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

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

1. CALL TO ORDER – 2:00 p.m.
   A. Approval of Agenda
   B. Approval of Minutes – June 12, 2019 (backup)

2. INTRODUCTIONS

3. PUBLIC COMMENT

4. SPECIAL PRESENTATION
   A. Microplastics and Tire Wear – Dr. John Weinstein, The Citadel

5. REPORTS
   A. Utility Update – Eric Larson, P.E. (backup)
   B. Monitoring Update – Eric Larson, P.E. (backup)
   D. Stormwater Related Projects – 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)

6. UNFINISHED BUSINESS

7. NEW BUSINESS

8. PUBLIC COMMENT

9. NEXT MEETING AGENDA
   A. August 14, 2019 (backup)

10. ADJOURNMENT
Beaufort County Stormwater Management Utility Board (SWMU Board) Meeting Minutes

June 12, 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 6/21/2019

**Board Members**

**Present**
- William Bruggeman
- Marc Feinberg
- James Clark
- Patrick Mitchell
- Allyn Schneider
- Steven Andrews

**Absent**
- James Fargher

**Ex-Officio Members**

**Present**
- Neil Desai
- Kim Jones
- Van Willis

**Absent**
- Scott Liggett

**Beaufort County Staff**
- Eric Larson
- Melissa Allen
- Katie Herrera
- Daniel Rybak

**Visitors**
- Alice Howard, County Council
- Denise Parsick, Beaufort Conservation District
- York Glover, County Council
- Alan Warren, USCB
- Chris Marsh, Lowcountry Institute

1. Meeting called to order – William Bruggeman
   A. Agenda – Approved.
   B. May 8, 2019 Minutes – Approved.

2. Introductions – Completed.

3. Public Comment(s) – None.

4. Reports – Mr. Eric Larson and Mr. David Wilhelm provided a written report which is included in the posted agenda and can be accessed at:

   A. Utility Update – Eric Larson
   An updated manager report was provided to the board. In reference to item #1 (SoLoCo Regional Board), an extensive update was done at the end of May for the regional stormwater project. The model draft ordinance is ready and in the process of finishing the technical design guide. The regional stormwater design guide will be based on codes from Beaufort and Jasper County, as well as research done on communities with similarities. The commonality is the runoff reduction method, the County calls it “effective imperviousness”. The SoLoCo Regional Board Stormwater Committee is informally partnering with Nature Conservancy, as they are working with Port Royal Sound Foundation on a mapping project.
of sensitive waters. They are working to identify areas that should remain undeveloped to protect the environment and water quality. Many efforts being done by both groups were overlapping, so they are discussing commonalities to see where each other’s work may be able to help one another. The draft should be ready to go to committee members within the next week. The public draft is scheduled for July. On target for both schedule and cost.

In reference #5, a special presentation on microplastics will be presented in July.

The budget, item #6, received its first reading on Monday (June 10th) and was recommended as presented with the rate increase. Some adjustments had to be made to bond interest, changing the numbers very slightly.

Update for delinquent accounts, item #8. The letters for delinquent federal accounts should be going out soon, as staff has been doing a final review with Auditor’s office and legal. The County has been getting some good response [accounts being paid] from some of the state letters that were sent out.

In reference to item #9, the Town of Bluffton has adopted Option E rate structure for billing. All five communities are using the same stormwater utility rate structure, but the fee structures are different. Ms. Kim Jones thanked County staff for working with her.

B. Monitoring Update – Eric Larson

Dr. Alan Warren noted that the lab has been busy doing wet water samples and is caught up for the quarter. The lab also delivered their report from evaluating the Bold and Gold filter that was installed in the Okatie West Pond. They have been studying the pond over the last year to see the efficiency of the bold and gold media. They monitored the water prior to and after passing through the filter. The pond for the first time had zero fecal and zero E.coli bacteria. Water was not allowed to leave the Okatie West BMP nor did water flow into the BMP; shows the benefit of holding water and a considerably long period of time. The report shows the filter media removes total coliform bacteria, but there is concern that it does not decrease total suspended solids and turbidity and that it may contribute to heavy metals.

