Measure #3 – IDDE (Illicit Discharge Detection & Elimination): Stormwater Infrastructure Inventory



Stormwater Infrastructure Inventory Collection Status	
FY 2019 YTD Collection Totals	2,375
FY 2018 Collection Totals	3,777
FY 2017 Collection Totals	3,874



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



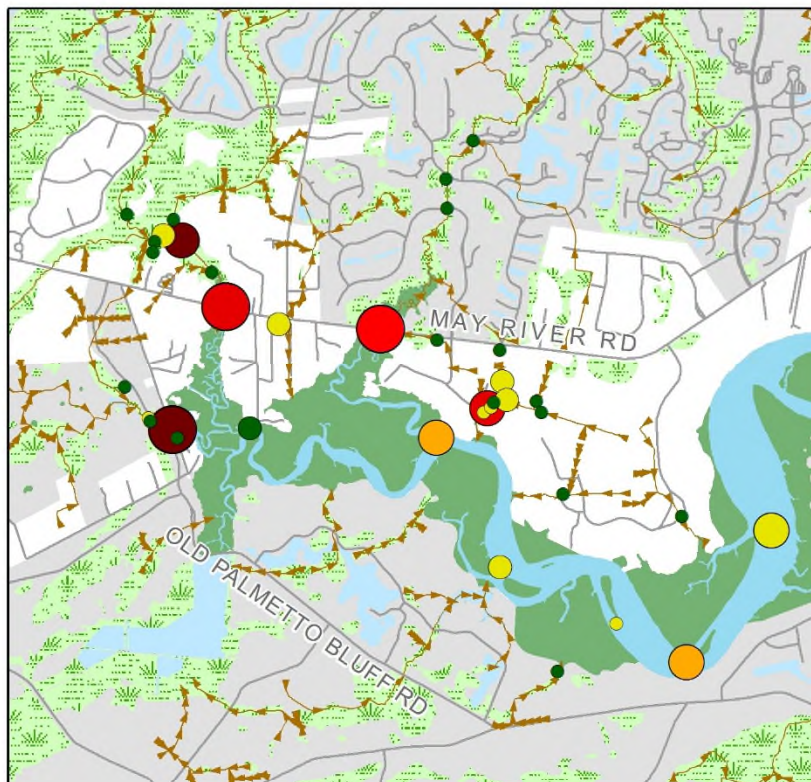
	USCB Water Quality Samples	Microbial Source Tracking Samples	MS4 Quarterly Samples Collected
FY 2019 YTD Totals	124	97	152
FY 2018 Totals	216	217	224
FY 2017 Totals	307	179	224
FY 2016 Totals	668	11	-

2/20/2019

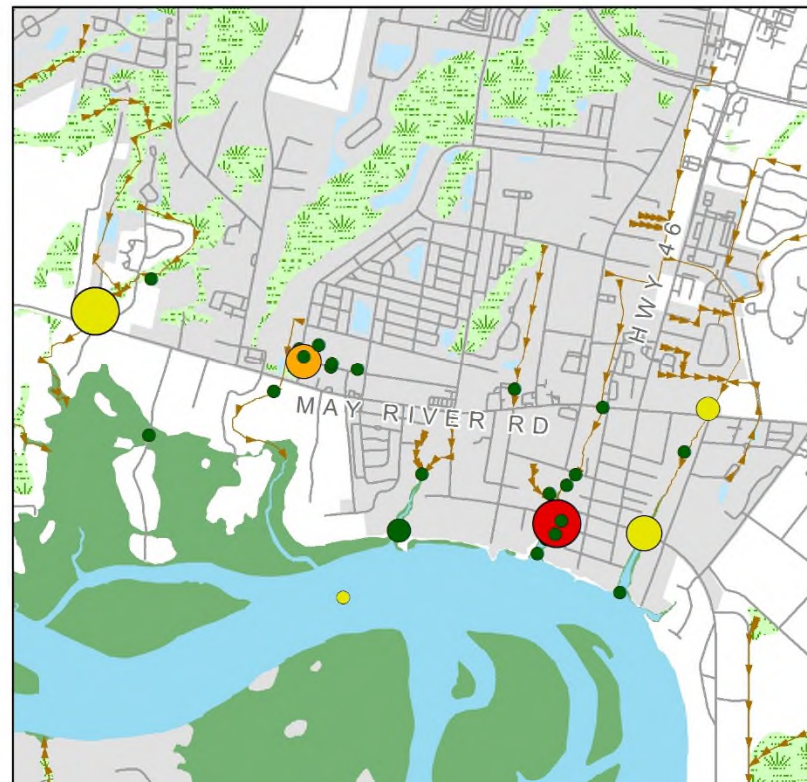
- MST program began November 2016; MS4 Quarterly Sampling initiated 2/2017
- Totals include only samples submitted for laboratory analysis, and not *in situ* parameters.



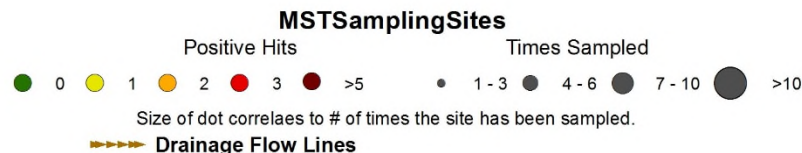
# MS4 Minimum Control Measure #3 – IDDE: Microbial Source Tracking (MST) Trend Map



Microbial Source Tracking Trend Map  
Headwaters May River



Microbial Source Tracking Trend Map  
Old Town May River

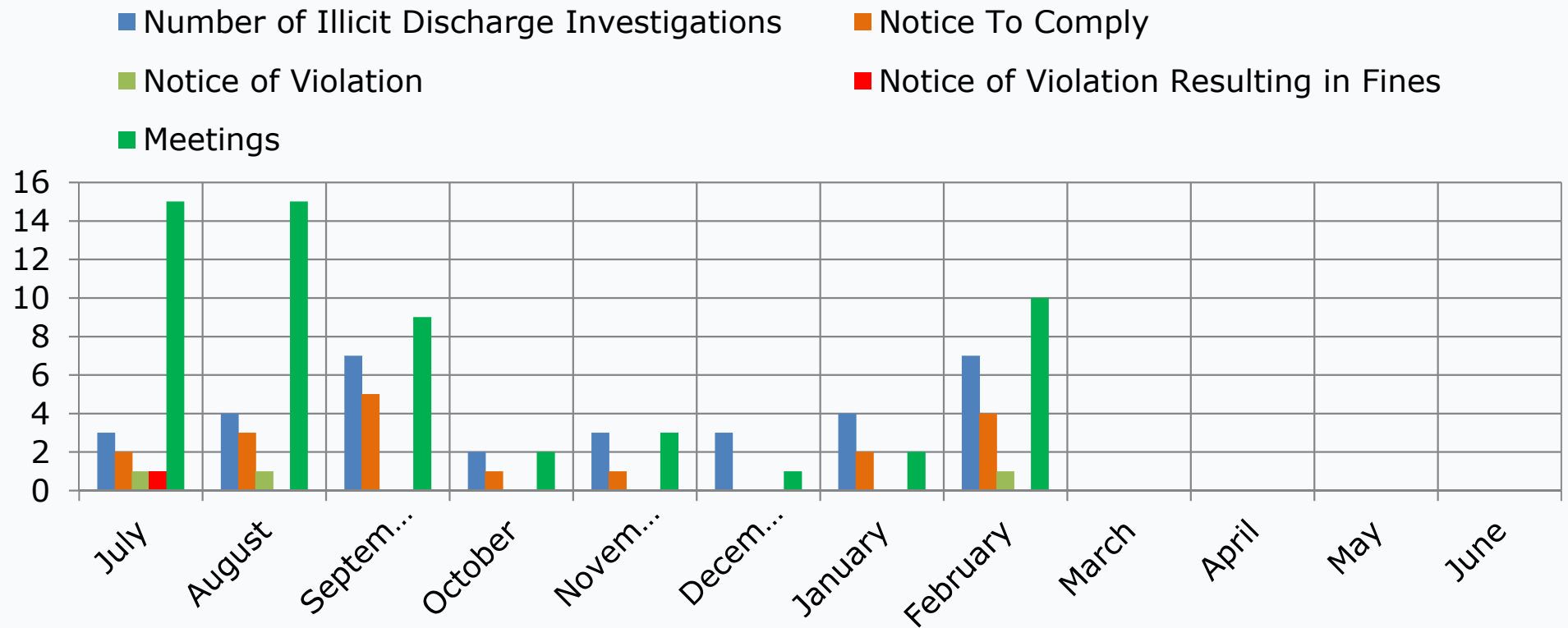


DISCLAIMER  
This map was prepared by the Town of Bluffton and is intended to provide a general overview of the data. It is not intended to be used for legal or other purposes. The Town of Bluffton is not responsible for any errors or omissions in this map. The data is provided as is, without warranty. The Town of Bluffton is not responsible for any damages or losses resulting from the use of this map. The data is provided as is, without warranty. The Town of Bluffton is not responsible for any damages or losses resulting from the use of this map.

Updated: 12/17/2018

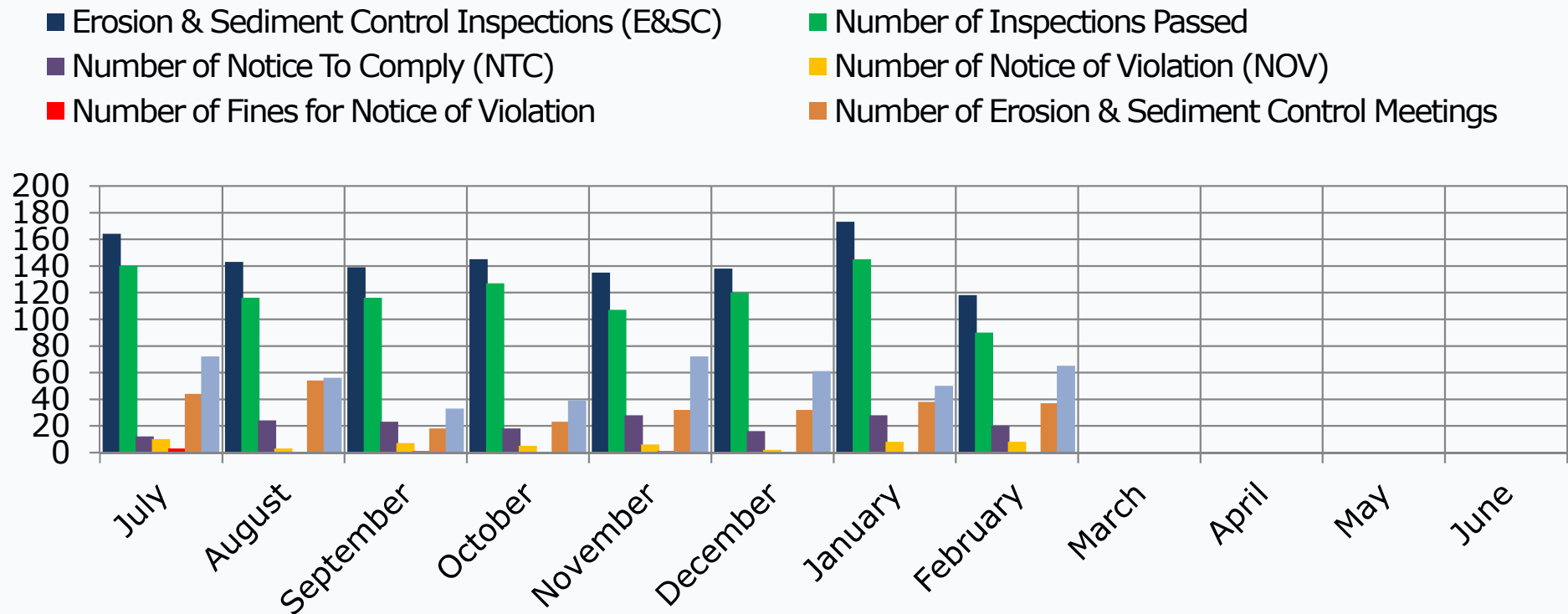


## MS4 Minimum Control Measure #3 – IDDE: Illicit Discharge Investigations



	Number of Illicit Discharge Investigations	Number of Notices To Comply Issued	Number of Notices of Violation Issued	Number of NOV Enforcement Actions	Number of Meetings
FY 2019 YTD Totals	33	18	3	1	57
FY 2018 Totals	48	20	4	2	60
FY 2017 Totals	50	19	8	13	67

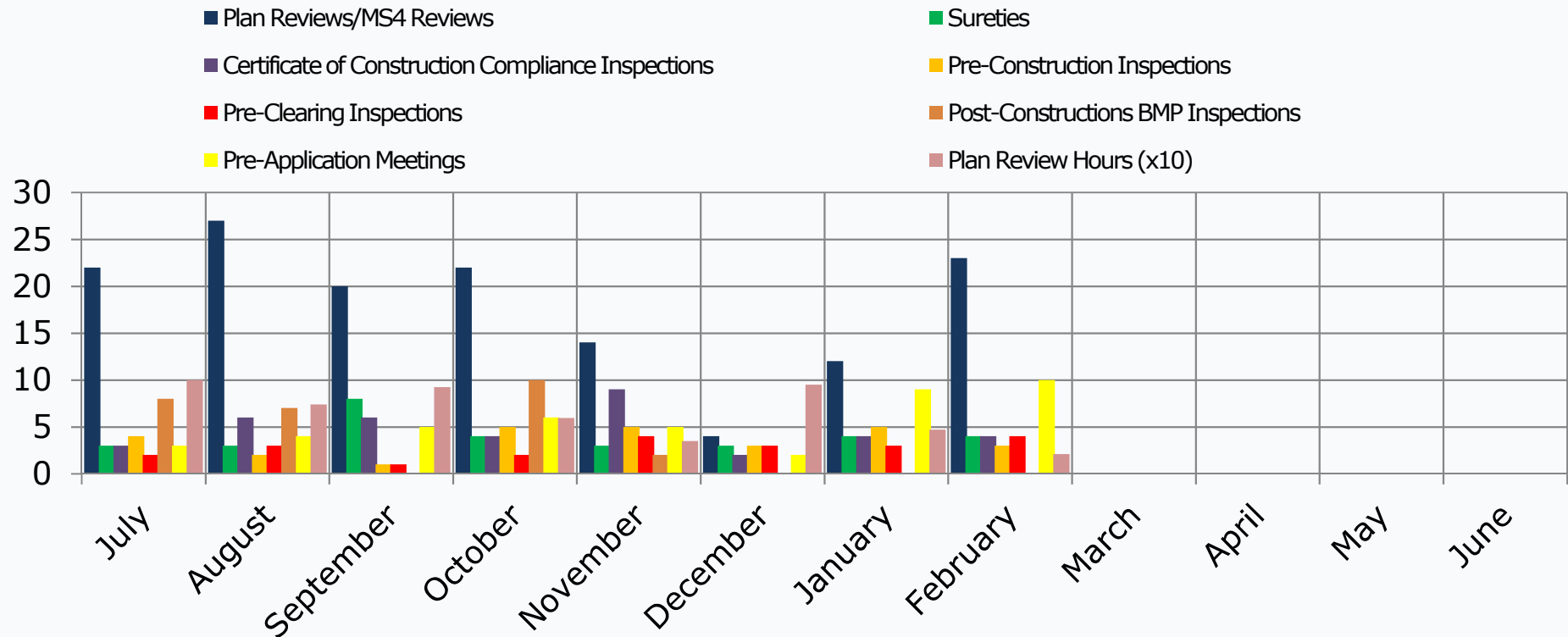
## MS4 Minimum Control Measure #4 - Construction Site Stormwater Runoff Control



	Number of Sediment & Erosion Control Inspections	Number of Inspections Passed	Number of NTC Issued	Number of NOVs Issued	Number of NOV Enforcement Actions	Number of E&SC Meetings
FY 2019 YTD Totals	1155	961	169	49	5	278
FY 2018 Totals	1504	1159	300	83	10	499
FY 2017 Totals	1,219	862	233	58	10	237

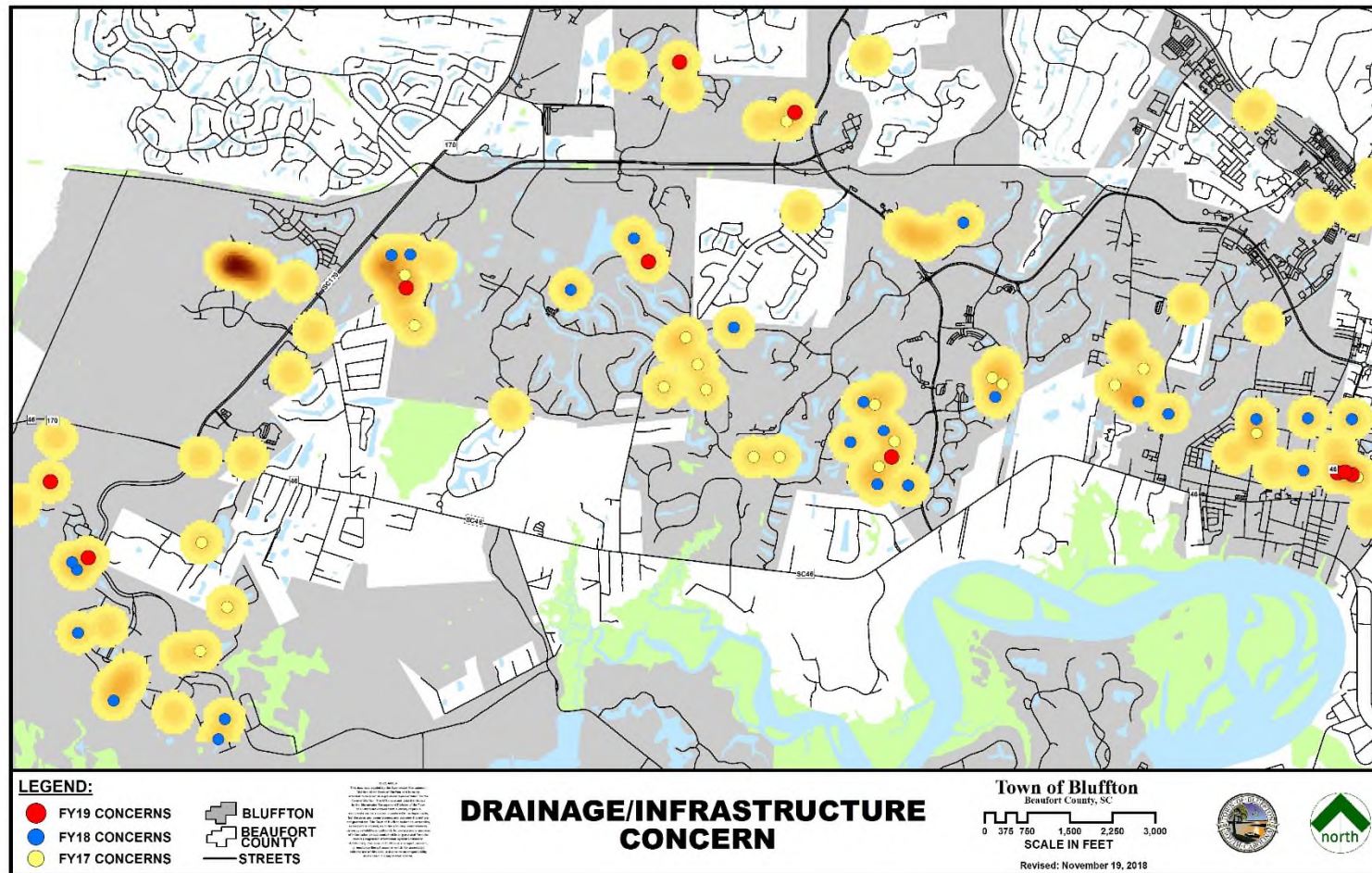


## MS4 Minimum Control Measure #5 Stormwater Plan Review & Related Activity



	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	144	32	38	28	22	27	44	523 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.

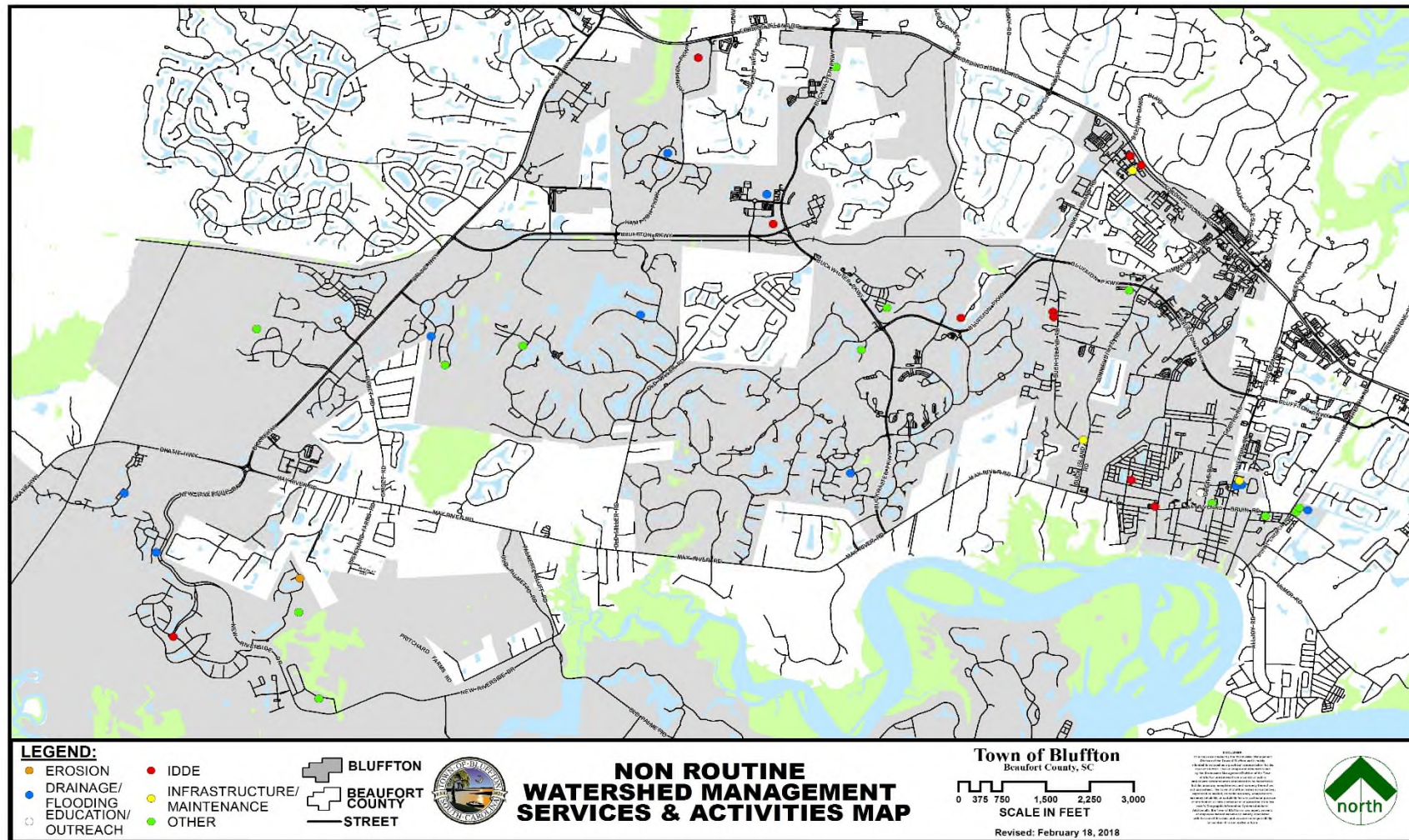
## Citizen Drainage Concern Heat Map (Drainage, Maintenance and Inspections)



	Number of Drainage Concerns Investigated	Number of Meetings
FY 2019 YTD Totals	39	30
FY 2018 Totals	48	75
FY 2017 Totals	72	80

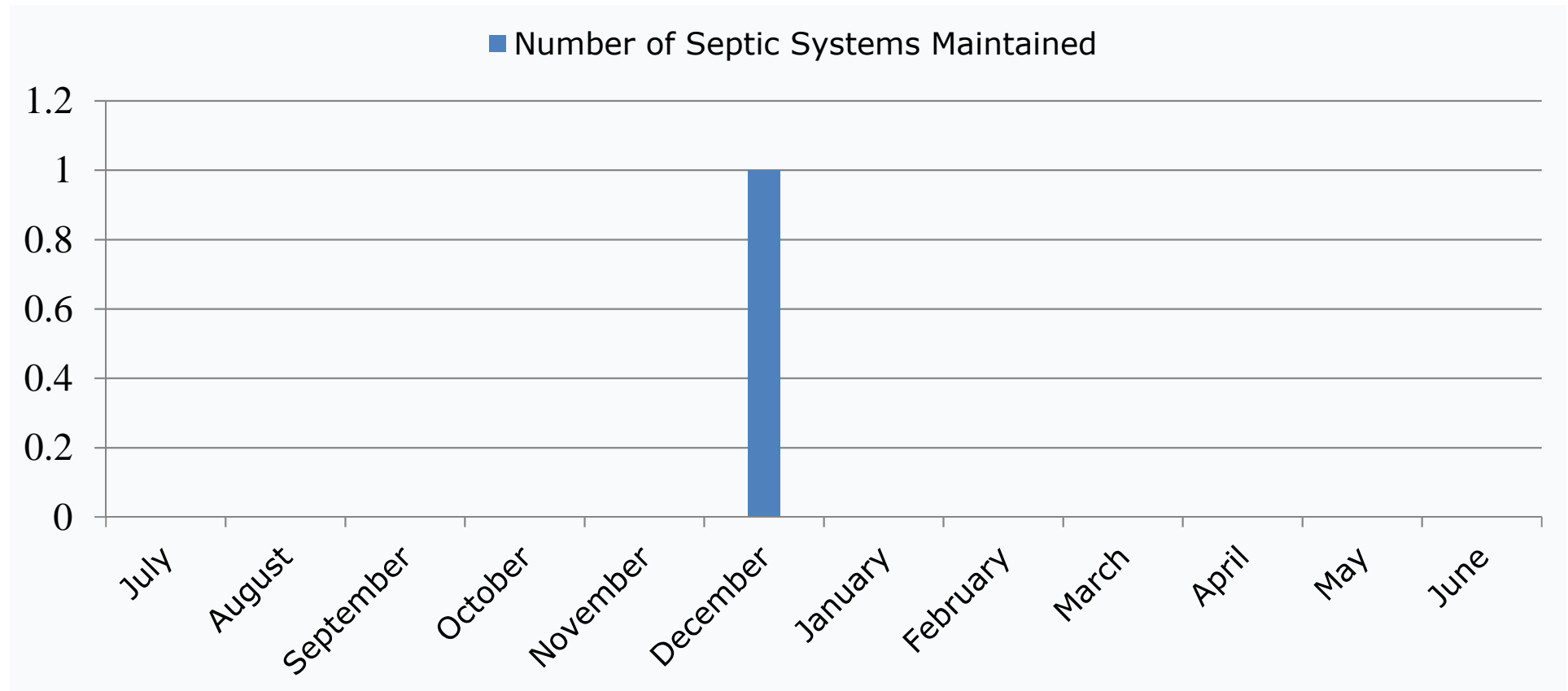


# Citizen Request for Watershed Mngt. Services & Activities Map



	Number of Citizen Requests Investigated	Number of Meetings
FY 2019 YTD Totals	41	40
FY 2018 Totals	75	79
FY 2017 Totals	53	82

## Septic System Maintenance Assistance



	Number of Septic Systems Maintained
FY 2019 YTD Totals	1
FY 2018 Totals	16
FY 2017 Totals	18



## **CITY OF BEAUFORT**

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

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

**DATE:** March 6, 2019

**SUBJECT:** Stormwater Utility Board Report

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The following is the City of Beaufort Public Works Department monthly report from February 1 to February 28, 2019

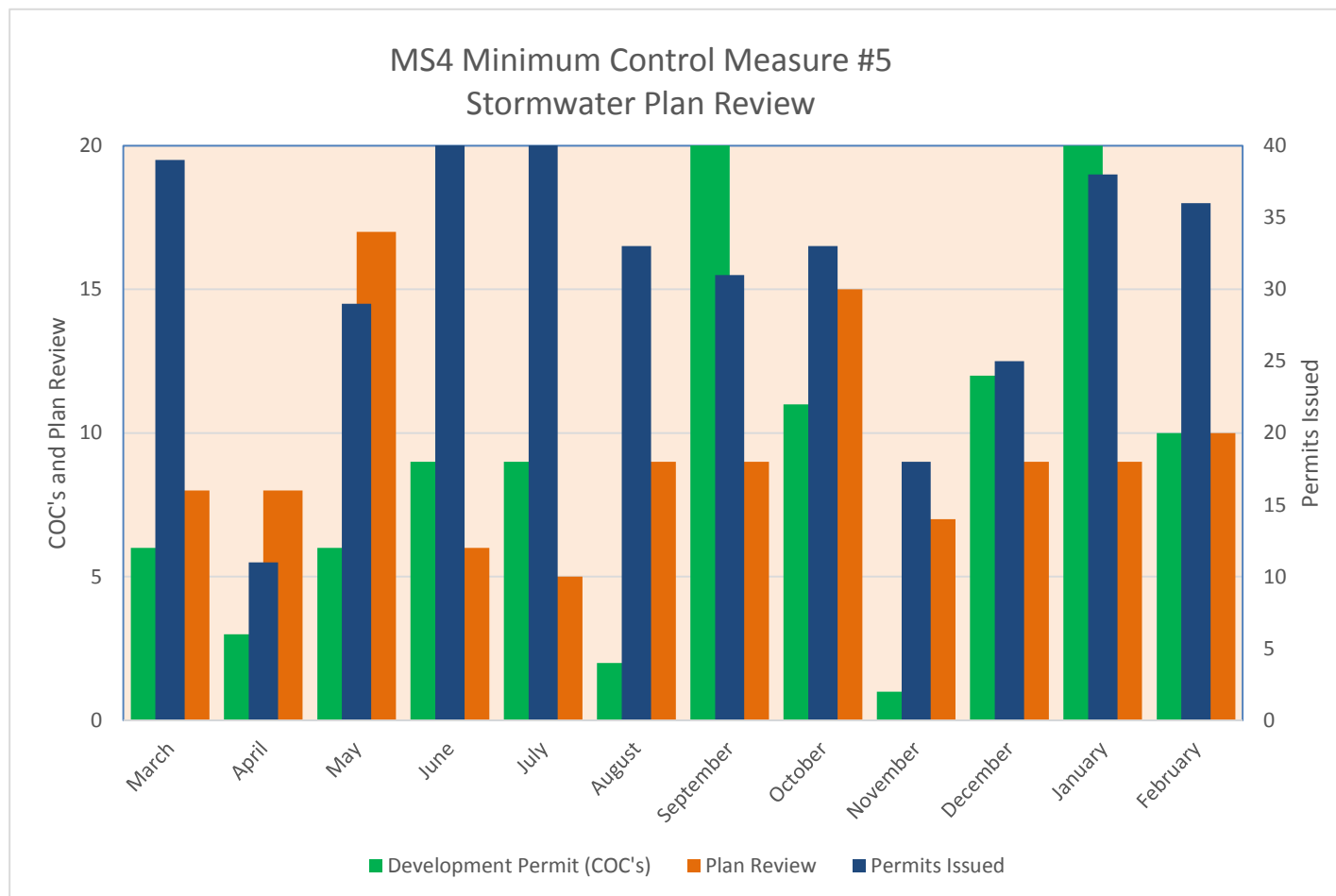
### **1) CAPITAL IMPROVEMENTS UPDATE**

- a) Mossy Oaks Drainage Project – City has received preliminary approval from Army Corps. Proceeding to apply for State M&R permits where applicable. Task force meeting held on February 27<sup>th</sup>.
- b) Azalea Project – Project is made significant progress in the month of February. Project is on time and under budget with a completion of March 15<sup>th</sup>.

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

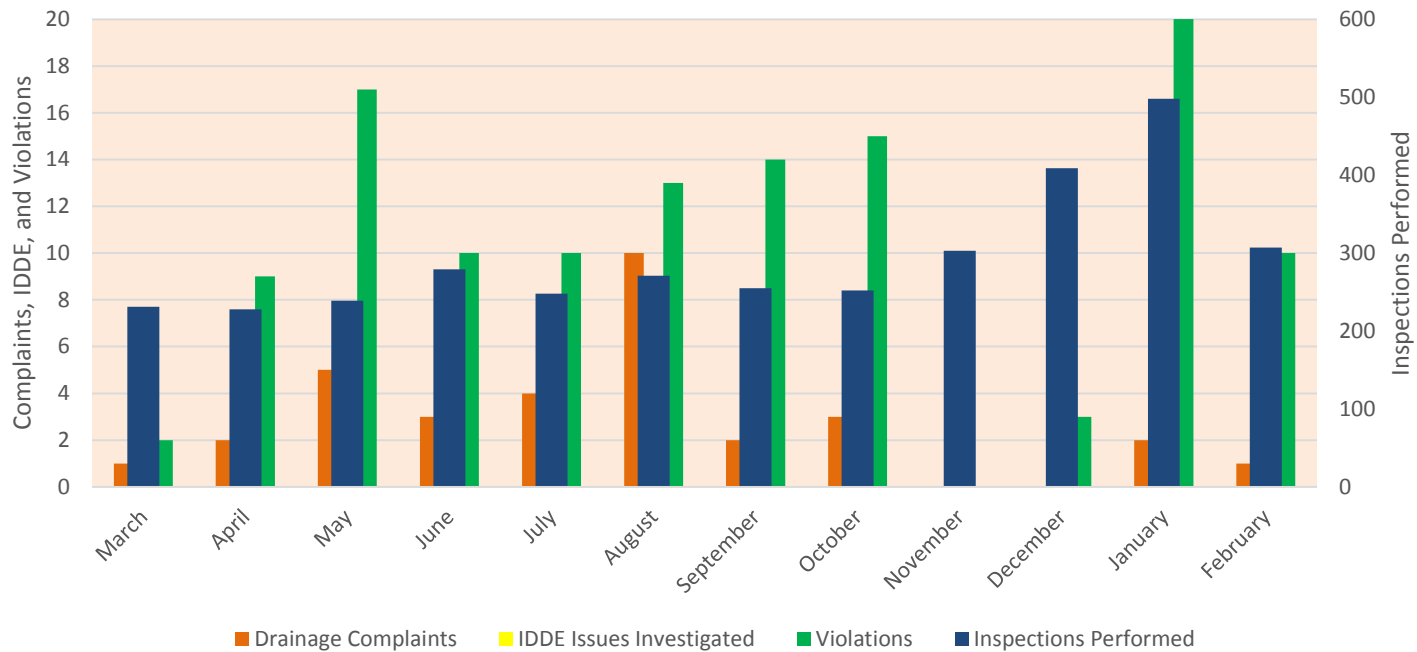
## 2) **MAINTANCE & REPAIR UPDATE**

- a) Routine maintenance of drainage easement City wide.
- b) Preliminary scheduled vac truck for April in the Battery Shores subdivision.



TYPE	March	April	May	June	July	August	September	October	November	December	January	February	Last 12 Months
Development Permit (COC's)	6	3	6	9	9	2	21	11	1	12	20	10	68
Plan Review	8	8	17	6	5	9	9	15	7	9	9	10	112
Permits Issued	39	11	29	47	45	33	31	33	18	25	38	36	286

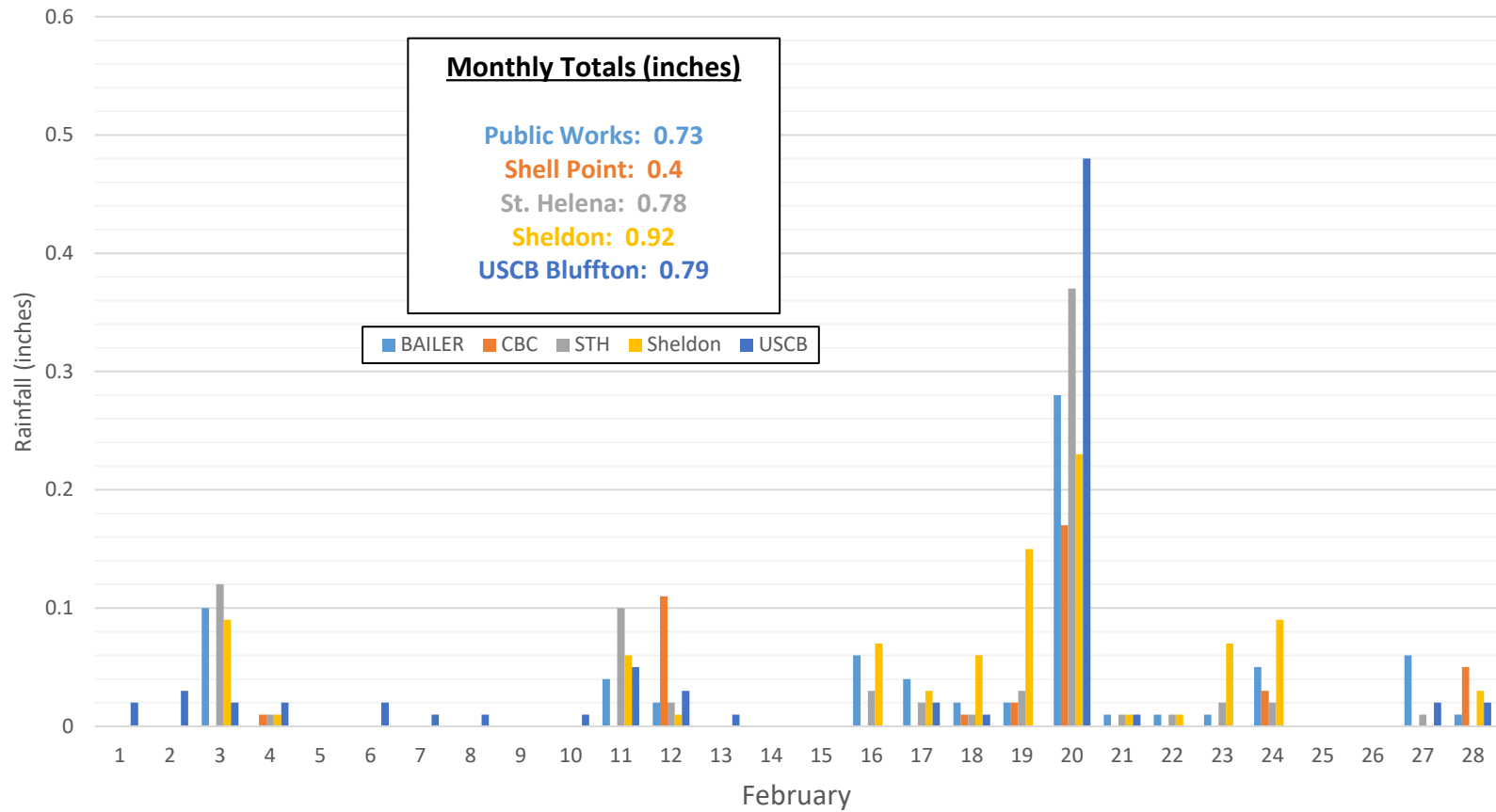
### MS4 Minimum Control Measure #4 Erosion Sediment Control Inspections

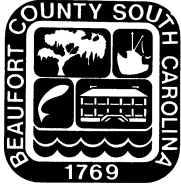


TYPE	March	April	May	June	July	August	September	October	November	December	January	February	Last 12 Months
Inspections Performed	231	228	239	279	248	271	255	252	303	409	498	307	3520
Drainage Complaints	1	2	5	3	4	10	2	3	0	0	2	1	30
IDDE Issues Investigated	0	0	1	0	1	2	1	2	0	1	0	1	9
Violations	2	9	17	10	10	13	14	15	0	3	22	10	90



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





## MEMORANDUM

Date: February 13, 2019

To: Stormwater Management Utility Board

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

Re: **Maintenance Project Report**

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

### **Major Project:**

- **Old Woodland Plantation – Hilton Head Island (SWUD 3):** This project improved 2,539 feet of drainage system. The scope of work included cleaning out 2,111 feet of roadside ditch, jetting 27 driveway pipes, 428 feet of roadside pipe, and hydroseeding for erosion control. The total cost was **\$20,762.17**.
- **Sandhill Estates Subdivision (SWUD 6):** This project improved 7,205 feet of drainage system. The scope of work included removing debris from roads, cleaning out 7,109 feet of roadside ditch, jetting 3 crossline pipes, 60 driveway pipes and 96 feet of roadside pipe. The total cost was **\$19,485.29**.

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

- **Stanley Road – Port Royal Island (SWUD 6):** This project improved 3,391 feet of drainage system. The scope of work included cleaning 3,391 feet of roadside ditch. The total cost was **\$12,261.44**.
- **Carolina Estates – Port Royal Island (SWUD 6):** This project improved 2,915 feet of drainage system. The scope of work included cleaning out 2,915 feet of roadside ditch, jetting 2 crossline pipes, 31 driveway pipes and rip rap for erosion control. The total cost was **\$11,518.12**.
- **Priester Road – Sheldon (SWUD 5):** The scope of work replacing 1 crossline pipe, repairing a sinkhole and installing rip rap for erosion control. The total cost was **\$7,473.69**.
- **Rose Island Drive – St Helena Island (SWUD 8):** This project improved 2,408 feet of drainage system. The scope of work included removing a blockage from flowline, cleaning out 2,408 feet of roadside ditch and valley drain, jetting 2 driveway pipes and hydroseeding for erosion control. The total cost was **\$7,443.28**.
- **Ashton Drive – St Helena Island (SWUD 8):** This project improved 30 feet of drainage system. The scope of work included cleaning out 30 feet of roadside ditch and installing 1 driveway pipe. The total cost was **\$3,593.26**.

- **Sheldon Valley Drains – Sheldon (SWUD 5):** This project improved 7,020 feet of drainage system. The scope of work included cleaning out 7,020 feet of valley drains. The total cost was **\$3,354.48.**
- **Mayfair Court – Lady’s Island (SWUD 7):** The scope of work included installing 2 driveway pipes. The total cost was **\$1,929.06.**
- **Pointe South Trace Channel 1 – Bluffton (SWUD 4):** This project improved 224 feet of drainage system. The scope of work included cleaning out 1 manhole, 200 feet of channel and jetting 24 feet of channel pipe. The total cost was **\$3,024.48.**
- **David Green Road Channel 1 – St Helena Island (SWUD 8):** This project improved 3,190 feet of drainage system. The scope of work included cleaning out 3,190 feet of channel. The total cost was **\$2,906.51.**
- **Tower Road – Bluffton (SWUD 4):** The scope of work included repairing a sinkhole. The total cost was **\$2,221.46.**
- **Lilac Lane – Lady’s Island (SWUD 7):** This project improved 225 feet of drainage system. The scope of work included cleaning out 225 feet of roadside ditch. The total cost was **\$2,205.80.**
- **Sea Front Lane – Hilton Head Island (SWUD 3):** This project improved 182 feet of drainage system. The scope of work included cleaning out 182 feet of roadside ditch. The total cost was **\$1,685.65.**



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

**Project Summary:** Old Woodland Plantation  
Mystic Drive, Marblehead Road, Indian Trail

**Activity:** Routine/Preventive Maintenance  
**Duration:** 08/26/18-10/23/18

**Narrative Description of Project:**

Project improved 2,539 L.F. of drainage system. Cleaned out 2,111 L.F. of roadside ditch. Jetted (27) driveway pipes and 428 L.F. of roadside pipe. Hydroseeded for erosion control.

2019-512 / Old Woodland Plantation	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
DLO / Ditch Layout	10.0	\$322.45	\$19.20	\$27.58	\$0.00	\$133.35	\$502.58
DPJT / Driveway Pipe - Jetted	80.0	\$1,782.40	\$1,532.80	\$410.22	\$0.00	\$1,147.20	\$4,872.62
HAUL / Hauling	90.0	\$1,987.02	\$1,274.40	\$420.68	\$0.00	\$778.68	\$4,460.78
HYDR / Hydroseeding	12.0	\$263.67	\$35.68	\$799.09	\$0.00	\$168.48	\$1,266.92
RSDCL / Roadside Ditch - Cleanout	211.0	\$4,683.51	\$1,002.05	\$284.09	\$0.00	\$2,866.11	\$8,835.76
STBY / Stand By	14.0	\$308.42	\$198.24	\$88.40	\$0.00	\$100.94	\$696.00
UTLOC / Utility locates	2.5	\$61.75	\$0.00	\$0.00	\$0.00	\$33.08	\$94.83
2019-512 / Old Woodland Plantation Sub Total	421.0	\$9,441.91	\$4,062.37	\$2,030.06	\$0.00	\$5,227.83	\$20,762.17
<b>Grand Total</b>	<b>421.0</b>	<b>\$9,441.91</b>	<b>\$4,062.37</b>	<b>\$2,030.06</b>	<b>\$0.00</b>	<b>\$5,227.83</b>	<b>\$20,762.17</b>

**Before**



**During**



**After**

**(No Picture Available)**



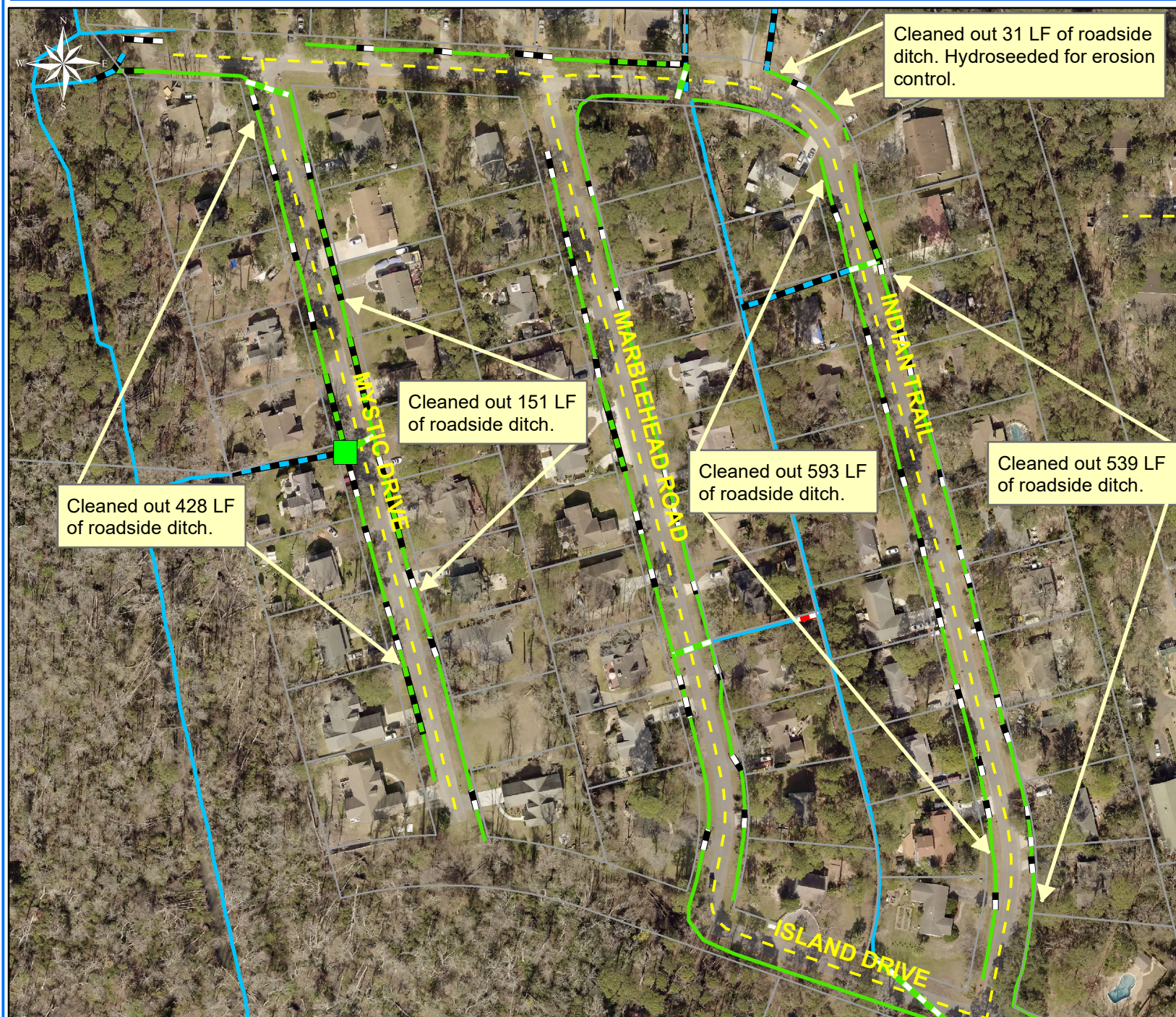
Project: Old  
Woodland  
Plantation Map #1

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-512

Township/SW Dist:  
ToHHI-3

Completed  
October 2018



0 40 80 160 240 320  
Feet

1 inch = 170 feet

Prepared By: BC Stormwater Management Utility

Date Print: 01/24/19

File: C:\project summaries map\Old Woodland Plantation Map#1\_2019-512



Project: Old  
Woodland  
Plantation Map #2

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-512

Township/SW Dist:  
ToHHI-3

Completed  
October 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: 01/24/19

File: C:\project summaries map\Old Woodland Plantation Map#2\_2019-512





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

**Project Summary:** Sandhill Estates Subdivision

Shannon Lane, Craig Lane, Sandhill Drive, Tammy Lane

**Activity:** Routine/Preventive Maintenance

**Duration:** 12/19/17-02/15/18

**Narrative Description of Project:**

Project improved 7,205 L.F. of drainage system. Removed debris from roads. Cleaned out 7,109 L.F. of roadside ditch. Jetted (3) crossline pipes, (60) driveway pipes and 96 L.F. of roadside pipe.