Mr. Larson commented that Bold and Gold is a research project and that reducing bacteria was successful. He mentioned that himself and Chris Bogdan submitted a paper to APWA for the annual conference and will be presenting results of Bold and Gold filter at the conference next week.

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

Please reference the report, no additional updates.

D. Stormwater Related Projects – Daniel Rybak

In reference to Horse Island, item #2a, staff met with reps of the community on May 14th. As a result of the meeting, the County has prepared a scope of work and gave to the consultant on May 22nd.

Item #2b, area of concern is on the southeast bound ramp where it meets 278. There is erosion under the ramp area. Working on solutions and to see if the work can be done in house or not. Staff met on site with the consultant on June 5th and he is working on a proposal to help evaluate.

Results of Alljoy meeting (item #3), only one property owner was interested in an acquisition. Staff submitted an application for a drainage study in the area to identify flooding and solutions. In response to a question about meeting participation, it was indicated that about 15-16 properties were represented. In response to Mr. Marc Feinberg’s comment regarding only one homeowner showing interest, Mr. Rybak explained there are
two applications the County was attempting. One was for acquisition and one was for the study. Mr. Larson clarified that homeowners weren’t interested in selling and moving, but they do want the drainage fixed. The study was not in the budget so the County is doing the FEMA grant and will see how to fund the land acquisition once study results are in. Since it appears to be a tidal issue and not stormwater, the County is seeking other funding sources. Alljoy is in Unincorporated Bluffton; Thomas Lawton and Shad are the area of focus.

Mr. Billy Bruggeman asked if Horse Island had been visited since the rain. Mr Rybak and Mr. Larson said no, but mentioned that it has been evaluated on two different occasions. Mr. Larson commented it is more tidally influence.

In reference to item #9, the Lady’s Island plan sea level rise and no-fill ordinance committee was held on May 23rd to define a purpose statement.

E. Professional Contracts Report – Daniel Rybak

In reference Salt Creek, staff met on site with the consult on May 31st to review and discuss design elements. The BMP on Kinghorn tract is not viable due to wetland impact. The Ramsey tract BMP is being pursued. In regards to the Shanklin Road project, the Smith tract is not viable due to wetland impact, but moving forward with Roseida Storm drain tract and Shady Oaks Beachwood tract BMP.

Brewer Memorial is at 70% design development not 30%. Staff met with the consultant, Clemson Extension, and Beaufort County Open Land Trust on May 23rd to discuss slope stabilization techniques and landscaping for the BMP and about educational signage.

F. Regional Coordination – Eric Larson

Item #1, found out from BJWSA that no projects were listed in their Capital Plan (referring to one of the extra projects in the May River area that weren’t stormwater but water quality related in the budget presentation).

Item #2, Mr. Larson and Mr. Desai are working on an agreement to cost share on a project.

Item #3, the group met on June 11th and Hilton Head has joined, the group is working together to coordinate maintenance.

G. Municipal Reports – Eric Larson

Mr. Desai shared that Mossy Oaks is well underway; clean-up efforts on Jane Way canal were substantially completed as of last week.

Mr. Van Willis shared that the Town of Port Royal has awarded the 12th Street drainage project and that the Cypress Wetlands didn’t receive grand funding, but the Town has decided to go forward with that project and will revise the scope of work.

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

Ms. Kim Jones shared a public education effort the Town of Bluffton is doing based on microbial source tracking hits. Related to dog waste reduction, they are doing a post card project. The Town purchased 900 addresses and targeting about 200 residences in this mailing. In reply to a comment about the dog bags the County gave out in the past, she explained there is a link to pledge to “scoop the poop” and the first 50 people to pledge will receive a dog bag clip dispenser through the Town.

Mr. Larson explained the process for Energov software is being developed and is about 18 months to a year out.
Mr. Larson shared an update that SCDHEC is writing a new construction related permit for SCDOT prior to beginning to write the statewide MS4 general permit.


Mr. Larson pointed out the two major projects listed in the packet. He explained the Administrative Building is the County’s internal project cost, which does not include the cost for the lining that was done. The Ulmer project was done to upgrade infrastructure to accommodate a dirt road paving project.