<b>2018-560 / Sandhill Estates</b>	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	1.5	\$32.69	\$0.00	\$0.00	\$0.00	\$0.00	\$32.69
CLPJT / Crossline Pipe - Jetted	20.0	\$445.60	\$86.80	\$94.26	\$0.00	\$286.80	\$913.46
DPJT / Driveway Pipe - Jetted	37.0	\$836.46	\$182.28	\$121.88	\$0.00	\$541.23	\$1,681.85
HAUL / Hauling	130.0	\$2,739.50	\$1,224.60	\$425.07	\$0.00	\$216.30	\$4,605.47
RMTR / Remove trees-roads	20.0	\$403.20	\$110.56	\$16.66	\$0.00	\$188.25	\$718.67
RMTRD / Remove trees - Ditch	15.0	\$303.90	\$18.00	\$2.03	\$0.00	\$127.20	\$451.13
RSDCL / Roadside Ditch - Cleanout	285.0	\$5,762.10	\$1,703.61	\$420.22	\$0.00	\$3,139.20	\$11,025.13
UTLOC / Utility locates	1.5	\$37.05	\$0.00	\$0.00	\$0.00	\$19.85	\$56.90
2018-560 / Sandhill Estates Sub Total	510.0	\$10,560.50	\$3,325.85	\$1,080.12	\$0.00	\$4,518.82	\$19,485.29
<b>Grand Total</b>	<b>510.0</b>	<b>\$10,560.50</b>	<b>\$3,325.85</b>	<b>\$1,080.12</b>	<b>\$0.00</b>	<b>\$4,518.82</b>	<b>\$19,485.29</b>

**Before**



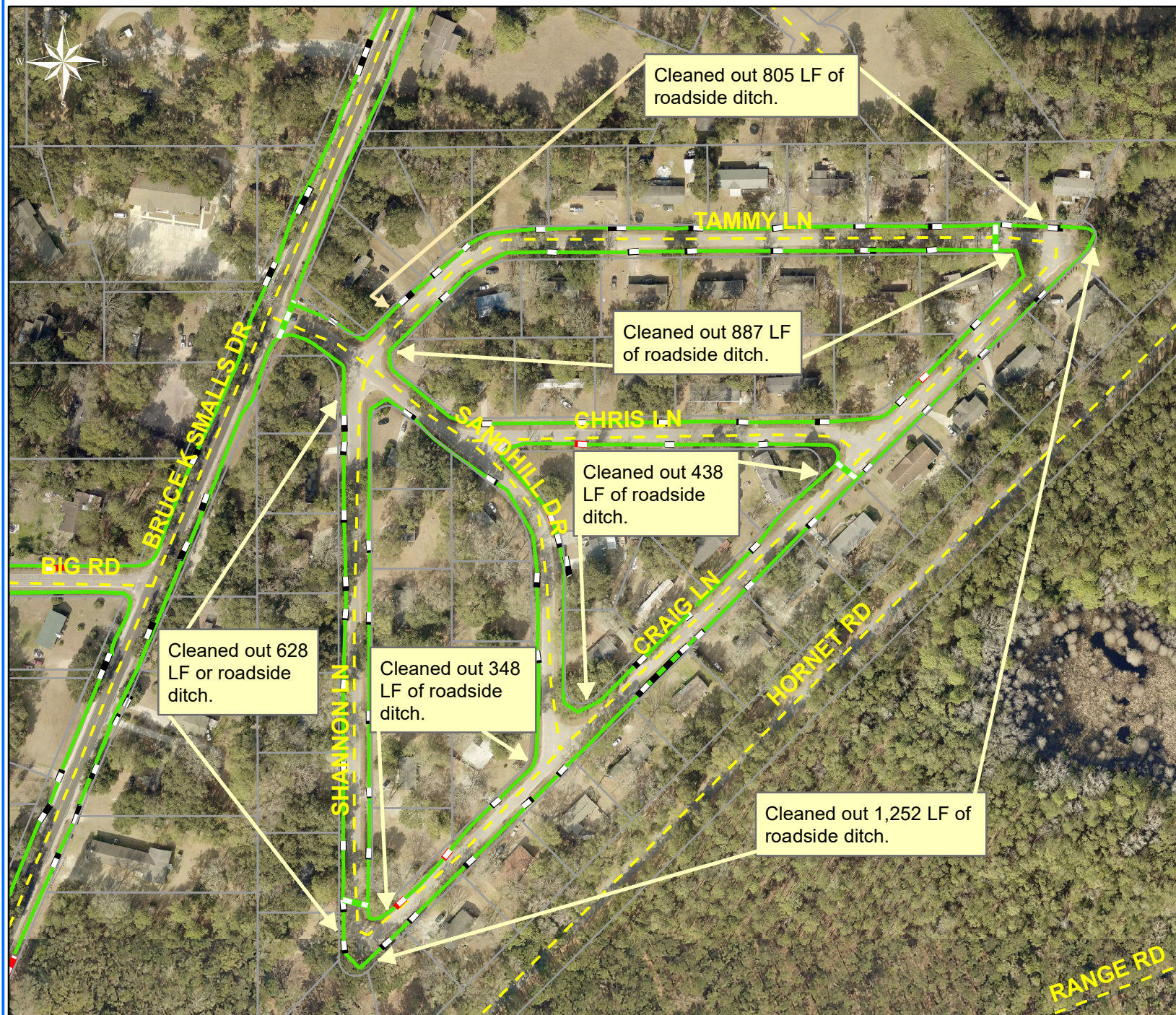
**During**



**After**







Project: Sandhill Estates - Shannon Lane, Craig Lane Sandhill Drive and Tammy Lane  
Map #1

Activity: Routine/ Preventive Maintenance

Project #:  
2018-560

Township/SW Dist:  
Port Royal Island/6

Completed  
February 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: 01/24/19

File: C:\project summaries map\Sand Hill Estates 2018-560





Project: Sandhill Estates - Shannon Lane, Craig Lane Sandhill Drive and Tammy Lane  
Map #2

Activity: Routine/ Preventive Maintenance

Project #:  
2018-560

Township/SW Dist:  
Port Royal Island/6

Completed  
February 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:01/24/19

File:C:\project summaries map\Sand Hill Estates Map#2\_2018-560





Project: Sandhill Estates - Shannon Lane, Craig Lane Sandhill Drive and Tammy Lane  
Map #3

Activity: Routine/ Preventive Maintenance

Project #:  
2018-560

Township/SW Dist:  
Port Royal Island/6

Completed  
February 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:01/24/19  
File:C:\project summaries map\Sand Hill Estates Map#3\_2018-560





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

**Project Summary:** Stanley Road

**Activity:** Routine/Preventive Maintenance

**Duration:** 08/21/18-09/06/18

**Narrative Description of Project:**

Project improved 3,391 L.F. of drainage system. Cleaned out 3,391 L.F. of roadside ditch.

2019-508 / Stanley Road 2019-508	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
HAUL / Hauling	67.0	\$1,665.39	\$927.48	\$218.32	\$0.00	\$664.63	\$3,475.82
RSDCL / Roadside Ditch - Cleanout	210.0	\$4,619.95	\$972.39	\$217.34	\$0.00	\$2,954.16	\$8,763.83
2019-508 / Stanley Road Sub Total	278.0	\$6,307.13	\$1,899.87	\$435.66	\$0.00	\$3,618.78	\$12,261.44
<b>Grand Total</b>	<b>278.0</b>	<b>\$6,307.13</b>	<b>\$1,899.87</b>	<b>\$435.66</b>	<b>\$0.00</b>	<b>\$3,618.78</b>	<b>\$12,261.44</b>

**Before**



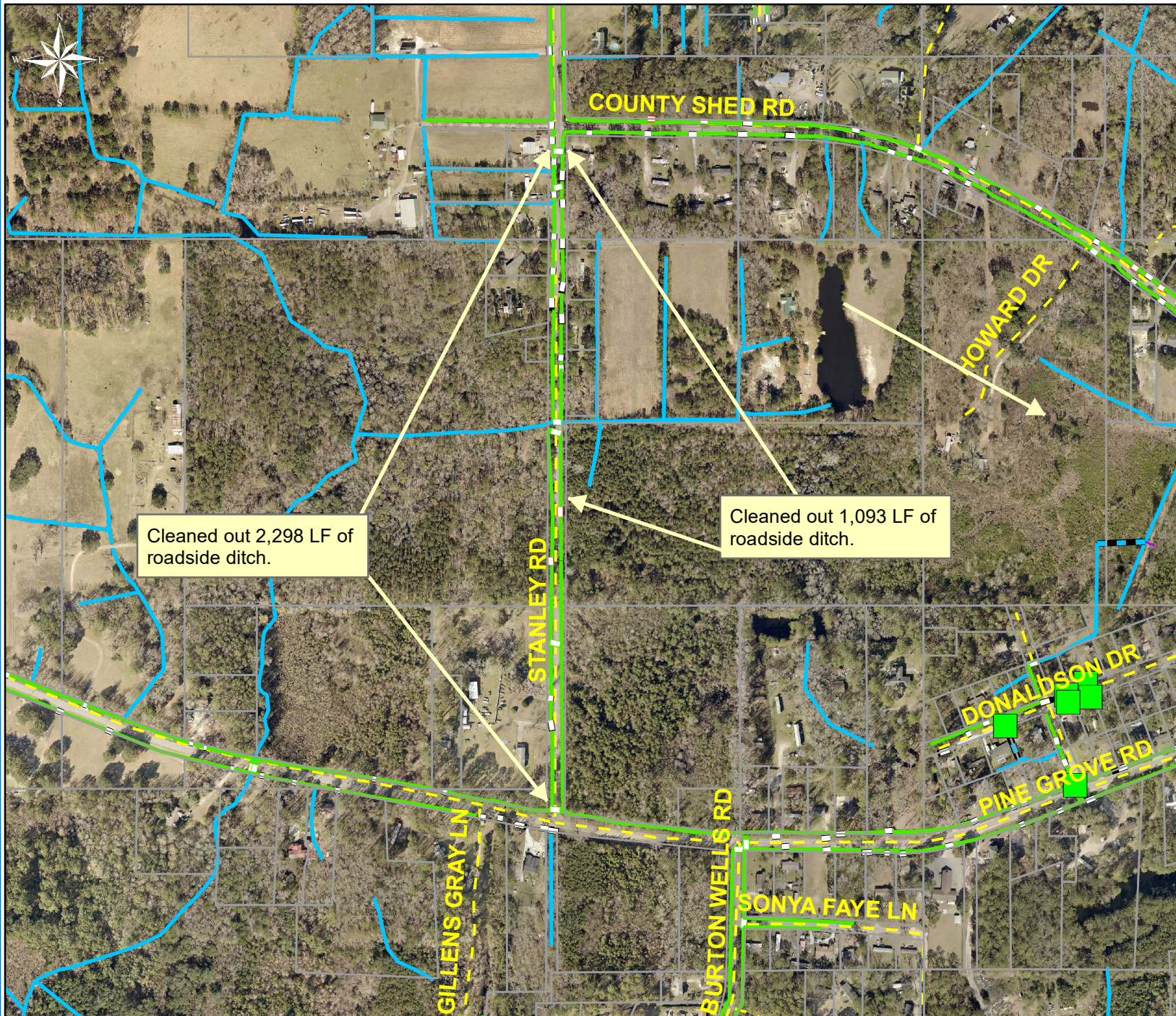
**During**



**After**







Project: Stanley Road

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-508

Township/SW Dist:  
Port Royal Island/6

Completed:  
September 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 120240 480 720 960  
Feet

1 inch = 500 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 02/07/19  
File: C:\project summaries map\Stanley Road\_2019-508





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

**Project Summary:** Carolina Estates- Charleston Drive and Colleton Drive

**Activity:** Routine/Preventive Maintenance

**Duration:** 02/15/18-03/01/18

**Narrative Description of Project:**

Project improved 2,915 L.F. of drainage system. Cleaned out 2,915 L.F. of roadside ditch. Jetted (2) crossline pipes and (31) driveway pipes. Hydroseeded for erosion control.

2018-574 / Carolina Estates	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	41.5	\$923.41	\$177.94	\$123.49	\$0.00	\$594.05	\$1,818.89
HAUL / Hauling	58.5	\$1,291.20	\$532.23	\$167.17	\$0.00	\$61.78	\$2,052.38
HYDR / Hydroseeding	12.0	\$243.12	\$51.72	\$812.97	\$0.00	\$101.76	\$1,209.57
RSDCL / Roadside Ditch - Cleanout	177.0	\$3,590.14	\$824.02	\$192.96	\$0.00	\$1,797.48	\$6,404.60
2018-574 / Carolina Estates Sub Total	290.5	\$6,080.55	\$1,585.91	\$1,296.59	\$0.00	\$2,555.07	\$11,518.12
<b>Grand Total</b>	<b>290.5</b>	<b>\$6,080.55</b>	<b>\$1,585.91</b>	<b>\$1,296.59</b>	<b>\$0.00</b>	<b>\$2,555.07</b>	<b>\$11,518.12</b>

**Before**



**During**



**After**







Project: Carolina Estates - Charleston Drive and Colleton Drive

Activity: Routine/ Preventive Maintenance

Project #: 2018-574

Township/SW Dist: Port Royal Island/6

Completed: March 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

0 100 200 400 600 800 Feet

1 inch = 420 feet

Prepared By: BC Stormwater Management Utility

Date Print: 02/07/19

File: C:\project summaries map\Carolina Estates\_2018-574





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

**Project Summary:** Priester Road

**Activity:** Routine/Preventive Maintenance

**Duration:** 05/17/18-07/26/18

**Narrative Description of Project:**

Replaced (1) crossline pipe. Repaired sinkhole. Installed rip rap for erosion control.

<b>2018-609 / Priester Road</b>	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	1.0	\$21.79	\$0.00	\$0.00	\$0.00	\$0.00	\$21.79
CPRPL / Crossline Pipe - Replaced	51.0	\$1,127.12	\$367.29	\$473.18	\$0.00	\$686.88	\$2,654.47
HAUL / Hauling	39.0	\$917.65	\$420.36	\$1,481.93	\$0.00	\$185.93	\$3,005.87
RRI / Rip Rap - Installed	12.0	\$267.32	\$34.03	\$20.35	\$0.00	\$171.72	\$493.42
SR / Sinkhole repair	20.0	\$466.10	\$19.20	\$169.75	\$0.00	\$271.60	\$926.65
STAGING / Staging Materials/Equipment	6.0	\$136.08	\$46.12	\$25.19	\$0.00	\$88.24	\$295.63
UTLOC / Utility locates	2.0	\$49.40	\$0.00	\$0.00	\$0.00	\$26.46	\$75.86
2018-609 / Priester Road Sub Total	131.0	\$2,985.46	\$887.00	\$2,170.40	\$0.00	\$1,430.83	\$7,473.69
<b>Grand Total</b>	<b>131.0</b>	<b>\$2,985.46</b>	<b>\$887.00</b>	<b>\$2,170.40</b>	<b>\$0.00</b>	<b>\$1,430.83</b>	<b>\$7,473.69</b>

**Before**



**During**



**After**







Project: Priester Road

Activity: Routine/  
Preventive  
Maintenance














Project #:  
2018-609

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 = 200 feet**





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

**Project Summary:** Rose Island Drive

**Activity:** Routine/Preventive Maintenance

**Duration:** 02/13/18-03/05/18

**Narrative Description of Project:**

Project improved 2,408 L.F. of drainage system. Removed blockage from flowline. Cleaned out 2,408 L.F. of roadside ditch and valley drain. Jetted (2) driveway pipes. Hydroseeded for erosion control.

2018-578 / Rose Island 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
DPJT / Driveway Pipe - Jetted	8.0	\$178.24	\$34.72	\$22.82	\$0.00	\$114.72	\$350.50
HAUL / Hauling	22.5	\$501.08	\$211.95	\$103.05	\$0.00	\$324.45	\$1,140.53
HYDR / Hydroseeding	40.0	\$818.40	\$68.07	\$424.41	\$0.00	\$386.70	\$1,697.58
RSDCL / Roadside Ditch - Cleanout	80.0	\$1,612.80	\$1,744.28	\$92.95	\$0.00	\$753.00	\$4,203.03
UTLOC / Utility locates	0.5	\$12.35	\$0.00	\$0.00	\$0.00	\$6.62	\$18.97
2018-578 / Rose Island Drive Sub Total	152.5	\$3,155.55	\$2,059.02	\$643.23	\$0.00	\$1,585.49	\$7,443.28
<b>Grand Total</b>	<b>152.5</b>	<b>\$3,155.55</b>	<b>\$2,059.02</b>	<b>\$643.23</b>	<b>\$0.00</b>	<b>\$1,585.49</b>	<b>\$7,443.28</b>

**Before**



**During**



**After**





Project: Rose  
Island Drive

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2018-578














Township/SW Dist:  
St. Helena Island/8

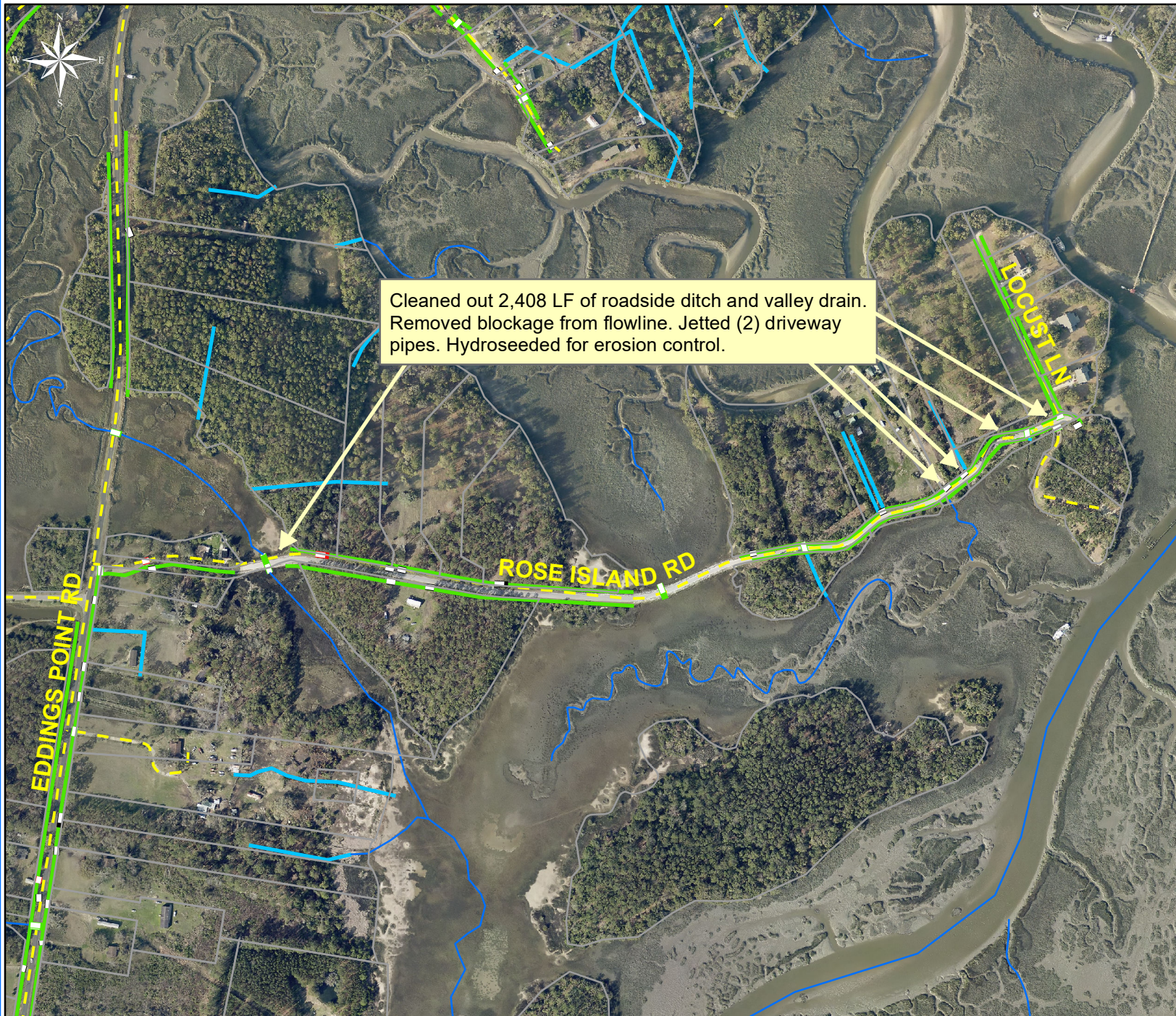
Completed:  
March 2018

Cleaned out 2,408 LF of roadside ditch and valley drain.  
Removed blockage from flowline. Jetted (2) driveway  
pipes. Hydroseeded for erosion control.

### 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 120240 480 720 960  
Feet

1 inch = 500 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 02/07/19  
File: C:\project summaries map\Rose Island Drive\_2018-578





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

**Project Summary:** Ashton Drive

**Activity:** Routine/Preventive Maintenance

**Duration:** 07/23/18-07/25/18

**Narrative Description of Project:**

Project improved 30 L.F. of drainage system. Cleaned out 30 L.F. of roadside ditch. Installed (1) driveway pipe.