Ms. Alice Howard asked about Hamrick Drive and if it has been done. Mr. Larson explained the project in the packet was work that was done a while ago (not current issue).

Mr. Larson commented on the amount of calls that were received because of the rain. He indicated they are being logged, priorities, inspected and scheduled.

5. Unfinished Business – None.

6. New Business –

Ms. Kim Jones shared about Dr. Weinstein, who will be presenting at next month’s meeting. He is with the Citadel and partner with Oceans and Human Health Interactions that was recently established with a grant. Dr. Weinstein is specifically focusing on research regarding stormwater conveyance of tire tread wear that is ending up in the Charleston Harbor in grass shrimp and the risks that may pose.

Mr. Marc Feinberg asked about the stormwater runoff causing erosion under the flyover bridge and if that was bad engineering. Mr. Larson commented that Mr. Rybak was researching plans to see what was designed vs. what was built. The jersey wall has slots to let water out, drop off to ground that has no grass because there is no sun [creating erosion]. Mr. Rybak confirmed it was built per design. The County is asking the consultant to look at a solution, need to fix the source of the problem to eliminate maintenance. The only way to access is to walk down there as the lower clearance is 2-3 feet and need to determine how to access it with equipment or materials to fix. Why the County’s responsibility?; the State maintains the two through lanes and everything associated with the bridge is the County [per MOA agreement]. This is a maintenance need.

Mr. Feinberg asked if stormwater gets to sign off on capital projects, Mr. Larson indicated yes, the department is part of the review process.

7. Public Comment(s) – None.

8. Next Meeting Agenda – Approved.

Addition After #3 Public Comment: Special Presentation – Microplastics and Tire Wear – Dr. John Weinstein

9. Meeting Adjourned
Stormwater Manager’s Report for the Stormwater Utility Board Meeting

Utility Update

1. Southern Lowcountry Regional Board (SoLoCo)
   a) There was no update to the Board in June. It is anticipated the preliminary draft of the Regional Standards will be presented to the Board in August.

2. Regionalization
   a) Regional Stormwater Design Standard and Model Ordinance Project – The stakeholder committee will be meeting in mid-July to review the draft document. CWP is still working on the draft and will be distributing it to the committee members the second week of July. The project may be slightly delayed based on these dates.
   b) Regionalization of programs – Nothing new to report.

3. FY 2020 Management fee concurrence letters from the Municipalities – All municipalities have responded.

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 to the Naval Hospital is still pending.
   b) Today’s special presentation is by Dr. John Weinstein, Biology Professor and Department Head, Associate Dean for Accreditation for Swain Family School of Science and Mathematics for The Citadel, and member of the newly funded Center for Oceans and Human Health and Climate Change Interactions. His topic will be microplastics as well as tire wear in our coastal waterways and how stormwater runoff can facilitate transport of these pollutants into our waterways and his research on what potential risks that may pose.
   c) Other topics?

5. FY 2020 Budget – The budget was approved and contained the SWU fee increase. For TY 20 through TY 25, the rates will be $19 Admin. fee, $71 IA fee, and $10 GA fee. A typical single family home (Tier II on 2 acres or less) will pay $100 / year.


7. Delinquent accounts – The letters to delinquent federal accounts have been mailed out. A
second round of state agency letters went out also. We have had very good response from most state agencies. We are working through several inquiries from SCDOT on properties associated to ROW acquisition.

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

8. TY 2019 tax run – Staff continues to work on reviewing account data for the next tax run.

Monitoring Update

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

2. 2nd Quarter 2019 test results – See attached the report and location maps for the 2nd quarter samples. Quarter 2 results show both increases and decreases in E.coli and Fecal Coliform bacteria. 14 locations sampled showed decreases in bacteria counts, 11 locations showed increases in bacteria levels. All four of the Okatie River TMDL sampling locations did experience an increase in bacteria levels. Three of the locations with increases were still below acceptable levels of bacteria for the DHEC Shellfish program. Further sampling will indicate where to focus efforts in the future.

Stormwater Implementation Committee (SWIC) Report

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

Stormwater Related Projects

1. Easements – Staff is working on numerous easement requests and meets monthly to review status. Several condemnations are still being pursued using outside legal counsel.

2. Complaints – Staff continually works numerous drainage related complaints each month.
   a) Horse Island - The neighborhood has requested assistance with roadside drainage conveyance improvements, road overtopping and pond outfall upgrades. Staff met with Consultant on site June 5th to discuss/review project scope. The County has received scope and fee proposal from Consultant. Staff is working on a preliminary construction estimate based on several assumptions. County determination and approval to pursue proposed work is needed. The Stormwater Manager plans to contact the County Administrator and Council member for the area to discuss the project once costs are known.
   b) Flyover bridge preventative maintenance and deferred maintenance repairs – Staff met with Consultant on site June 5th to discuss/review project scope. Scope and fee from consultant received and submitted for County approval. Design solution is to cure erosion problem under the east bound terminus ramp.
This work will be bid out due to the complexity of the solution and traffic control needs. Crew is also working on scheduling some deferred maintenance needs.

3. Alljoy subwatershed flooding – Release of the RFQ and funding pending outcome of approval/denial of FEMA Hazard Mitigation Grant Application. The Hazard Mitigation Grant funding application was submitted to South Carolina Emergency Management Division on May 31, 2019 and the County is waiting for determination of acceptance/award.

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) – Construction on-going and estimated to be 50% complete.

5. Factory Creek Watershed Regional Detention Basin “Phase II” (Design Cost = $63,390, Tree Mitigation Cost is pending, Construction Cost by the Developer) – Construction on-going and estimated to be 80% complete.

6. Graves Property / Pepper Hall Public / private partnership – No additional update at this time.

7. Whitehall property purchase – No additional update at this time.

8. US 278 “super street” widening on Jenkins Island (Windmill Harbor area) – No update at this time.

9. Lady’s Island Plan, Sea Level Rise, and “no-fill” ordinance – The committee met June 18th to continue to define a purpose statement. Stormwater staff was unable to attend the meeting; therefore, there is no update at this time.

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 – Consultant proceeding with 30% design development drawings. Met on-site with Consultant May 31st to formalize final design direction. Salt Creek – Ramsey Tract BMP being pursued and in 30% design development. Shanklin - Roseida SD Tract BMP and Shady Oaks/Beachwood Tract BMPs being pursued and in 30% design development.
   b) Brewer Memorial – 70% design development drawings being developed. Staff is considering a slight change in scope to make the small pond a restored freshwater wetland.

2. Evergreen Regional Pond 319 grant project – (Design=$89,286, Construction=$590,000, Grant=$229,124) – Received 30% design drawings from consultant, geotechnical
investigation/report completed, survey and wetland delineation complete. These items were reviewed and County review comments presented to Consultant. USACE Nationwide permit completed and submitted to USACE. Consultant advised to pursue 70% design development drawings and obtain required permits for construction. Quarterly reporting for the grant was submitted July 1, 2019.

Regional Coordination

1. Town of Bluffton and Beaufort County Joint meetings on Sanitary Sewer in the May River watershed – Staff from the County and Town will be meeting with BJWSA staff July 18, 2019 to discuss status of the various projects in the plan.

2. Mossy Oaks Task Force – (Design $20,404, Construction $205,000; County portions only). See Municipal Reports.

3. Charleston Area MS4 managers group – This group did not meet this month.

4. Bluffton Ditch Task Force – This group did not meet this month.

5. May River watershed modeling – See municipal reports for more information.

6. Port Royal Sound Conservation Working Group – Met June 14th with representatives of the Nature Conservancy. At the meeting, they discussed common points of interest and means to protect water quality and land in the Port Royal Sound region as we continue to grow and prosper as a community. They plan to meet again in 2 months and discuss: Resolution/agreement to support land protection; Review funding opportunities to finance land protection; Review comprehensive plan and related ordinances for compatibility with land protection goals; and Establish goals and leadership for this initiative.

Municipal Reports

1. Town of Hilton Head Island (From Jeff Netzinger, Stormwater Manager and Brian Eber, MS4 Coordinator)
   i. No information was available at the time of this report.

2. Town of Bluffton (From Kim Jones, Watershed Management Division Director)
   i. See attached report.

3. City of Beaufort (From Neil Desai, Asst. Public Works Director)
   i. No information was available at the time of this report.
   ii. Mossy Oak Task Force provided a public update on July 10th.