2019-503 / Ashton 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
DPINS / Driveway Pipe - Installed	40.0	\$1,114.70	\$137.48	\$545.55	\$0.00	\$533.00	\$2,330.73
HAUL / Hauling	14.0	\$316.70	\$198.24	\$640.95	\$0.00	\$65.88	\$1,221.77
UTLOC / Utility locates	0.5	\$12.35	\$0.00	\$0.00	\$0.00	\$6.62	\$18.97
2019-503 / Ashton Drive Sub Total	55.5	\$1,465.54	\$335.72	\$1,186.50	\$0.00	\$605.50	\$3,593.26
<b>Grand Total</b>	<b>55.5</b>	<b>\$1,465.54</b>	<b>\$335.72</b>	<b>\$1,186.50</b>	<b>\$0.00</b>	<b>\$605.50</b>	<b>\$3,593.26</b>

**Before**



**During**



**After**







Project: Ashton Drive

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-503

Township/SW Dist:  
St. Helena Island/8

Completed:  
July 2018

### Legend

#### Drainage Type

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

0 40 80 160 240 320  
Feet

1 inch = 170 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 02/05/19  
File: C:\project summaries map\Ashton Drive\_2019-503





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

**Project Summary:** Sheldon Valley Drains

**Activity:** Routine/Preventive Maintenance

**Duration:** 08/06/18-08/07/18

**Narrative Description of Project:**

Project improved 7,020 L.F. of drainage system. Cleaned 7,020 L.F. of valley drains. This project consisted of the following areas: Prescott Road (4,568 L.F.) and Solomon White Lane (2,452 L.F.)

**2019-315 / Sheldon Valley Drains**

	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	1.0	\$21.79	\$0.00	\$0.00	\$0.00	\$0.00	\$21.79
COVD / Cleaned Out Valley Drains	70.0	\$1,535.20	\$324.86	\$118.60	\$0.00	\$980.70	\$2,959.36
HAUL / Hauling	10.0	\$192.80	\$141.60	\$38.93	\$0.00	\$0.00	\$373.33
2019-315 / Sheldon Valley Drains Sub Total	81.0	\$1,749.79	\$466.46	\$157.53	\$0.00	\$980.70	\$3,354.48
<b>Grand Total</b>	<b>81.0</b>	<b>\$1,749.79</b>	<b>\$466.46</b>	<b>\$157.53</b>	<b>\$0.00</b>	<b>\$980.70</b>	<b>\$3,354.48</b>

**Before**



**During**



**After**







Project: Sheldon Valley Drains - Prescott Road Map #1

Activity: Routine/ Preventive Maintenance

Project #: 2019-315

Township/SW Dist: Sheldon/5

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

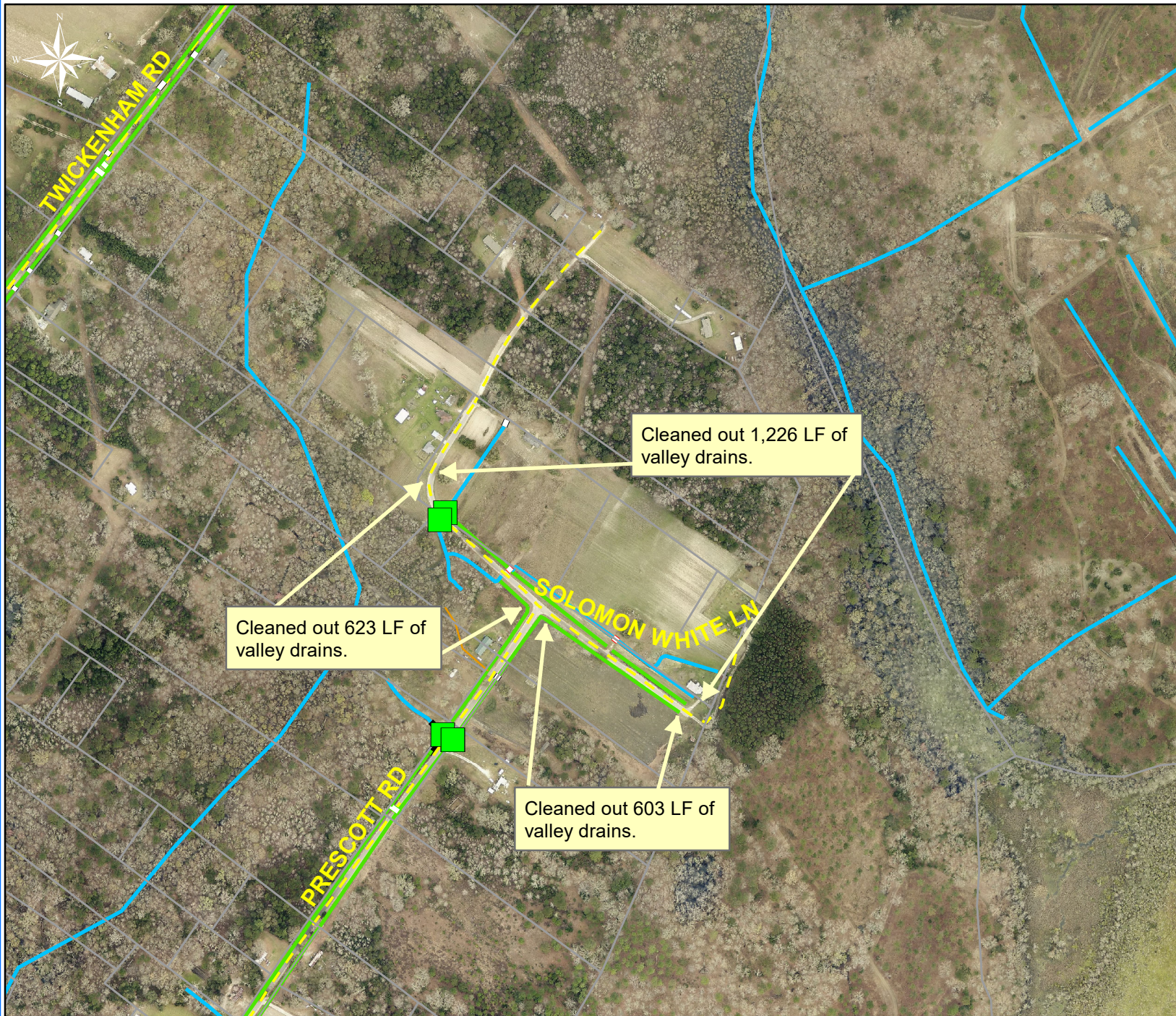
0 160320 640 960 1,280 Feet

1 inch = 670 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 02/07/19

File: C:\project summaries map\Sheldon Valley Drains Prescott Road\_Map#1\_2019-315





Project: Sheldon Valley Drains - Solomon White Lane Map #2

Activity: Routine/ Preventive Maintenance

Project #: 2019-315

Township/SW Dist: Sheldon/5

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 120240 480 720 960  
Feet

1 inch = 500 feet

Prepared By: BC Stormwater Management Utility

Date Print:02/07/19

File:C:\project summaries map/Sheldon Valley Drains Solomon White Lane Map#2\_2019-315





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

**Project Summary:** Mayfair Court

**Activity:** Routine/Preventive Maintenance

**Duration:** 04/26/18-05/17/18

**Narrative Description of Project:**

Reconstructed french drain.

**2018-604 / Mayfair Court**

	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	0.5	\$10.90	\$0.00	\$0.00	\$0.00	\$0.00	\$10.90
FDRECON / French Drain - Reconstructed	30.0	\$607.80	\$85.54	\$763.96	\$0.00	\$376.50	\$1,833.80
HAUL / Hauling	17.0	\$367.83	\$150.78	\$682.79	\$0.00	\$72.10	\$1,273.50
UTLOC / Utility locates	0.5	\$12.35	\$0.00	\$0.00	\$0.00	\$6.62	\$18.97
2018-604 / Mayfair Court Sub Total	48.0	\$998.88	\$236.32	\$1,446.76	\$0.00	\$455.22	\$3,137.17
<b>Grand Total</b>	<b>48.0</b>	<b>\$998.88</b>	<b>\$236.32</b>	<b>\$1,446.76</b>	<b>\$0.00</b>	<b>\$455.22</b>	<b>\$3,137.17</b>

**Before**



**During**



**After**







Project: Mayfair Court

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2018-604

Township/SW Dist:  
Ladys Island/7

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

0 10 20 40 60 80  
Feet

1 inch = 50 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 12/19/18  
File: C:\project summaries map\Mayfair Court\_2018-604





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

**Project Summary:** Pointe South Trace Channel #1

**Activity:** Routine/Preventive Maintenance

**Duration:** 07/09/18-08/15/18

**Narrative Description of Project:**

Project improved 224 L.F. of drainage system. Cleaned out 200 L.F. of channel and (1) manhole. Jetted 24 L.F. of channel pipe.

2019-514 / Pointe South Trace	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	14.0	\$286.44	\$84.14	\$18.72	\$0.00	\$178.08	\$567.38
CPJ / Channel Pipe - Jetted	10.0	\$222.80	\$191.60	\$44.35	\$0.00	\$143.40	\$602.15
HAUL / Hauling	14.0	\$311.78	\$198.24	\$59.54	\$0.00	\$201.88	\$771.44
PRRECON / Project Reconnaissance	16.0	\$332.20	\$72.00	\$185.05	\$0.00	\$208.28	\$797.53
UC / Utility Coordination	4.0	\$167.80	\$7.20	\$10.40	\$0.00	\$59.82	\$245.22
UTLOC / Utility locates	0.5	\$12.35	\$0.00	\$0.00	\$0.00	\$6.62	\$18.97
2019-514 / Pointe South Trace Sub Total	59.5	\$1,355.16	\$553.18	\$318.06	\$0.00	\$798.08	\$3,024.48
<b>Grand Total</b>	<b>59.5</b>	<b>\$1,355.16</b>	<b>\$553.18</b>	<b>\$318.06</b>	<b>\$0.00</b>	<b>\$798.08</b>	<b>\$3,024.48</b>

**Before**



**During**



**After**







Project: Pointe  
South Trace  
Channel #1

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-514

Township/SW Dist:  
Bluffton/4

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 40 80 160 240 320  
Feet

1 inch = 170 feet

Prepared By: BC Stormwater Management Utility

Date Print: 12/20/18

File: C:\project summaries map\Pointe South Trace Channel #1\_2019-514





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

**Project Summary:** David Green Road Channel #1

**Activity:** Routine/Preventive Maintenance

**Duration:** 05/30/18-05/31/18

**Narrative Description of Project:**

Project improved 3,190 L.F. of drainage system. Cleaned out 3,190 L.F. of channel.

2018-622 / David Green Road Channel #1	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AUDIT / Audit Project	0.5	\$10.90	\$0.00	\$0.00	\$0.00	\$0.00	\$10.90
CCO / Channel - cleaned out	60.0	\$1,256.80	\$357.85	\$82.28	\$0.00	\$643.20	\$2,340.13
HAUL / Hauling	10.0	\$222.70	\$94.20	\$94.38	\$0.00	\$144.20	\$555.48
2018-622 / David Green Road Channel #1 Sub Total	70.5	\$1,490.40	\$452.05	\$176.66	\$0.00	\$787.40	\$2,906.51
<b>Grand Total</b>	<b>70.5</b>	<b>\$1,490.40</b>	<b>\$452.05</b>	<b>\$176.66</b>	<b>\$0.00</b>	<b>\$787.40</b>	<b>\$2,906.51</b>

**Before**



**During**



**After**

**(Picture Not Available)**





Project: David  
Green Road  
Channel #1

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2018-622

Township/SW Dist:  
St. Helena Island/8

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

0 120240 480 720 960  
Feet

1 inch = 500 feet

Prepared By: BC Stormwater Management Utility

Date Print: 02/07/19

File: C:\project summaries map\David Green Road Channel #1\_2018-622





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

**Project Summary:** Tower Road

**Activity:** Routine/Preventive Maintenance

**Duration:** 07/18/2018

**Narrative Description of Project:**

Repaired sinkhole.

**2019-501 / Tower Road**

	<b>Labor Hours</b>	<b>Labor Cost</b>	<b>Equipment Cost</b>	<b>Material Cost</b>	<b>Contractor Cost</b>	<b>Indirect Labor</b>	<b>Total Cost</b>
AUDIT / Audit Project	1.0	\$21.79	\$0.00	\$0.00	\$0.00	\$0.00	\$21.79
HAUL / Hauling	8.5	\$186.90	\$120.36	\$348.77	\$0.00	\$50.47	\$706.50
SD / Soft Digging	10.0	\$222.80	\$191.60	\$39.93	\$0.00	\$143.40	\$597.73
SR / Sinkhole repair	20.0	\$460.10	\$19.20	\$149.65	\$0.00	\$266.50	\$895.45
2019-501 / Tower Road Sub Total	39.5	\$891.59	\$331.16	\$538.35	\$0.00	\$460.37	\$2,221.46
<b>Grand Total</b>	<b>39.5</b>	<b>\$891.59</b>	<b>\$331.16</b>	<b>\$538.35</b>	<b>\$0.00</b>	<b>\$460.37</b>	<b>\$2,221.46</b>

**Before**



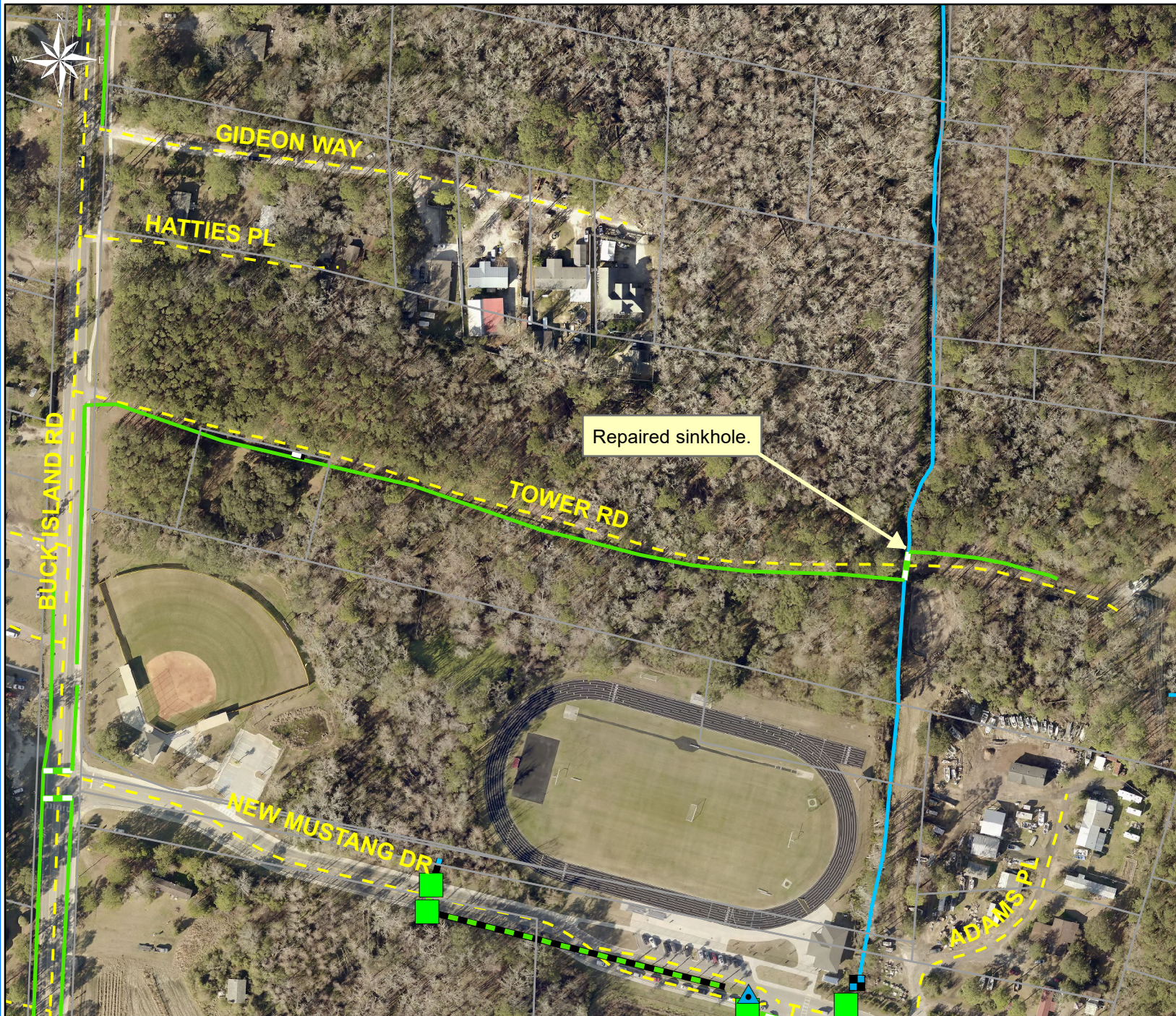
**During**



**After**







Project: Tower Road

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2019-501

Township/SW Dist:  
Bluffton/4

Completed:  
July 2018

### Legend

#### Drainage Type

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

0 50 100 200 300 400  
Feet

1 inch = 210 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 01/08/19  
File: C:\project summaries map\Tower Road\_2019-501





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

**Project Summary:** Lilac Lane

**Activity:** Routine/Preventive Maintenance

**Duration:** 07/09/18-07/26/18

**Narrative Description of Project:**

Project improved 225 L.F. of drainage system. Cleaned out 225 L.F. of roadside ditch.

2018-626 / Lilac Lane	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AUDIT / Audit Project	1.0	\$21.79	\$0.00	\$0.00	\$0.00	\$0.00	\$21.79
HAUL / Hauling	17.0	\$375.23	\$240.72	\$82.44	\$0.00	\$144.20	\$842.59
PRRECON / Project Reconnaissance	0.5	\$12.35	\$0.00	\$0.00	\$0.00	\$6.62	\$18.97
RSDCL / Roadside Ditch - Cleanout	28.0	\$780.29	\$101.19	\$29.95	\$0.00	\$373.10	\$1,284.53
UTLOC / Utility locates	1.0	\$24.70	\$0.00	\$0.00	\$0.00	\$13.23	\$37.93
2018-626 / Lilac Lane Sub Total	47.5	\$1,214.36	\$341.91	\$112.39	\$0.00	\$537.14	\$2,205.80
<b>Grand Total</b>	<b>47.5</b>	<b>\$1,214.36</b>	<b>\$341.91</b>	<b>\$112.39</b>	<b>\$0.00</b>	<b>\$537.14</b>	<b>\$2,205.80</b>

**Before**



**During**



**After**







Project: Lilac Lane

Activity: Routine/  
Preventive  
Maintenance

Project #:  
2018-626

Township/SW Dist:  
Ladys Island/7

Completed:  
July 2018

### Legend

#### Drainage Type

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

0 15 30 60 90 120  
Feet

1 inch = 67 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 01/08/19  
File: C:\project summaries map\Lilac Lane\_2018-626





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

**Project Summary:** Sea Front Lane

**Activity:** Routine/Preventive Maintenance

**Duration:** 07/26/18-08/06/18

**Narrative Description of Project:**

Project improved 182 L.F. of drainage system. Cleaned out 182 L.F. of roadside ditch.

2019-507 / Sea Front Lane	Labor Hours	Labor Cost	Equipment Cost	Material Cost	Contractor Cost	Indirect Labor	Total Cost
AUDIT / Audit Project	1.0	\$21.79	\$0.00	\$0.00	\$0.00	\$0.00	\$21.79
HAUL / Hauling	10.0	\$222.70	\$141.60	\$57.25	\$0.00	\$144.20	\$565.75
RSDCL / Roadside Ditch - Cleanout	30.0	\$672.40	\$113.64	\$38.70	\$0.00	\$254.40	\$1,079.14
UTLOC / Utility locates	0.5	\$12.35	\$0.00	\$0.00	\$0.00	\$6.62	\$18.97
2019-507 / Sea Front Lane Sub Total	41.5	\$929.24	\$255.24	\$95.95	\$0.00	\$405.22	\$1,685.65
<b>Grand Total</b>	<b>41.5</b>	<b>\$929.24</b>	<b>\$255.24</b>	<b>\$95.95</b>	<b>\$0.00</b>	<b>\$405.22</b>	<b>\$1,685.65</b>

**Before**



**During**

(Picture Not Available)

**After**







Project: Sea Front Lane

Activity: Routine/  
Preventive  
Maintenance














Project #:  
2019-507

Township/SW Dist:  
Hilton Head Island/  
3

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 30 60 120 180 240  
Feet

1 inch = 130 feet

Prepared By: BC Stormwater Management Utility

Date Print: 12/20/18

File: C:\project summaries map\Sea Front Lane\_2019-507






# **STORMWATER 5 YEAR PLAN UPDATE**

BEAUFORT COUNTY STORMWATER DEPARTMENT AND UTILITY  
MANAGEMENT BUDGET PROPOSAL

FY 2020 – FY 2025





# SERVICES – LOS/EOS

- UTILITY FEE CALCULATION, BILLING, AND COLLECTIONS
- MS4 PERMIT COMPLIANCE
  - PLAN REVIEW
  - INSPECTION
  - MONITORING / IDDE
  - PUBLIC EDUCATION AND OUTREACH
- COUNTY (PUBLIC) OWNED PIPE AND DITCH MAINTENANCE
  - INVENTORY MAPPING\* AND ASSET MANAGEMENT
  - RETROFITTING
  - LIMITED STATE OUTFALL DITCH MAINTENANCE
- SERVICE REQUESTS
- SUPPORT FLOODPLAIN MANAGEMENT

\* INCLUDING PRIVATE  
AND MUNICIPAL SYSTEMS

# EXISTING STAFFING LEVELS

- UTILITY MANAGEMENT (3+2)

- **STORMWATER UTILITY MANAGER** /  
ENGINEER
- BUSINESS MANAGER
- ADMIN SUPPORT
- GIS FUNDED POSITION
- FINANCE FUNDED POSITION

- REGULATIONS (5)

- 1 MS4 COORDINATOR
- **4 INSPECTORS**

- INFRASTRUCTURE (43)

- **SUPERINTENDENT**
- ADMIN SUPPORT
- UTILITY LOCATION COORDINATOR
- 2 FOREMAN
  - **2 CREW LEADERS**
- 16 OPERATORS
- **18 TECHNICIANS**
- 2 INSPECTION TECHS



# EXISTING ASSETS

- 6 DUMP TRUCKS
- 22 PICKUPS / CREW CABS
- 2 VACUUM JET TRUCKS
- 1 STREET SWEEPER
- 1 SUBCOMPACT SEDAN
- 1 SHINN CUTTER
- 1 GYRO TRAC
- 3 LARGE EXCAVATORS
- 3 SMALL / URBAN EXCAVATORS
- 1 LOADER
- 5 BUSH HOGS
- 1 BULL DOZER
- 2 BACKHOES
- 2 SKID STEER LOADERS
- 7 TRAILERS
- 1 HYDRO SEEDER
- 1 TRENCHING MACHINE
- 1 ROCK SCREENER
- 16 MISC. PIECES OF ATTACHMENTS AND LIGHT EQUIPMENT

# SIGNIFICANT CHANGES


- ADDITION OF AN ASSISTANT STORMWATER MANAGER
- ADDITION OF A PLAN REVIEWER / MS4 INSPECTOR
- ADDITION OF AN ASSISTANT SUPERINTENDENT
- ADDITION OF SECOND VAC TRUCK CREW
  - DECISION TO KEEP THE OLD VAC TRUCK,
  - HIRE A 2-MAN CREW, AND
  - EVENTUAL PURCHASE OF A SECOND NEW VAC TRUCK IN FY 2023
- GRAD-ALL PURCHASE
- WHY?
  - COMPLETION OF PRIMARY SW INVENTORY SHOWS DRAMATICALLY MORE INFRASTRUCTURE
  - ADMINISTRATIVE AND REGULATORY WORKLOAD HAVE INCREASED
  - ADDITION OF NEW CIP PROJECTS FROM 2018 MASTERPLAN UPDATE





# CAPITAL PROJECTS CURRENTLY UNDERWAY

(REMAINING COSTS FOR FY 2020 & FY 2021)

- BREWER MEMORIAL PARK - \$562,000
  - FACTORY CREEK PHASE I – NO ADDITIONAL COSTS
  - FACTORY CREEK PHASE II - NO ADDITIONAL COSTS
  - SALT CREEK SOUTH - \$2.1 MIL.
  - SHANKLIN ROAD (AKA ROSEIDA ROAD) - \$3.5 MIL.
  - MOSSY OAKS TASK FORCE - \$220,000
  - EVERGREEN REGIONAL POND & 319 GRANT - \$697,000
- 

County Retrofit Project: Brewer Memorial Park Demonstration Wet Pond Project Feasibility  
Activity: Demonstration BMP  
Township: Lady's Island

Project Schedule: FY 2015, 2016 & 2018

Project Cost: \$79,500

\$9,500 (2015)

\$20,000 (2016)

\$50,000 (2018)



**Drainage**

TYPE	
River	Roadside
Creek/Stream	Roadside Pipe
River/Creek/Marsh BANK	Road Pipe
Channel (fka Outfall)	Crossline Pipe
Channel Pipe	Driveway Pipe
Lateral	Access Pipe
Lateral Pipe	Bleeder Pipe



0 62.5 125 250 375 500 Feet

1 inch = 167 feet

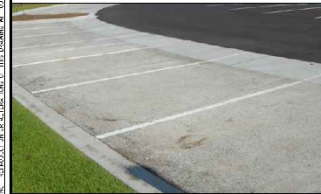
Prepared By: BC Stormwater Management Utility  
Date Print: 5/19/14

**Description:** Retrofit a former bait pond at the Brewer Memorial Park on Lady's Island. The site has runoff from Sea Island Parkway and adjacent properties that discharges directly to Factory Creek without water quality treatment or volume reduction. The site is envisioned as a demonstration site due to the high profile location. The park is being built with separate funding through the Beaufort Open Land Trust and will include a broadwalk and landscaping around the pond, providing opportunity for viewing and public education.