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

MS4 Report

1. Plan Review – See the attached chart for Beaufort County Stormwater staff plan review workload for the past 12 months.

2. Stormwater Permits – See the attached chart for Beaufort County Stormwater permits issued for the past 12 months.

3. Monthly Inspection summary - See the attached chart for Beaufort County Stormwater staff inspection, complaint, IDDE, and violations summary for the past 12 months.

4. Weather Station Data. See attached chart.

5. Public Education – Lowcountry Stormwater Partners (LSP), via Carolina Clear, continues to work on several initiatives towards public education and outreach. No additional updates are available at this time.

6. Energov permitting software – Stormwater department has completed all necessary documentation required by the Energov team to start developing the work flow for the software implementation.

7. MS4 Statewide General permit – No update at this time.

8. Statewide General permit for Construction – No update at this time.
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**Notes:**
- M: Medium Flow Observed at sample site
- L: Low Flow Observed at sample site
- H: High Flow Observed at sample site
- NS: No Sample Collected
- DRY: DRY
- WQ: Water Quality
- MRR02: MRR02
- WQ: Water Quality
- SPECIAL: SPECIAL
- TMDL: TMDL
- MOA: MOA
- SHARED: SHARED

**SHARED** sites in other jurisdictions that BC sampling

**Further details for notes are addressed in comments section.**

**WQ**

**MRR02**

**MOA-COB**

**MOA-TOPR**

**MOA-TOB**

**SHARED-TOB**

**WQ**

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Notes: Further details for notes are addressed in comments section.
NS = No Sample Collected
NF = No Flow Observed at sample site
NW = No Water Observed at sample site
ND = No Data recorded

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**Notes:**
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- NF = No Flow Observed at sample site
- NW = No Water Observed at sample site
- ND = No Data recorded

**Comments:**
- Metals-Copper (Cu) mg/L
- Metals-Lead (Pb) mg/L
- Metals-Zinc (Zn) mg/L
- Metals-Mercury (Hg) mg/L

**Date of Collection**
- Beaufort County Monitoring 2019
- Metals: Copper (Cu), Lead (Pb), Zinc (Zn), Mercury (Hg)
- Remarks: Total Nitrogen (TN), Total Phosphorus (T-P)
### May River Headwaters Stations

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**NS** = No Sample  
AS = Additional Samples  
** = Town staff calculations utilizing DHEC statistics
"Monitoring Stations are required to have both Geometric Mean values of 14.0 Most Probable Number or below and 90th percentile values of 43.0 Most Probable Number or below to be classified as APPROVED by SC Department of Health & Environmental Control for shellfish harvesting."
<table>
<thead>
<tr>
<th>ACTIVITY - POLICY</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>May River Watershed Action Plan Update</td>
<td>Contract to McCormick Taylor to complete MRWAP Update - Water Quality Model, current project assessment, and proposed new projects was approved by Council on 5/14/19. <strong>Notice to Proceed issued 6/20/19.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACTIVITY - PROJECTS</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanitary Sewer Extension</td>
<td><strong>Completed Buck Island/Simmonsville Road (BIS) Phases I, II, III, IV; Toy Fields; and Jason/Able.</strong> Six phases of sewer extension are proposed in the 5-year Capital Improvement Program. Current project updates are included in Engineering Consent Agenda under &quot;Sewer &amp; Water.&quot;</td>
</tr>
<tr>
<td>May River 319 Grant Phase 1 - New Riverside Pond (Grant award of $483,500 in 2009)</td>
<td><strong>Completed in 2013.</strong></td>
</tr>
<tr>
<td>May River 319 Grant Phase 2 - Pine Ridge (Grant award of $290,000 in 2011)</td>
<td><strong>Completed in 2016.</strong></td>
</tr>
<tr>
<td>May River 319 Grant Phase 3 - Town Hall Parking Retrofit (Grant award of $231,350 in 2016)</td>
<td><strong>Completed 2019.</strong> Open House ceremony held 5/29/19.</td>
</tr>
<tr>
<td>Stoney Creek Wetlands Restoration: Preliminary Design Phase</td>
<td>Project on hold following Council direction on 5/31/17.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACTIVITY - FINANCIAL</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Funding Opportunities</td>
<td>Exploring partnership opportunities with BJWSA for future sewer phases. Council unanimously agreed on 5/14/19 to change the SWU Fee Rate Structure to Option E at $98 for tax year 2019. Staff submitted a $307,345.00, 319 grant proposal in support of 37 sewer lateral connections for Posey’s Court and Historic District Phases 1 and 2 on 5/22/19. Notification is anticipated by 6/30/19.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Stormwater Infrastructure Inventory Collection Status</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2019 YTD Collection Totals</td>
<td>2,925</td>
</tr>
<tr>
<td>FY 2018 Collection Totals</td>
<td>3,777</td>
</tr>
<tr>
<td>FY 2017 Collection Totals</td>
<td>3,874</td>
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</table>
MS4 Minimum Control Measure #3 – IDDE:
Fecal Coliform Concentrations Trend Map