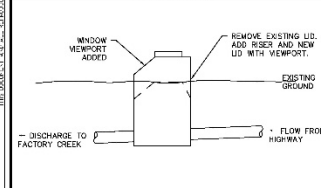
ARMORED TURF



PERMEABLE CONCRETE



POROUS PAVERS

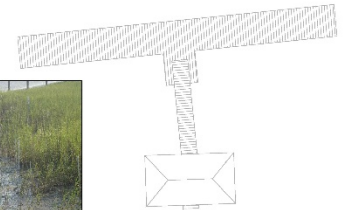


HYDRODYNAMIC SEPARATOR DEMONSTRATION LID

NOTE: EDUCATIONAL SIGNAGE TO BE INSTALLED AT EACH BMP



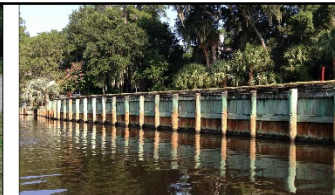
LIVING SHORELINE



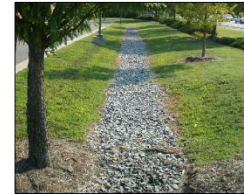
FILTERRA BIORETENTION



GRAVEL DRIVE



WOODEN BULKHEAD



INFILTRATION TRENCH



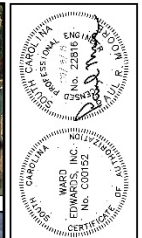
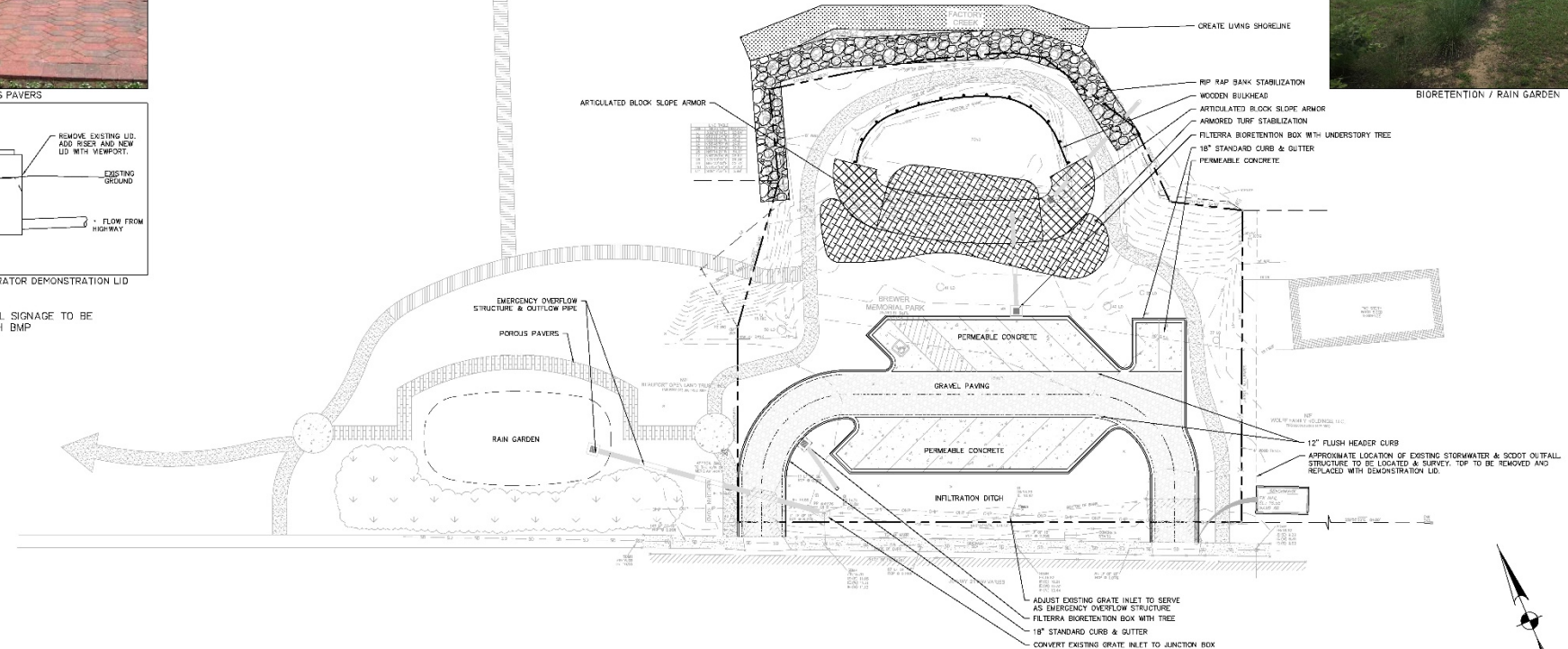
RIP RAP



ARTICULATED BLOCK



BIORETENTION / RAIN GARDEN



NO.	DESCRIPTION	DATE
1		
2		
3		
4		
5		
6		
7		

**Ward Edwards**  
ENGINEERING  
P.O. BOX 10000  
PH (803) 837-3550 / FAX (803) 837-3558  
WWW.WARDEWARDS.COM

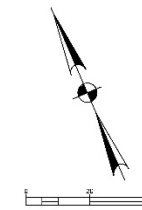
**BREWER MEMORIAL PARK**  
BEAUFORT COUNTY, SOUTH CAROLINA  
BEAUFORT COUNTY, SOUTH CAROLINA  
**CONCEPT PLAN**

IF NOT FOR CONSTRUCTION  
IF RELEASED FOR CONSTRUCTION

PROJECT # 22016  
DATE 09/15/16  
DRAWN BY JCH  
CHECKED BY JCH  
SCALE 1"=20'

SHEET  
**EX.01**

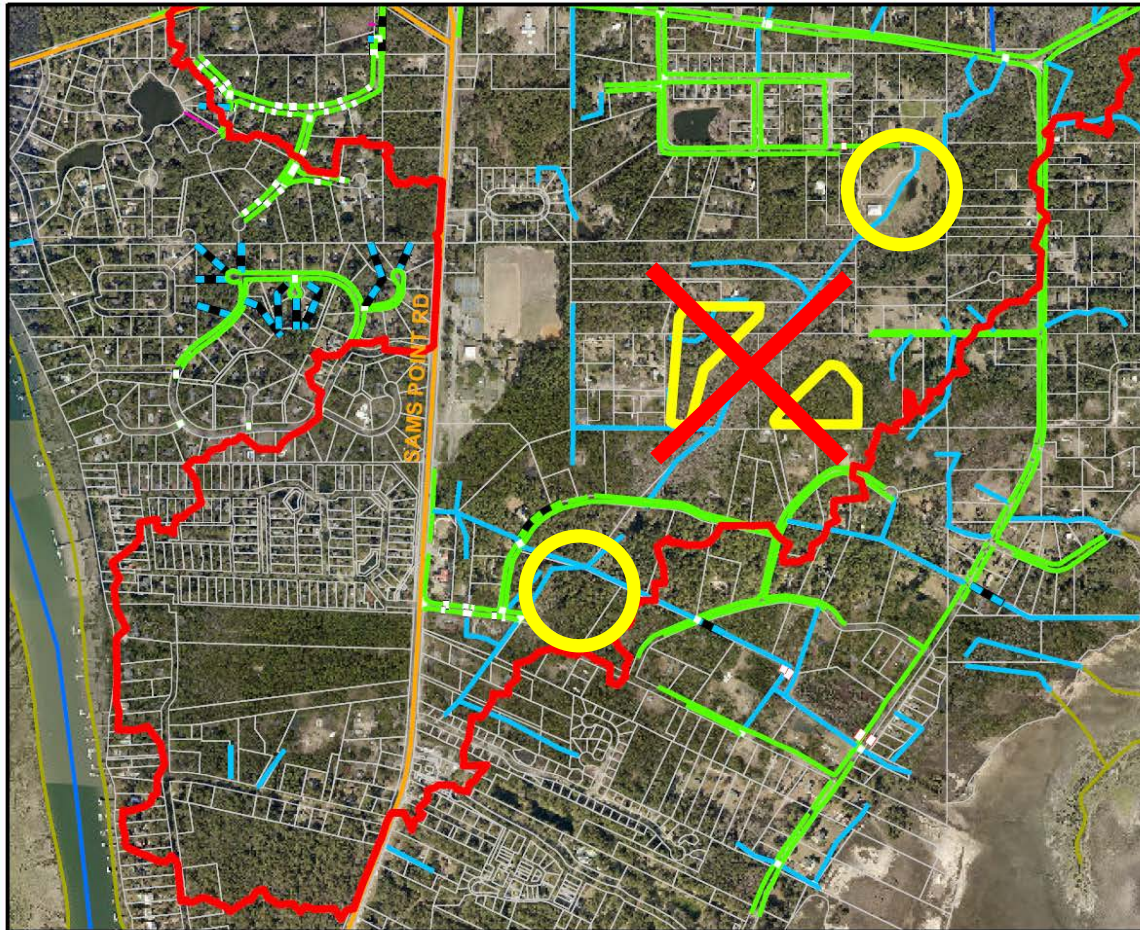
# BREWER MEMORIAL PARK STORMWATER BMP IMPROVEMENTS



IF THIS SHEET IS LESS THAN 22" X 34" IT IS A "RECEIVED PRINT", SCALE ACCORDINGLY.



County Retrofit Project: Factory Creek M2  
Activity: Regional BMP  
Township: Lady's Island



Project Schedule: FY 2018, 2020 & 2022

Project Cost: \$1,740,000

\$200,000 (2018)

\$340,000 (2020)

\$1,200,000 (2022)

Drainage

TYPE

River

Creek/Stream

River/Creek/Marsh BANK

Channel (fka Outfall)

Channel Pipe

Lateral

Lateral Pipe

Roadside

Roadside Pipe

Road Pipe

Crossline Pipe

Driveway Pipe

Access Pipe

Bleeder Pipe



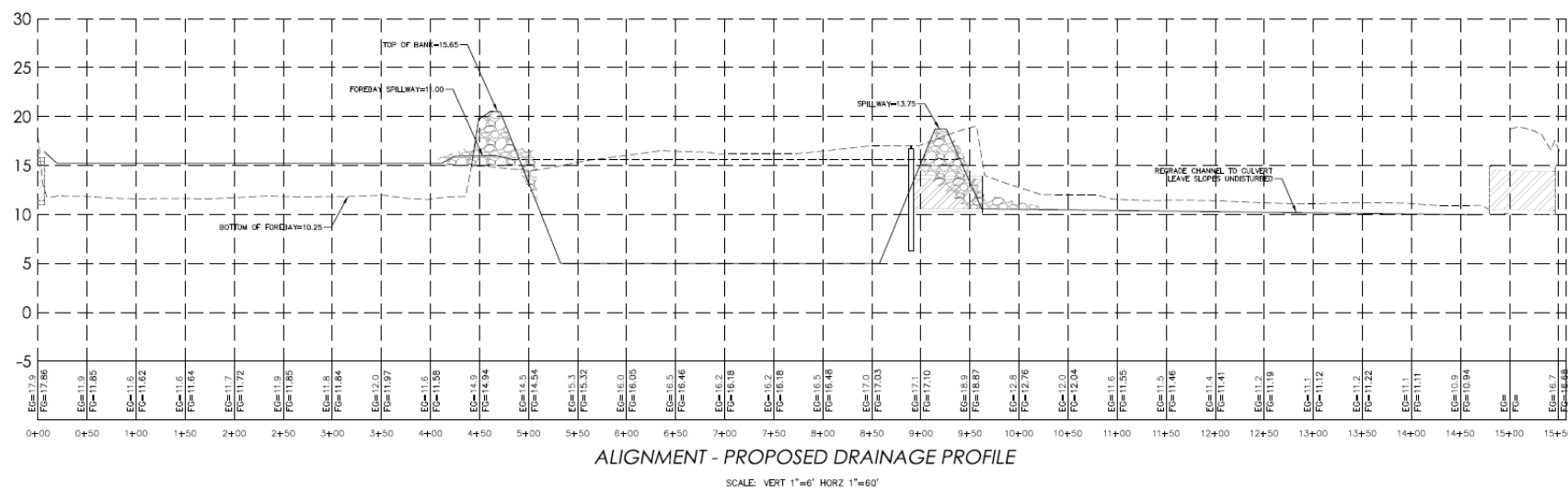
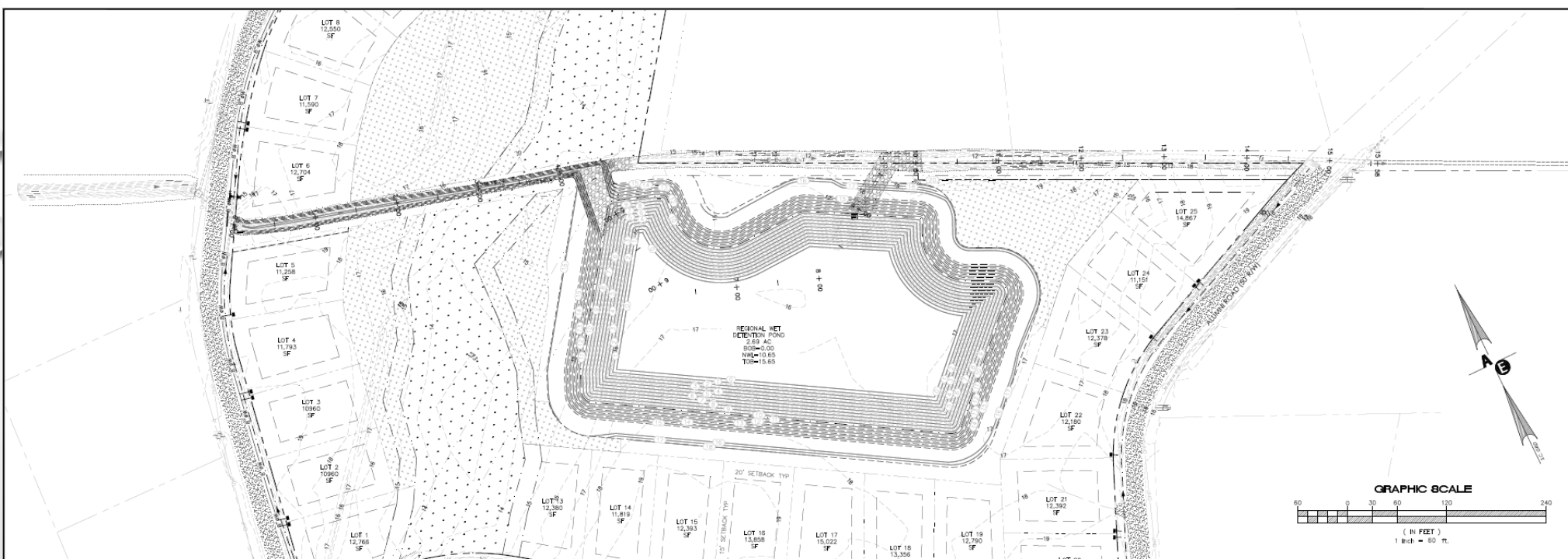
0 450 900 1,800 2,700 3,600 Feet

1 inch = 1,207 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 5/19/14

Description: Development in the Factory Creek hydrologic sub-basin in the Rock Springs Creek watershed includes approx. 300 acres of a mix of single family development, and commercial/institutional development built prior to stormwater regulations. There are only a few stormwater best management practices, such as detention basins, in the area. The project would be to construct a regional detention facility to provide stormwater runoff water quality treatment and volume reduction. Due to the grades of the area and the "stop gap measure" to construct a ditch to drain a portion of the wetland, construction will involve a large amount of earthwork, making project cost a limiting factor for project implementation. Rock Springs Creek drains into the Morgan River, which is impaired by bacteria pollution, a major source being urban runoff. The site is located in Beaufort County on Lady's Island.





ALIGNMENT - PROPOSED DRAINAGE PROFILE

SCALE: VERT 1"=6' HORIZ 1"=60'

PLAN REVISIONS	
NO.	DESCRIPTION
1	
2	
3	
4	
5	
6	
7	
8	

THE DESIGN AND REVISIONS SHOWN IN THESE DRAWINGS ARE THE SOLE PROPERTY OF ANDREWS ENGINEERING & SURVEYING. NO PART OF THESE DRAWINGS MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PRIOR WRITTEN CONSENT.

**Andrews Engineering & Surveying**  
 2712 Bill Street, Suite A  
 Beaufort, SC 29902  
 Phone: 843.733.2223  
 Fax: 843.733.2223

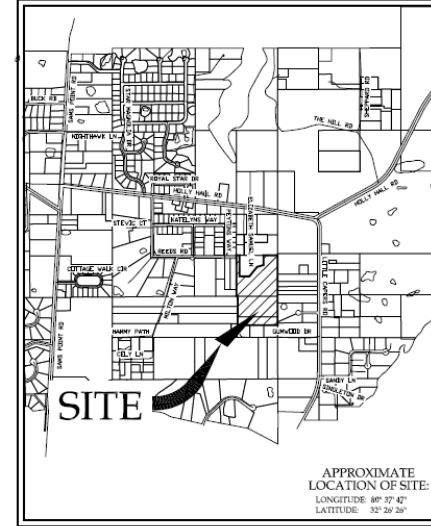
Site Development Plan  
 For  
 Academy Park S/D  
 Fairfield Road  
 Ladys Island  
 Beaufort County, SC

Drainage Plan  
 & Profile

Date Drawn: 09/27/17  
 Last Revised: 11/27/17  
 Drawn By: L. Wren  
 Engineer: A. Kisteman

SHEET #:  
**7**

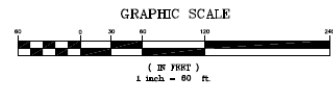
JOB: 170042



VICINITY MAP  
NTS

POND AREA TABLE	
PHASE 1 -	PERMITTED
TOTAL POND AREA=	2.0 AC
PHASE 2 -	NOT PERMITTED
POND AREA =	2.2 AC
PHASE 3 -	NOT PERMITTED
POND AREA =	1.3 AC

NOTE:  
PHASES 2 & 3 STORM WATER POND  
AREAS AND LOCATIONS ARE APPROXIMATE.  
POND AREAS AND DESIGN ARE SUBJECT  
TO CHANGE BASED ON TREE LOCATION  
AND STORMWATER DESIGN



PLAN REVISIONS	
NO.	DATE
1	-
2	-
3	-
4	-
5	-
6	-
7	-
8	-

**COLEMAN'S STORMWATER POND**  
REEDS ROAD  
BEAUFORT COUNTY, SC

**CAROLINA ENGINEERING CONSULTANTS, INC.**  
843/323-0553  
843/323-0556 (FAX)  
PO BOX 284  
BEAUFORT, SC 29901  
WWW.CAROLINAENGINEERING.COM

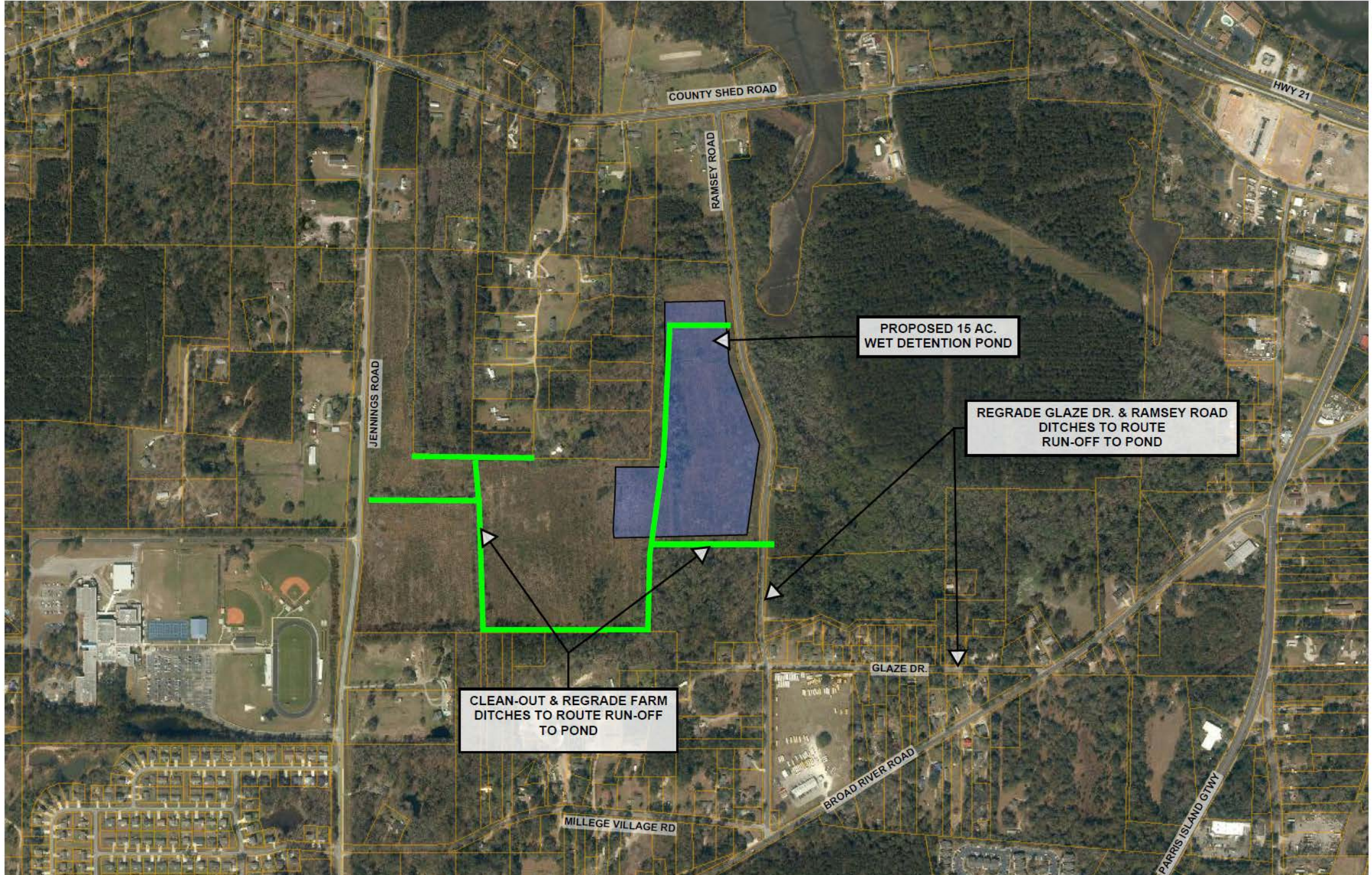
PROJECT: 1952  
DATE: 06/15/16  
REVISED: 06/15/16  
DRAWN BY: TAB  
ENGINEER: JPA  
SCALE: 1"=60'

SITE PLAN  
**1**  
OF 1

CAROLINA  
ENGINEERING  
CONSULTANTS  
INC.  
No. 00284  
SOUTH CAROLINA  
REGISTERED PROFESSIONAL ENGINEERS

\*ANY INSTRUMENTATION MAY BE SUBJECT TO LOCAL ACTION.  
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DRAWINGS ARE THE PROPERTY OF CAROLINA  
ENGINEERING CONSULTANTS, INC. NO REUSE OR  
REPRODUCTION, COPY, OR USE OF THESE PLANS OR THE  
INFORMATION CONTAINED HEREIN WITHOUT THE  
WRITTEN CONSENT OF THE ENGINEER.





LEGEND

- EXISTING DITCH
- PROPOSED DITCH
- PROPOSED PIPE
- PROPOSED BMP



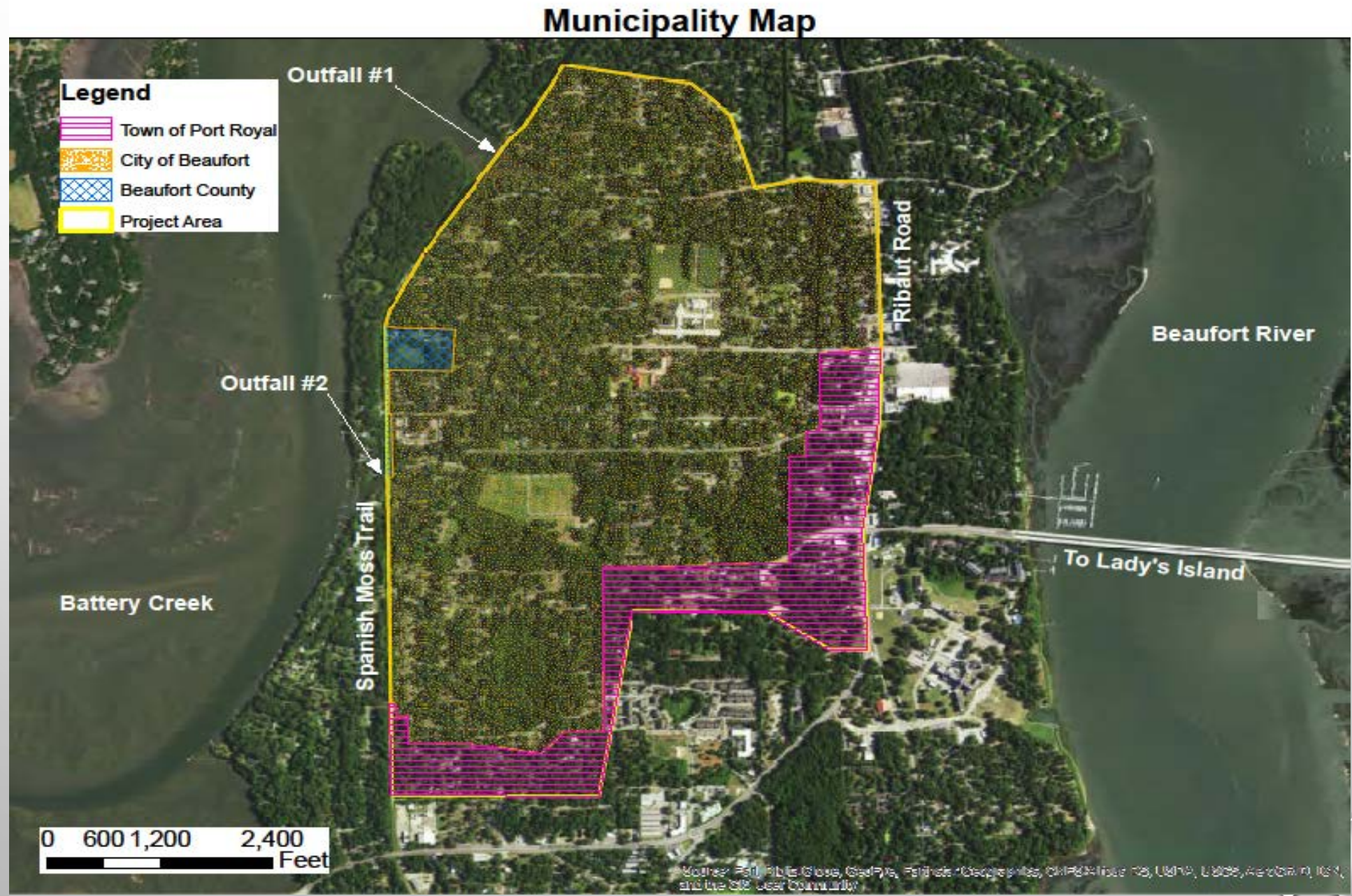


LEGEND

- EXISTING DITCH
- PROPOSED DITCH
- PROPOSED PIPE
- PROPOSED BMP



# MOSSY OAKS TASK FORCE





# EXHIBIT 4: EVERGREEN POND LOCATION

18-08

## Legend:

- DEQ-4 Monitoring Stations
- Okatie West Retrofit Basin
- Okatie East Retrofit Basin
- Okatie West BMP
- Okatie East Retrofit Basin

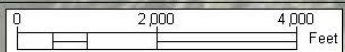


OKATIE WEST POND LOCATION

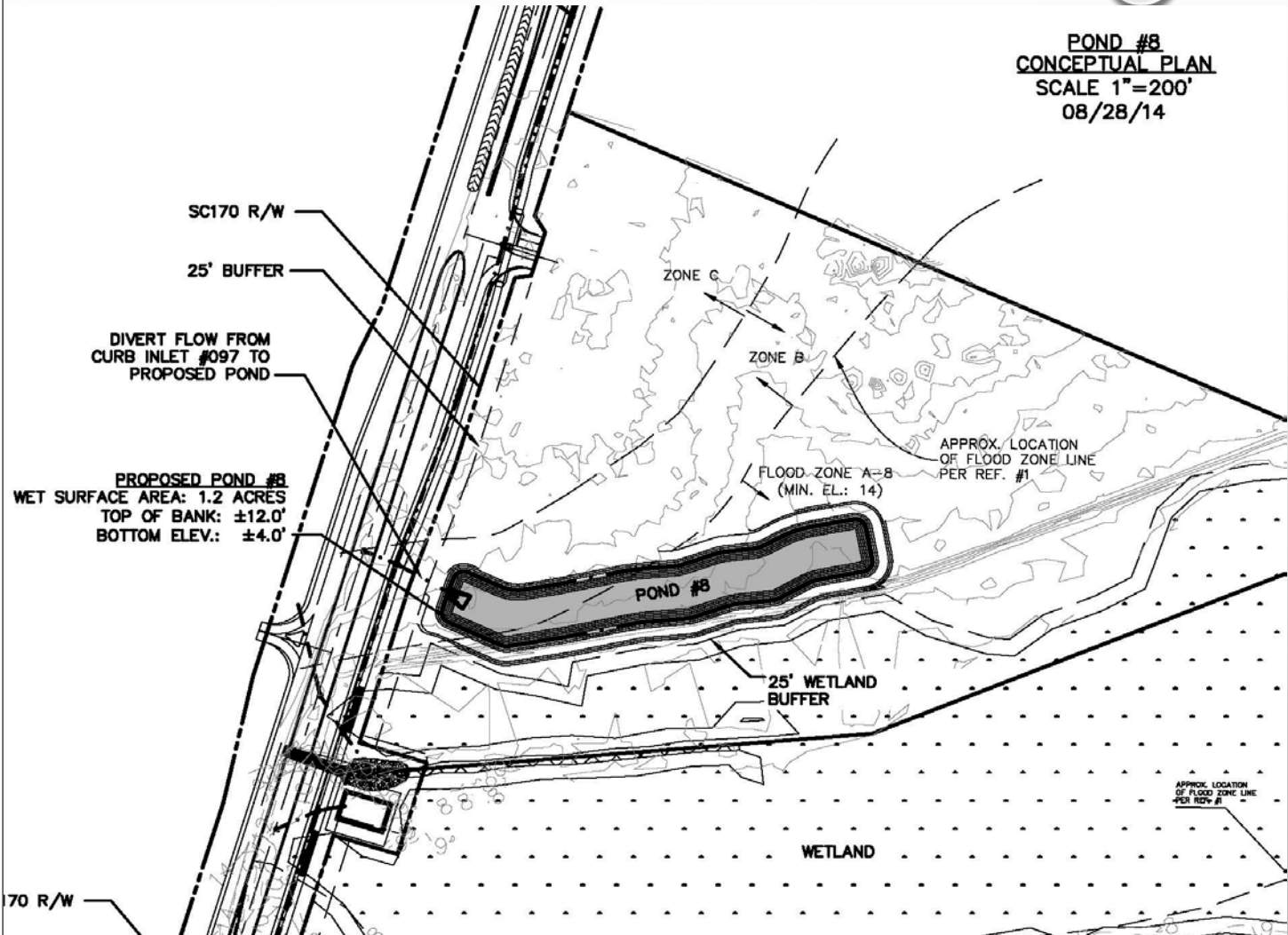
PROPOSED EVERGREEN POND LOCATION

BLUFFTON PKWY

SC 170




## POND #8 CONCEPTUAL PLAN SCALE 1"=200' 08/28/14







# NEW CAPITAL PROJECTS FROM 2018 MASTERPLAN

- CAMP ST. MARY REGIONAL POND - \$3.9 MIL.
  - ROCK SPRINGS CREEK - \$431,000
  - SAWMILL BRANCH REGIONAL - \$1.1 MIL.
  - LUCY POINT CREEK REGIONAL - \$439,000
  - ALBERGOTTI CREEK REGIONAL - \$602,000
- 
- ALL RELATED TO EXCESSIVE BACTERIA LOADING AND LACK OF STORMWATER DETENTION
- 

County Retrofit Project: Camp St. Mary's M2  
Activity: Regional BMP  
Township: Bluffton

Project Schedule: FY 2021-2023

Project Cost: \$3,757,000  
\$342,000 (2021)  
\$165,000 (2022)  
\$3,250,000 (2023)



Drainage	
TYPE	
River	Roadside
Creek/Stream	Roadside Pipe
River/Creek/Marsh BANK	Road Pipe
Channel (fka Outfall)	Crossline Pipe
Channel Pipe	Driveway Pipe
Lateral	Access Pipe
Lateral Pipe	Bleeder Pipe



0 550 1,100 2,200 3,300 4,400 Feet

1 inch = 1,457 feet

Prepared By: BC Stormwater Management Utility  
Date Print: 5/19/14

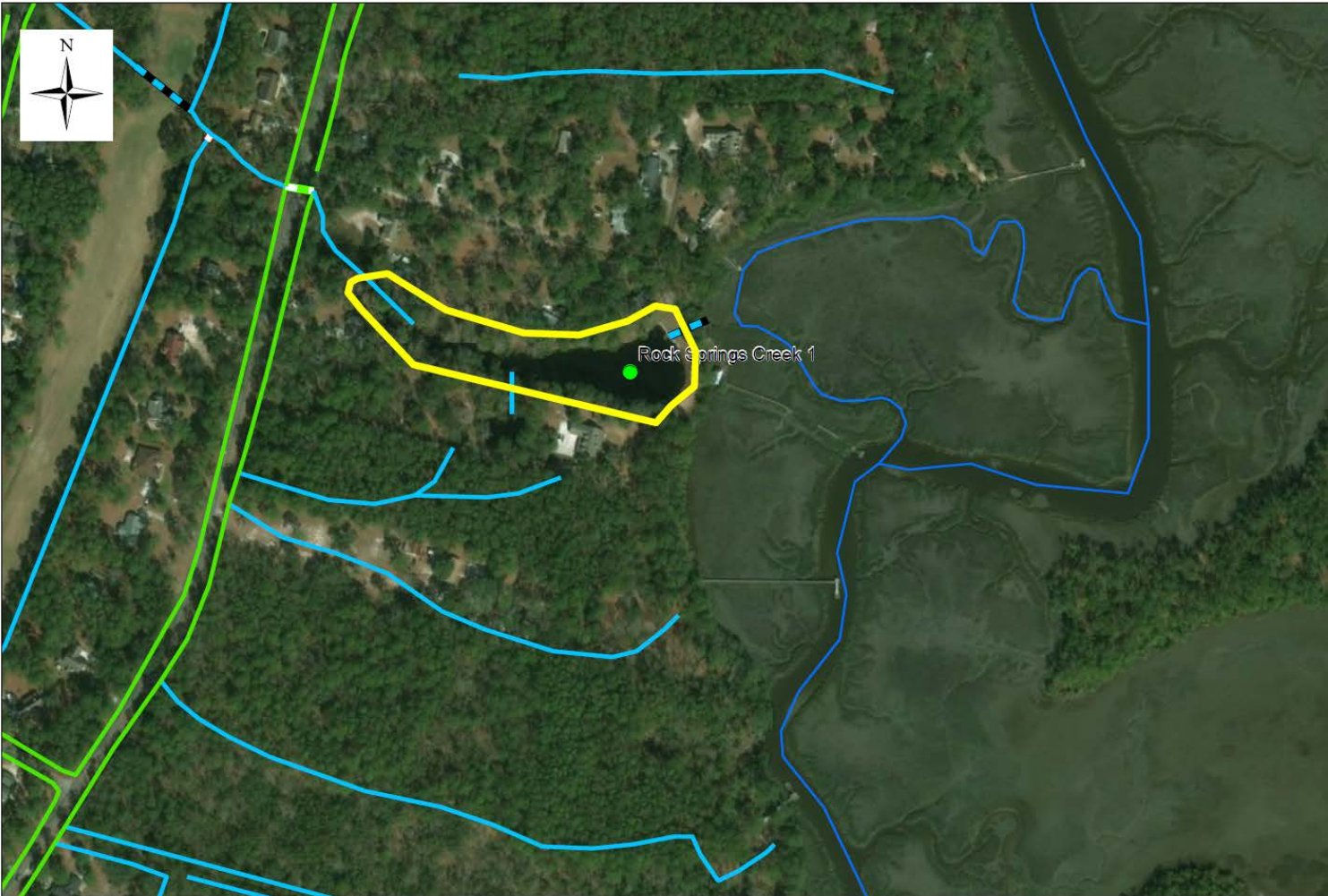
**Description:** Development in the Camp St. Mary hydrologic sub-basin in the Okatie River watershed includes approx. 500 acres of rural and single family development built prior to stormwater regulations. There are no stormwater best management practices, such as detention facilities, in the area. The project would be to construct a regional detention facility to provide stormwater runoff water quality treatment and volume reduction. Due to the presence of multiple wetlands in the area, project design would involve delineation and avoidance of the wetlands, making construction cost a limiting factor for project implementation. Okatie River is impaired by bacteria pollution, a major source being urban runoff. The watershed of the site is located within both Beaufort and Jasper Counties.



January 2018

## Rock Spring Creek 1 Regional BMP Township: Lady's Island

**Project Cost**  
**\$430,524**



### Drainage TYPE

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

0 175 350 700  
Feet



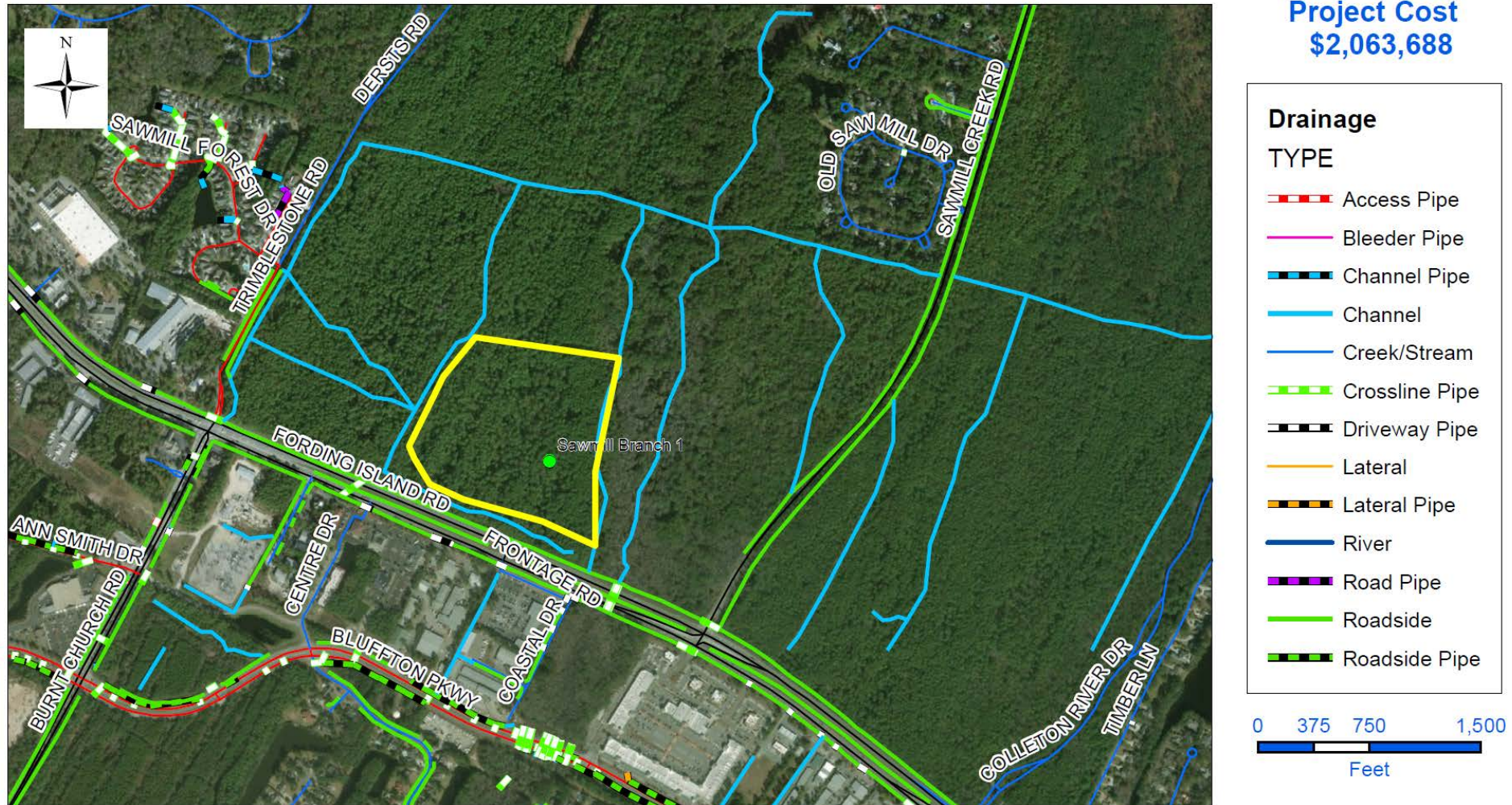
**Description:** Development in the Rock Springs Creek 1 hydrologic basin includes approx. 194 acres of golf course and single-family development built prior to volume control stormwater regulations. There are stormwater best management practices, such as detention facilities, in the area. The project would be to construct modifications to the existing regional wet detention pond including permanent pool expansion, littoral shelf creation and control structure modifications. The project will provide enhanced stormwater runoff water quality treatment and volume reduction. Rock Springs Creek is impaired by bacteria pollution. The watershed of the site is located within the Lady's Island Township



January 2018

## Sawmill Branch 1 Regional BMP Bluffton / Beaufort County

Project Cost  
\$2,063,688



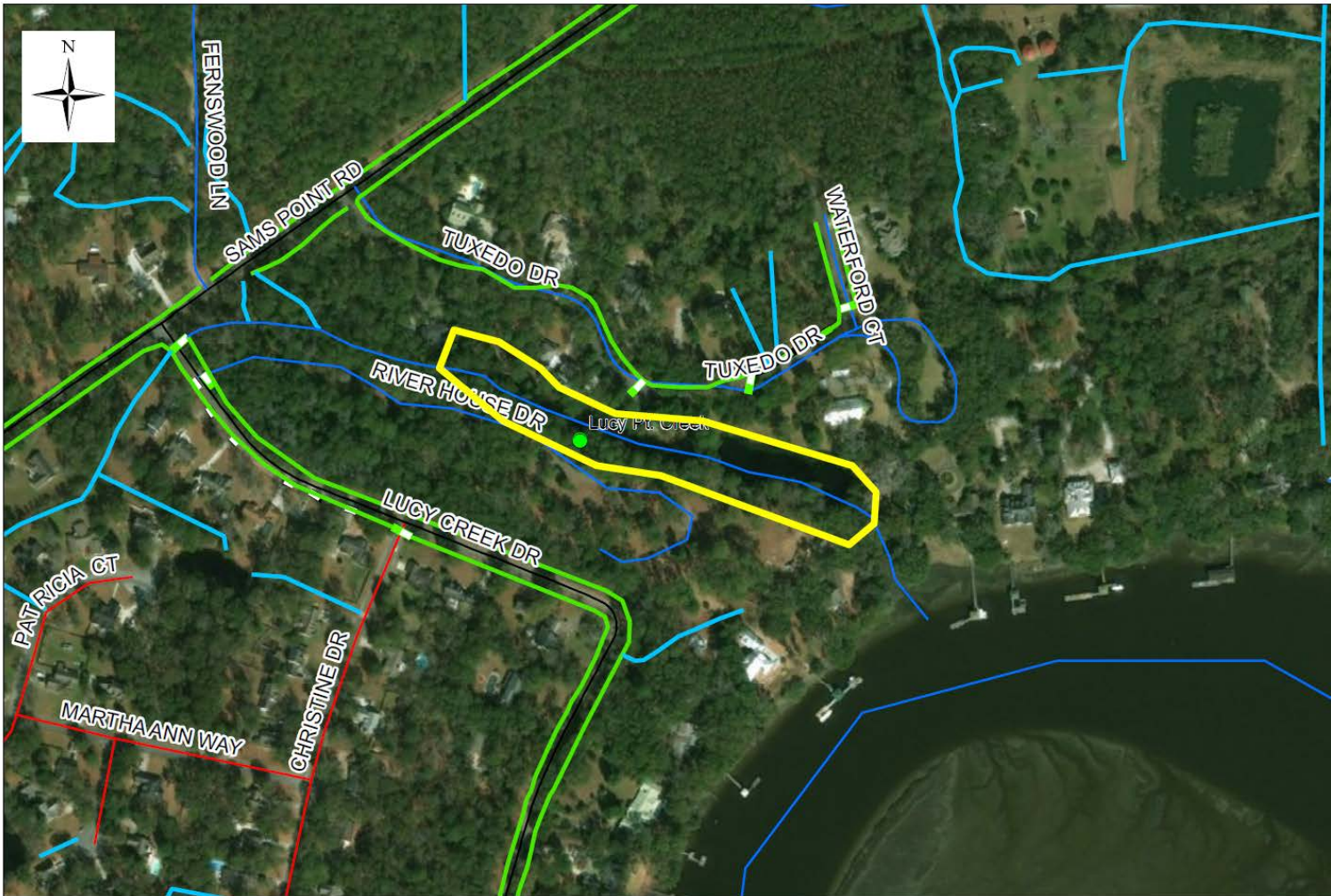
**Description:** Development in the Sawmill Branch 1 hydrologic basin in the Colleton River watershed includes approx. 310 acres of commercial and single-family development built prior to volume control stormwater regulations. There are stormwater best management practices, such as detention facilities, in the area. The project would be to construct a regional detention facility to provide stormwater runoff water quality treatment and volume reduction. Due to the presence of multiple wetlands in the area, project design would involve delineation and avoidance of the wetlands. The watershed of the site is located within Bluffton/Beaufort County.



January 2018

## Lucy Point Creek Regional BMP Township: Lady's Island

Project Cost  
\$483,293



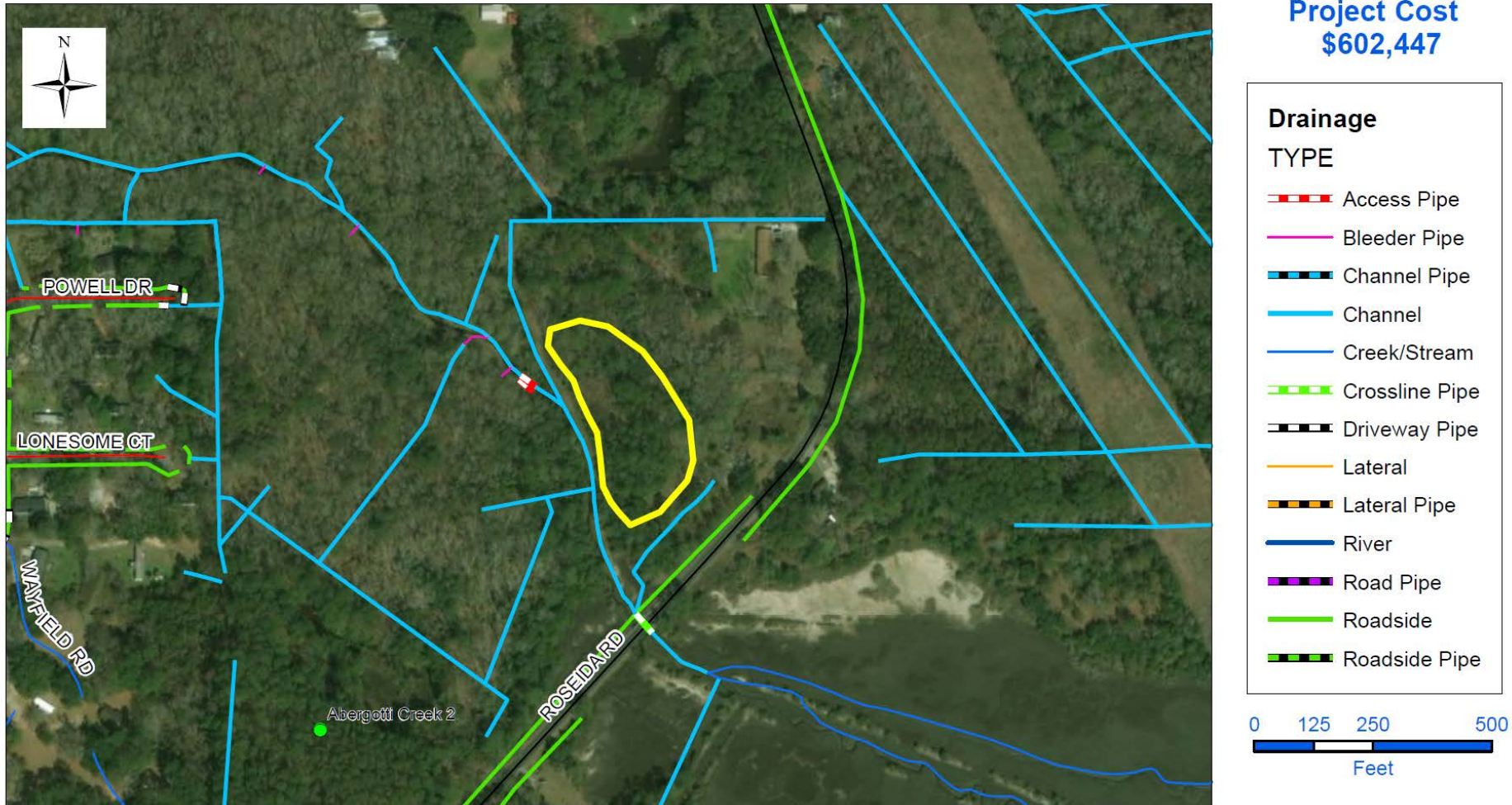
**Description:** Development in the Lucy Point Creek hydrologic sub-basin includes approx. 105 acres of rural and single-family development built prior to stormwater regulations. There are limited stormwater best management practices, such as detention facilities, in the area. The project would be to construct modifications to the existing regional wet detention pond including permanent pool expansion, littoral shelf creation and control structure modifications. The project will provide enhanced stormwater runoff water quality treatment and volume reduction. Due to the presence of some wetlands in the area, project design would involve delineation and avoidance of the wetlands. The watershed of the site is located within the Lady's Island Township.



January 2018

## Albergotti Creek 2 Regional BMP Beaufort County

**Project Cost**  
**\$602,447**



**Description:** Development in the Albergotti Creek 2 hydrologic sub-basin includes approx. 172 acres of rural and single-family development built prior to stormwater regulations. There are no stormwater best management practices, such as detention facilities, in the area. The project would be to construct a regional wet detention facility adjacent to Roseida Road to provide stormwater runoff water quality treatment and volume reduction. Due to the presence of some wetlands in the area, project design would involve delineation and avoidance of the wetlands. Albergotti Creek is impaired by bacteria pollution. The watershed of the site is located within Beaufort County.



# ADDITIONAL CIP TO CONSIDER

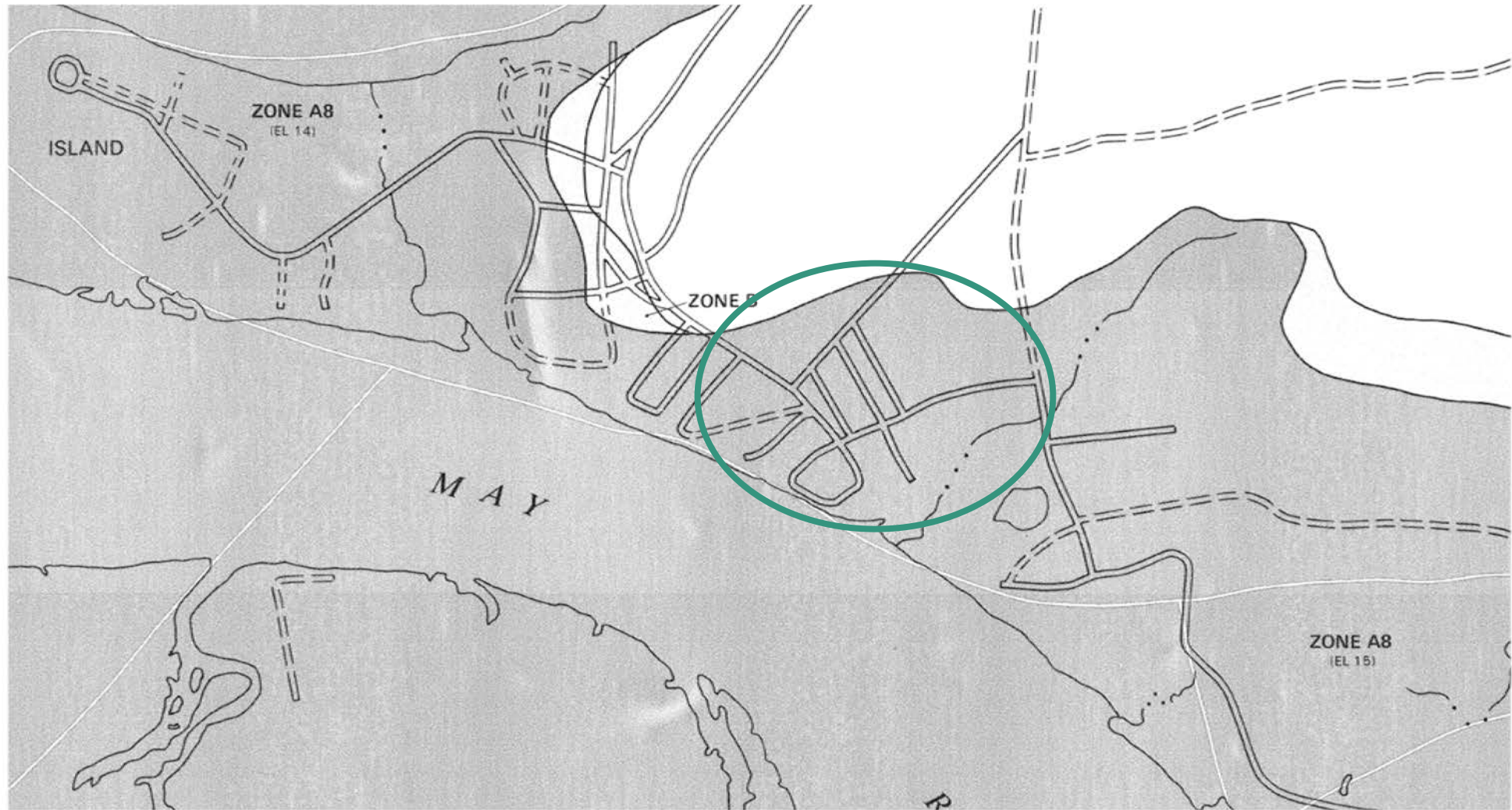
- GRAVES / PEPPER HALL COST SHARE OF SW DESIGN & CONSTRUCTION - \$850,000 (EST.)  
(PROPOSED SPILT IN FY20 AND FY21)
- ALLJOY REGIONAL WATERSHED STUDY - \$950,000 (EST.) (PROPOSED \$250,000 IN FY20)
  - ACQUISITIONS AND/OR STRUCTURE ELEVATIONS - \$9.7 MIL. TOTAL (EST.)
    - \$1.6 MIL. GRANT MATCH
- MAY RIVER WATERSHED SANITARY SEWER EXTENSIONS
  - GAS. BLUFF / STONEY CREEK - \$8 MIL. (EST.)
  - CAHILL BRANCH - \$ 2 MIL. (EST.)
  - PRITCHARDVILLE - \$10.5 MIL. (EST.)
  - ALLJOY - \$12.5 MIL. (EST.)





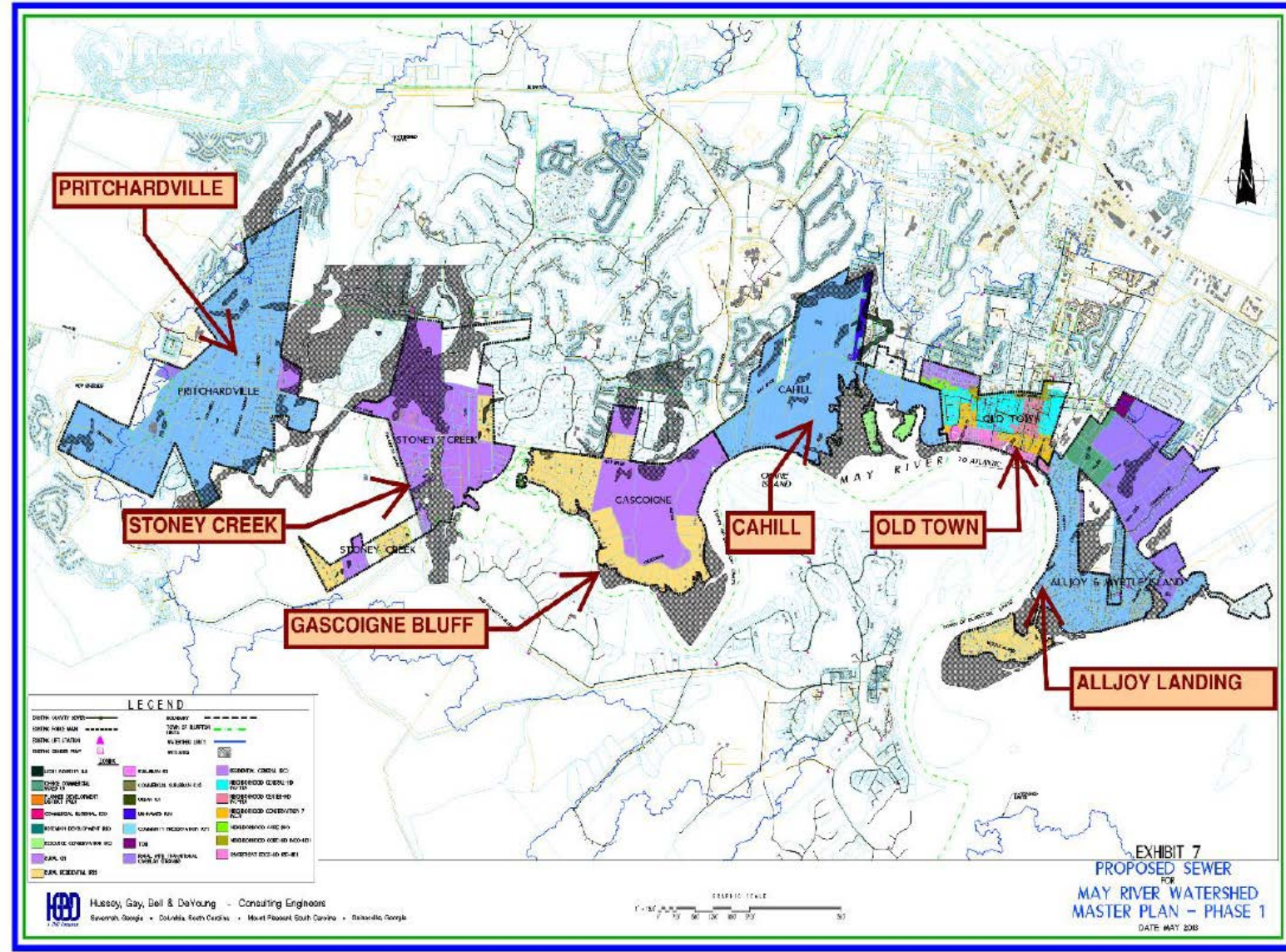


# ALLJOY FLOODING AREA



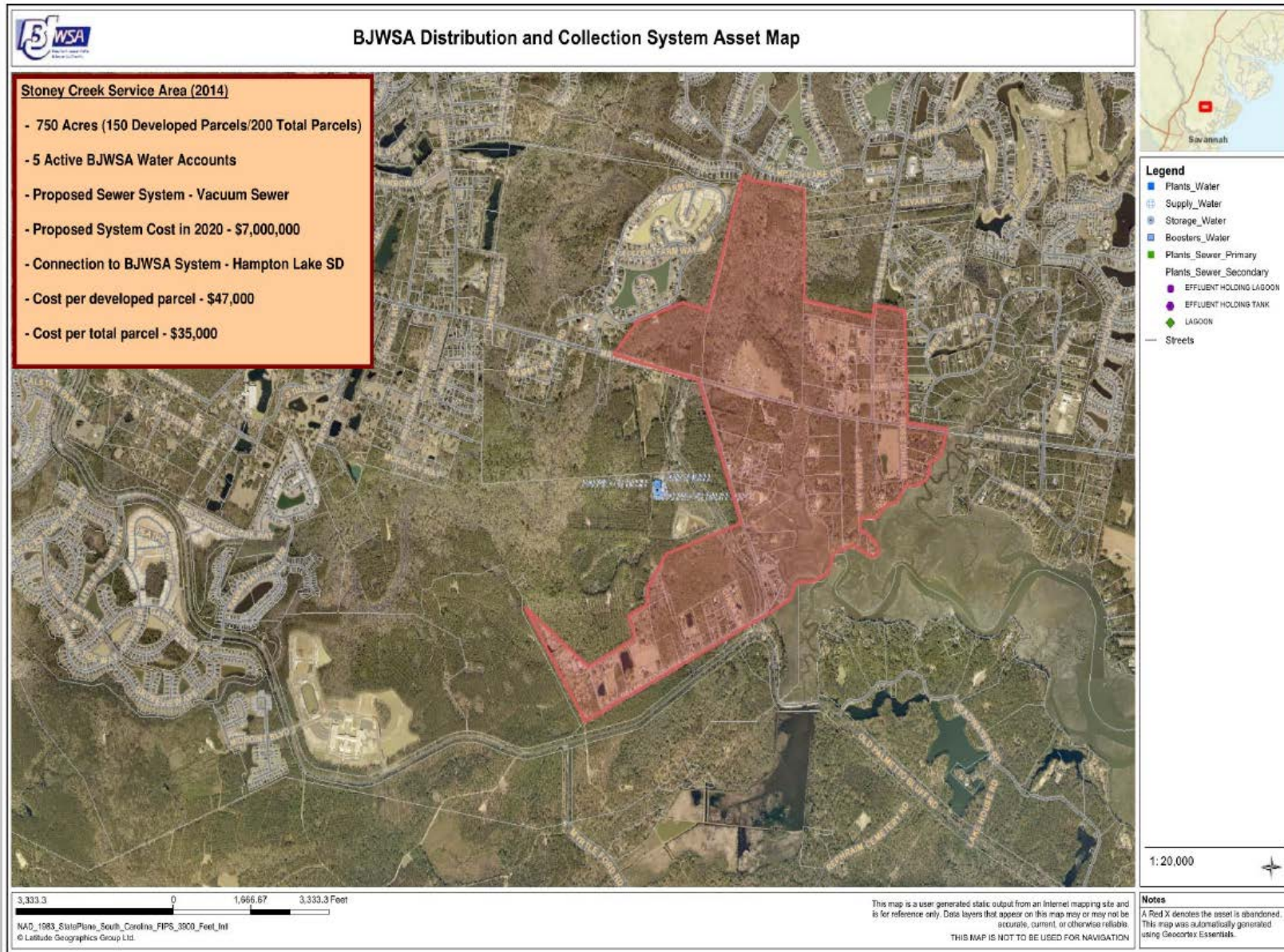


# BJWSA 2014 MAY RIVER SEWER MASTERPLAN



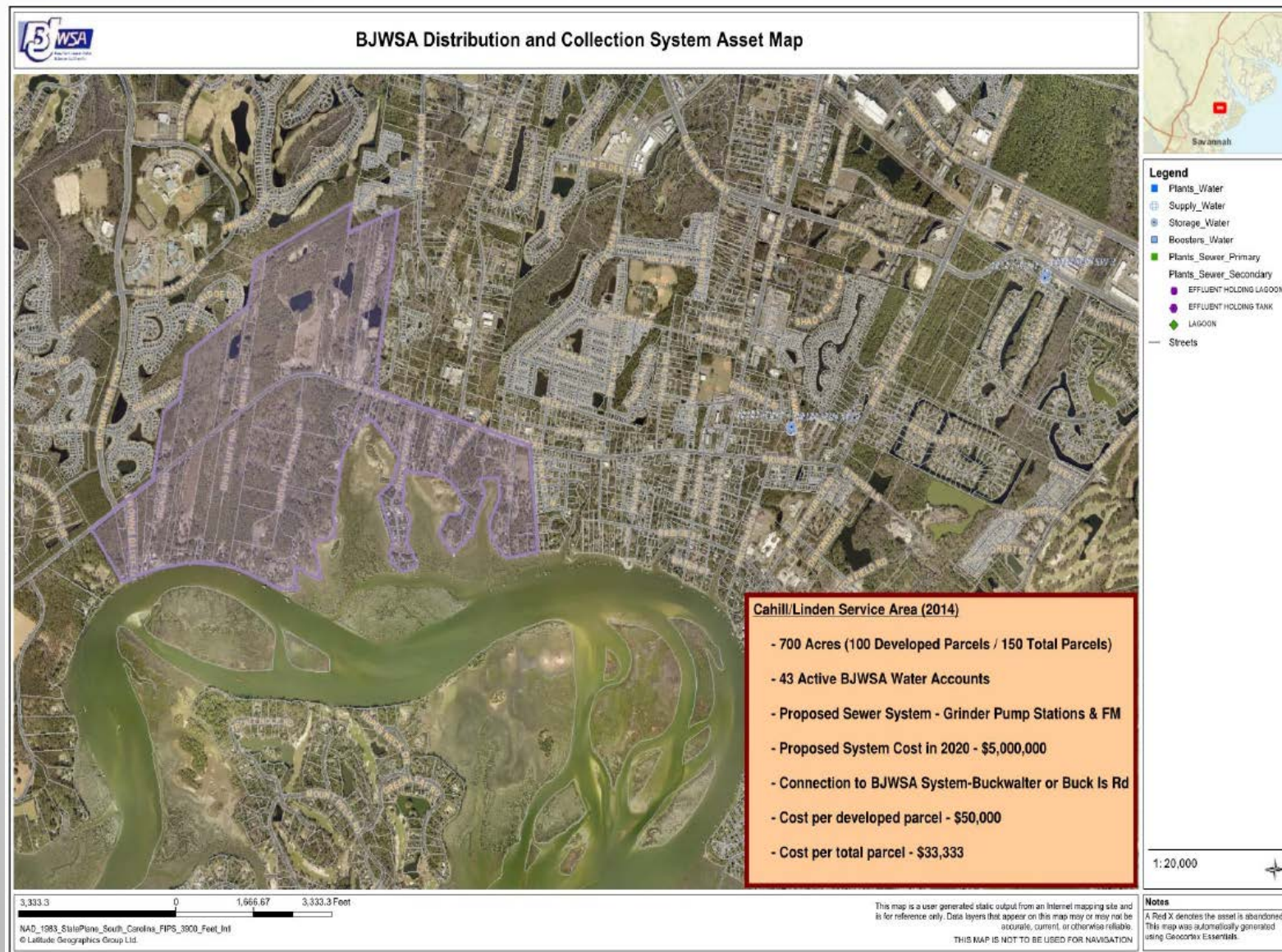


# STONEY CREEK SANITARY SEWER



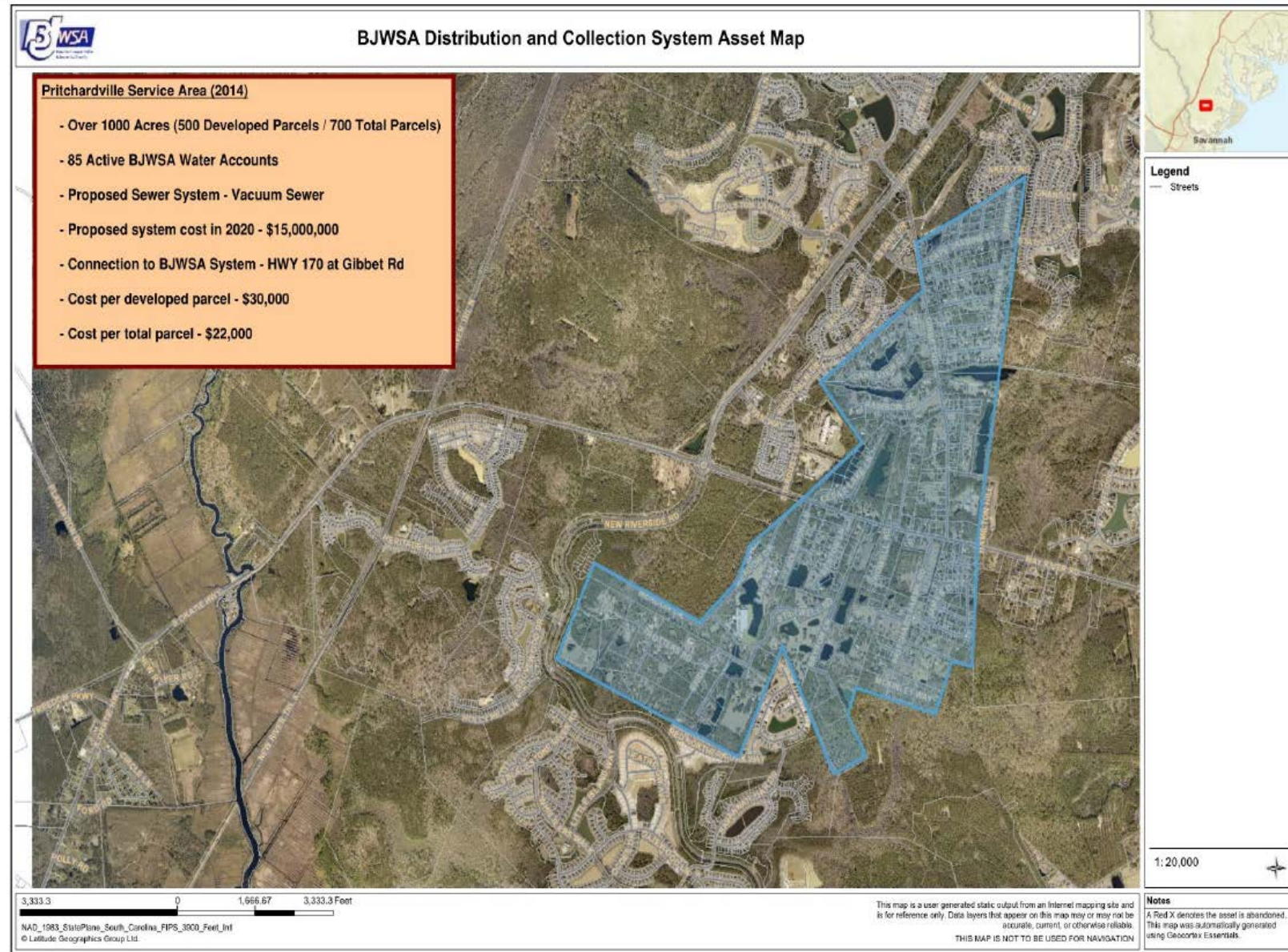


# CAHILL AREA SANITARY SEWER





# PRITCHARDVILLE SANITARY SEWER AREA



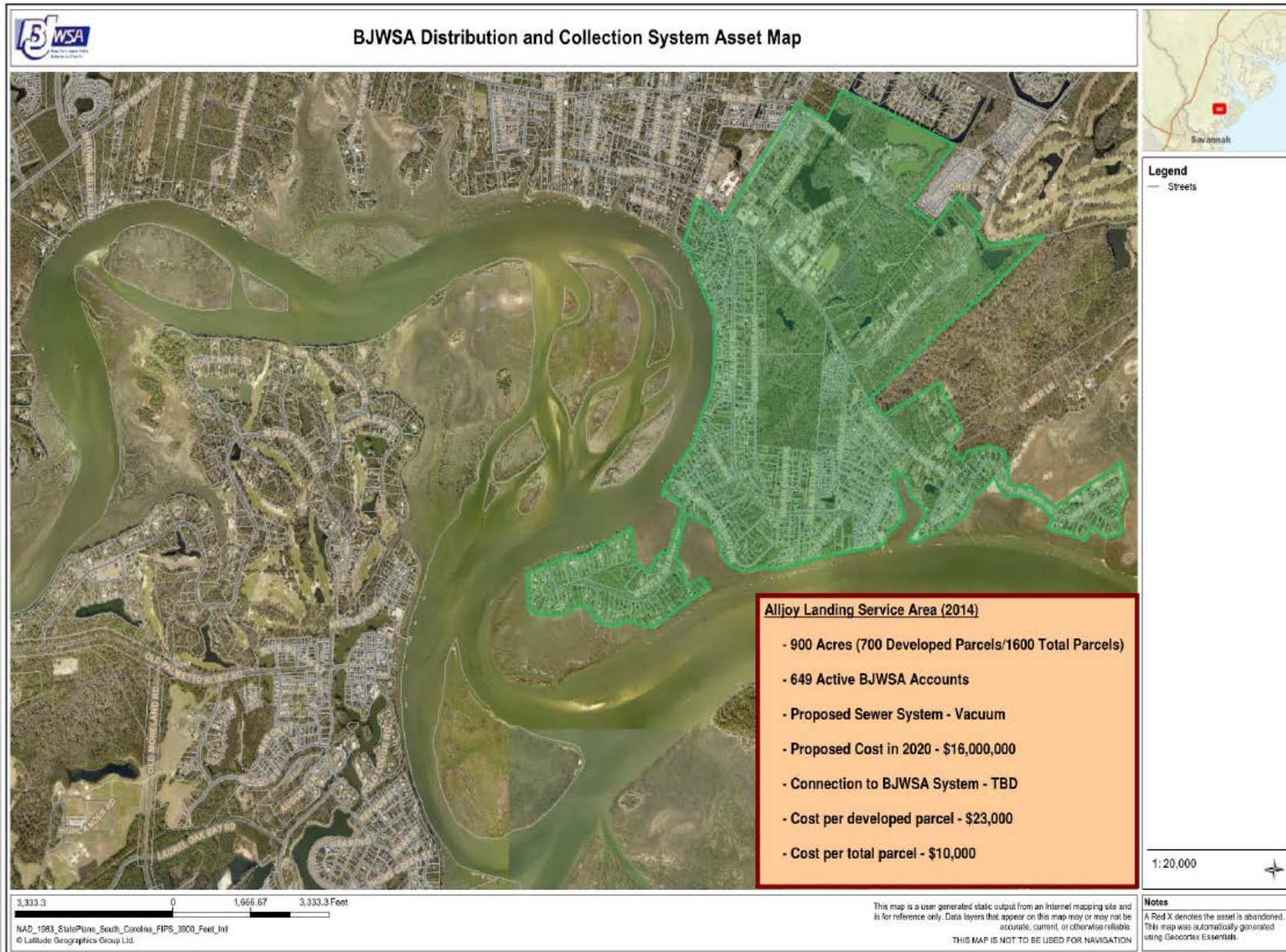


# GASCOIGNE BLUFF SANITARY SEWER





# ALLJOY SANITARY SEWER AREA



# PROPOSED BUDGET

## (BASED ON PREFERRED SWU FEE ALTERNATE)

	FY 20	FY 21	FY 22	FY 23	FY 24
Expenses					
SWU Mgt.	\$ 444,291	\$ 450,414	\$ 459,302	\$ 469,484	\$ 480,185
SWU Reg.	\$ 1,074,840	\$ 1,006,642	\$ 1,002,025	\$ 945,839	\$ 1,009,402
SWU O&M	\$ 4,045,600	\$ 4,212,944	\$ 4,311,607	\$ 4,404,818	\$ 4,456,676
Capital Equipment	\$ 758,940	\$ 657,000	\$ 855,000	\$ 639,100	\$ 415,000
Capital Projects	\$ 1,916,638	\$ 2,958,871	\$ 2,074,528	\$ 2,084,984	\$ 1,806,369
Debt Service	\$ 188,268	\$ 188,268	\$ 282,371	\$ 369,886	\$ 542,511
Total	\$ 8,428,577	\$ 9,474,138	\$ 8,984,833	\$ 8,914,111	\$ 8,710,142
Revenues					
Beginning Balance	\$ 5,876,948	\$ 4,392,755	\$ 1,913,848	\$ 4,997,173	\$ 3,221,328
Reserve	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
SWU Fees (all)	\$ 5,944,384	\$ 5,995,231	\$ 6,068,158	\$ 6,138,267	\$ 6,188,654
Bonds			\$ 5,000,000		
Total	\$ 12,821,332	\$ 11,387,986	\$ 13,982,006	\$ 12,135,440	\$ 10,409,982
Net	\$ 4,392,755	\$ 1,913,848	\$ 4,997,173	\$ 3,221,328	\$ 1,699,840



# PROPOSED SWU FEE PREFERRED ALTERNATE

Budget Alt. #1	FY 20	FY 21	FY 22	FY 23	FY 24	
Admin.	\$ 19	\$ 19	\$ 19	\$ 19	\$ 19	
IA (1)	\$ 71	\$ 71	\$ 71	\$ 71	\$ 71	
GA (2)	\$ 10	\$ 10	\$ 10	\$ 10	\$ 10	
total (3)	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100	\$ 500
Bond			\$ 5,000,000 (4)			\$ 5,000,000
(1) Based on 4,906 sq.ft. per billable unit			(4) Current CIP has an add. \$4.5mil in new projects			
(2) Based on a declining block method						
(3) Typical Tier II SFR on 2 acres or less						

# PROPOSED SWU FEE ALTERNATE #2

Budget Alt. #2	FY 20	FY 21	FY 22	FY 23	FY 24	
Admin.	\$ 12	\$ 12	\$ 19	\$ 19	\$ 19	
IA (1)	\$ 65	\$ 65	\$ 80	\$ 80	\$ 80	
GA (2)	\$ 10	\$ 10	\$ 10	\$ 10	\$ 10	
total (3)	\$ 87	\$ 87	\$ 109	\$ 109	\$ 109	\$ 501
Bond			\$ 5,000,000 (4)			\$ 5,000,000
(1) Based on 4,906 sq.ft. per billable unit			(4) Current CIP has an add. \$4.5mil in new projects			
(2) Based on a declining block method						
(3) Typical Tier II SFR on 2 acres or less						



(ASSUMES COST SHARES WITH OTHER JURISDICTIONS)

Budget Alt. #3a *	FY 20	FY 21	FY 22	FY 23	FY 24	
Admin.	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20	
IA (1)	\$ 85	\$ 85	\$ 85	\$ 85	\$ 85	
GA (2)	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20	
total (3)	\$ 125	\$ 125	\$ 125	\$ 125	\$ 125	\$ 625
Bond		\$ 2,000,000	\$ 4,000,000	\$6,000,000	\$ 7,000,000	\$ 19,000,000
(1) Based on 4,906 sq.ft. per billable unit						
(2) Based on a declining block method						
(3) Typical Tier II SFR on 2 acres or less						
* adds to CIP: Pepper Hall cost share, Alljoy Flood Control, 50% of May River San. Sewer projects						

(ASSUMES COST SHARES WITH OTHER JURISDICTIONS)

Budget Alt. #3b *	FY 20	FY 21	FY 22	FY 23	FY 24	
Admin.	\$ 12	\$ 19	\$ 19	\$ 19	\$ 20	
IA (1)	\$ 65	\$ 65	\$ 75	\$ 80	\$ 85	
GA (2)	\$ 10	\$ 10	\$ 15	\$ 20	\$ 20	
total (3)	\$ 87	\$ 94	\$ 109	\$ 119	\$ 125	\$ 534
Bond		\$ 6,000,000	\$ 6,000,000	\$7,000,000	\$ 7,000,000	\$ 26,000,000
(1) Based on 4,906 sq.ft. per billable unit						
(2) Based on a declining block method						
(3) Typical Tier II SFR on 2 acres or less						
* adds to CIP: Pepper Hall cost share, Alljoy Flood Control, 50% of May River San. Sewer projects						



Budget Alt. #4a *	FY 20	FY 21	FY 22	FY 23	FY 24	
Admin.	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20	
IA (1)	\$ 105	\$ 105	\$ 105	\$ 105	\$ 105	
GA (2)	\$ 25	\$ 25	\$ 25	\$ 25	\$ 25	
total (3)	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 750
Bond		\$ 2,000,000	\$ 5,000,000	\$10,000,000	\$12,000,000	\$ 29,000,000
(1) Based on 4,906 sq.ft. per billable unit						
(2) Based on a declining block method						
(3) Typical Tier II SFR on 2 acres or less						
* adds to CIP: Pepper Hall cost share, Alljoy Flood Control, 100% of May River San. Sewer projects						

Budget Alt. #4b *	FY 20	FY 21	FY 22	FY 23	FY 24	
Admin.	\$ 12	\$ 19	\$ 19	\$ 19	\$ 20	
IA (1)	\$ 65	\$ 65	\$ 80	\$ 80	\$ 105	
GA (2)	\$ 10	\$ 10	\$ 20	\$ 20	\$ 25	
total (3)	\$ 87	\$ 94	\$ 119	\$ 119	\$ 150	\$ 569
Bond		\$ 10,000,000	\$ 10,000,000	\$11,000,000	\$12,000,000	\$ 43,000,000
(1) Based on 4,906 sq.ft. per billable unit						
(2) Based on a declining block method						
(3) Typical Tier II SFR on 2 acres or less						
* adds to CIP: Pepper Hall cost share, Alljoy Flood Control, 100% of May River San. Sewer projects						






# RECOMMENDATIONS

- ADOPT A RATE INCREASE IN FY 20 AND REMAIN LEVEL FOR 5 YEARS, OR
- DELAY RATE INCREASE AND RAMP FEE INCREASES OVER 5 YEARS

AND

- COMMIT TO ADDING SOME OR ALL OF THE ADDITIONAL CIP PROJECTS TO PLAN, OR
  - RECOMMEND THAT COUNTY COUNCIL SEEK OTHER FUNDING SOURCES FOR THESE PROJECTS
- 

Beaufort County Stormwater Utility  
Proposed Budget for FY2020

Unaudited Projected Revenue

	FY2019 Budget	FY2020 Proposed Budget
<b>Revenue</b>		
Admin SWU Fees	777,672	1,022,876
Unincorp/CWI SWU Fees	5,092,859	5,759,669
<b>Total Revenue from SWU Fees</b>	5,870,531	6,782,545
Reimbursable Projects	-	-
Interest	2,500	148,938
Gain on Sale of Capital Assets	-	-
Cost-Share for Joint Efforts	27,694	12,914
<b>Reserve Utilization</b>		
Utility's Cash Balance	-	-
Capital Improvement Fund	2,145,569	1,484,181
Stormwater Utility	526,007	
<b>Projected Revenue Total</b>	8,572,301	8,428,578

444,291 - Admin budget  
C/S for monitoring (\$120K) & PE/O (\$90K)  
COB - \$38,228  
ToB - \$55,554  
ToHHI - \$161,798  
ToPR - \$22,109  
Unincorp BC \$376,601  
Additional Unincorp BC \$368,586

County SW Admin Fees & SWU Fees - \$5,767,411  
CWI Fees - \$737,445  
Admin fees from municipalities - \$218,099  
C/S Reg Compliance from municipalities - \$59,591

Interest on County investments  
allocated to SW

Regional SW Std Cost-Share  
\$5,556 - Jasper County  
\$1,702 - City of Hardeeville  
\$5,656 - Town of Bluffton

**Personnel**  
Superintendent; (2) Foremen; (36) crew & support; (2) Infrastruc Inspec Tech; Fiscal Tech - .2 FTE  
*New - Asst SW Mngr - .4FTE*  
*New SWI Admin Superintendent*  
*New Vac Truck Crew (EO2 & MT1)*  
**Professional Services**  
\$15K - Survey  
\$15K - Engineering Services  
\$5K - Wetland Delineation  
**Non-Professional Services**  
\$100K - Contingency for major failures repaired by contractor  
**Other**  
\$188K - Interest on bond

**Personnel**  
Director of Env Engr - .8 FTE; Business Mngr; GIS/MS4 Data Mngr; Admin Tech - .5 FTE; Fiscal Tech - .1 FTE;  
*New Asst SW Mngr - .2 FTE*

Efforts (Expenditures)

	FY2019	FY2020
<b>Administration</b>	367,672	444,291
<b>Utility Activities</b>		
UA/Annual Maintenance	3,398,972	4,193,868
UA/Drainage Enhancement	14,000	20,000
UA/Additional Studies	15,000	20,000
<i>Utility Activities Subtotal</i>	3,427,972	4,233,868
<b>Regulation</b>		
UA/Control Reg	897,830	794,840
UA/WQ Monitoring	180,000	185,000
UA/Public Information/Outreach	90,000	95,000
<i>Regulation Subtotal</i>	1,167,830	1,074,840
<b>Reserve Utilization</b>		
Capital Improvement Fund		
Okatie West/SC 170 Retrofit	5,000	-
Buckingham Plantation	276,247	-
Brewer Memorial Demo Pond	-	462,000
Salt Creek South	444,774	248,496
Shanklin Road	639,144	341,820
Sawmill Creek/Forby	560,000	-
Mossy Oaks	220,404	205,000
Camp St. Mary	-	342,000
Evergreen	-	317,322
<i>Reserve Utilization Subtotal</i>	2,145,569	1,916,638
<b>Utility Operating Fund</b>		
Capital Assets New Purchases	1,213,258	758,940
Reserve Fund	250,000	-
<b>Efforts Total</b>	8,572,301	8,428,578

Contingency

Contingency

**Personnel**  
MS4 Coord/Inspector; (4) Inspectors; Admin Tech- .5 FTE; Fiscal Tech- .1 FTE  
*New Asst SW Mngr - .4 FTE*  
*New SW Plan Reviewer/Inspector*  
**Professional Services**  
\$50,050 - Regional SW Std Development  
\$25K - MS4 Permit Update  
\$25K - PPP Plan

\$120K - USCB Lab  
\$50K - May River Watershed Plan Update  
\$15K - USCB WQ Lab Data Mining

\$90K - Carolina Clear  
\$5K - Website Maintenance

Construction delayed b/c other parties have not found the revenue for the cost share.  
Recommend discontinue planning for project

Construction

ROW

ROW

Project canceled

Cost-Share w/ CoB

**Regulatory**  
\$32.5K - Pickup for SW Plan Reveiwer  
\$10K - MS4 Data Mgmt Software Upgrade  
\$10K - (5) Weather Stations  
\$11K - (1) Handheld flowmeter  
\$20K - 17 Foot Boat  
**Infrastructure**  
\$330,000 - Replace (2) dump trucks  
\$41K - Replace Pickup Truck  
\$46K - Replace Labor Truck  
\$32.5K - Pickup for SWI Admin Superintendent  
\$41.75K - SUV for Asst SW Mngr  
\$18K - Replace 6" Pump  
\$15K - Replace Flatbed Trailer  
\$6,990 - 7x6 Dump trailer  
\$7,200 - 8.5x24 Enclosed Trailer  
\$12K - Stand on Blower  
\$75K - Wash facility  
\$50K - Land Acquisition



Beaufort County Public Works' Stormwater Utility  
FY 2018 Actuals

Revenue/Reserve Utilization

February 18, 2019	FY 2017	FY 2018			
	Actuals	Approved Budget	Actuals	Variance	
Revenue					\$732,456 - Unincorp BC \$246,054 - Municipalities
Admin SWU Fees	935,368	\$ 565,297	978,510	413,213	Budget: Includes SW Admin budget and cost-shares for PE/O & WQ Monitoring Actuals: Includes the same plus the excess from the County's \$12 admin fee
Unincorp/CWI SWU Fees	4,566,167	5,112,155	4,697,084	(415,071)	
Total Revenue from SWU Fees	5,501,534	5,677,452	5,675,593	(1,859)	
Reimbursable Projects	6,585	-	-	-	
Interest	19,226	2,500	148,938	146,438	Equip was not fully depreciated
Gain (Loss) Sale of Capital Assets	-	-	(10,836)	(10,836)	
Other	3,444	-	12,490	12,490	\$3,741 - Driveway installation \$8,749 - Permits
Cost-Share for Joint Efforts	310,595	92,200	27,622	(64,578)	
Bond	-	-	-	-	
Reserve Utilization					
Utility's Cash Balance		976,684		(976,684)	Grant funds for Okatie West Project
Capital Improvement Fund		2,140,274	616,990	(1,523,284)	
Stormwater Utility		-		-	
	\$ 5,841,385	\$ 8,889,110	\$ 6,470,798	(2,418,312)	

Efforts (Expenditures)

	FY 2017	FY 2018			
Admin	\$ 400,898	\$ 391,466	\$ 380,014	\$ (11,452)	\$4,145 - Billing Support
Regulation					Professional Services \$62,027 - Contract Plan review \$34,651 - MS4 Administration Support Note: Depreciation for equip and vehicle charged to O&M account
UA/Control Reg	378,719	426,321	446,009	19,688	USCB lab
UA/WQ Monitoring	120,000	120,000	120,000	-	
UA/Public Information/Outreach	70,000	90,000	90,000	-	Carolina Clear
Utility Activities Subtotal	568,719	636,321	656,009	19,688	
Utility Activities					\$85,244 - Interest expense
UA/Annual Maintenance	2,613,071	3,189,716	2,956,276	(233,440)	\$45,199 - Completion of SMMP Update (Change order was negotiated for no additional cost) \$12,800 - Wallace Dr Ditch \$10,000 - Workflow Management
UA/Drainage Enhancement	6,503	14,000	-	(14,000)	
UA/Additional Studies	348,385	123,050	67,999	(55,051)	
Utility Activities Subtotal	2,967,959	3,326,766	3,024,275	(302,491)	
Reserve Utilization					
Capital Improvement Fund					Construction
Hwy 278 Retrofit	20,310	-	-	-	Cost-Share to CoB for construction
Okatie West/SC 170 Retrofit	51,371	1,210,000	946,213	(263,787)	Construction delayed b/c other parties have not found the revenue for the cost share.
Battery Creek Upper Retrofit	3,515	-	205,137	205,137	
Buckingham Plantation	-	276,450	-	(276,450)	Conceptual design & surveying
Brewer Memorial Demo Pond	-	29,500	17,338	(12,162)	Design
Factory Creek Phase I	-	100,000	62,930	(37,070)	Tree mitigation
Factory Creek Phase II	-	-	12,000	12,000	Conceptual design & surveying
Salt Creek South	-	245,000	26,109	(218,891)	Design & Surveying
Shanklin Road	-	330,000	22,248	(307,752)	
Grober Hill	-	225,000	-	(225,000)	Feasibility Study
Sawmill	-	-	31,181	31,181	Grant application
Evergreen	-	-	8,118	8,118	
Reserve Utilization Subtotal	75,196	2,415,950	1,331,274	(1,084,676)	
Capital Improvement Fund					Infrastructure
Surplus (Deficit)	1,544,773	904,957	-	(904,957)	\$318,309 - Replaced (2) Dump Trucks \$162,782 - Replaced JCB Excavator \$244,943 - Sweeper \$128,736 - Bush Hog (budgeted and ordered for FY17, received in FY18) \$398,100 - Replaced Vac Truck (budgeted for FY19) \$28,790 - Appraisals, title research, and legal services (Note: Labor truck budgeted for replacement, not received until FY19)
Utility Operating Fund					
Capital Assets New Purchases	831,241	963,650	1,281,659	318,009	
Reserve Fund	250,000	250,000	250,000	-	
Surplus (Deficit)				-	
Efforts Total	\$ 5,807,546	\$ 8,889,110	\$ 5,641,572	\$ (3,247,538)	

3rd year



BEAUFORT COUNTY  
STORMWATER MANAGEMENT UTILITY BOARD AGENDA  
Wednesday, April 10, 2019  
2:00 p.m.  
Executive Conference Room, Administration Building  
Beaufort County Government Robert Smalls Complex  
100 Ribaut Road, Beaufort, South Carolina  
843.255.2805

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

1. CALL TO ORDER – 2:00 p.m.
  - A. Approval of Agenda
  - B. Approval of Minutes – March 13, 2018 ([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. Living Shorelines – Peter Kingsley-Smith, SC DNR
7. PUBLIC COMMENT
8. NEXT MEETING AGENDA
  - A. May 8, 2019 ([backup](#))
9. ADJOURNMENT