<table>
<thead>
<tr>
<th>USCB Water Quality Samples</th>
<th>Microbial Source Tracking Samples</th>
<th>MS4 Quarterly Samples Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2019 YTD Totals</td>
<td>280</td>
<td>187</td>
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<tr>
<td>FY 2018 Totals</td>
<td>216</td>
<td>217</td>
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<tr>
<td>FY 2017 Totals</td>
<td>307</td>
<td>179</td>
</tr>
<tr>
<td>FY 2016 Totals</td>
<td>668</td>
<td>11</td>
</tr>
</tbody>
</table>

- 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) Human Sources Trend Map

Microbial Source Tracking Trend Map
Headwaters May River

Microbial Source Tracking Trend Map
Old Town May River

MSTSamplingSites
Positive Hits
0 1 2 3 >5
Times Sampled
1 - 3 4 - 6 7 - 10 >10
Size of dot correlates to # of times the site has been sampled.

Drainage Flow Lines

Updated: 6/19/2018
MS4 Minimum Control Measure #3 – IDDE: Microbial Source Tracking (MST) All Sources Trend Map

Microbial Sources Detected Within the May River
2017 - 2019

Town of Bluffton
Beaufort County, SC
MS4 Minimum Control Measure #3 – IDDE: Illicit Discharge Investigations

<table>
<thead>
<tr>
<th></th>
<th>Number of Illicit Discharge Investigations</th>
<th>Number of Notices To Comply Issued</th>
<th>Number of Notices of Violation Issued</th>
<th>Number of NOV Enforcement Actions</th>
<th>Number of Meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2019 YTD Totals</td>
<td>38</td>
<td>20</td>
<td>3</td>
<td>1</td>
<td>61</td>
</tr>
<tr>
<td>FY 2018 Totals</td>
<td>48</td>
<td>20</td>
<td>4</td>
<td>2</td>
<td>60</td>
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<tr>
<td>FY 2017 Totals</td>
<td>50</td>
<td>19</td>
<td>8</td>
<td>13</td>
<td>67</td>
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</tbody>
</table>
MS4 Minimum Control Measure #4 - Construction Site Stormwater Runoff Control

<table>
<thead>
<tr>
<th></th>
<th>FY 2019 YTD Totals</th>
<th>FY 2018 Totals</th>
<th>FY 2017 Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Sediment &amp; Erosion Control Inspections</td>
<td>1,688</td>
<td>1,504</td>
<td>1,219</td>
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<tr>
<td>Number of Inspections Passed</td>
<td>1,384</td>
<td>1,159</td>
<td>862</td>
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<tr>
<td>Number of NTC Issued</td>
<td>254</td>
<td>300</td>
<td>233</td>
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<tr>
<td>Number of NOVs Issued</td>
<td>72</td>
<td>83</td>
<td>58</td>
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<tr>
<td>Number of NOV Enforcement Actions</td>
<td>7</td>
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<td>10</td>
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<tr>
<td>Number of E&amp;SC Meetings</td>
<td>403</td>
<td>499</td>
<td>237</td>
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6/19/2019
### MS4 Minimum Control Measure #5

**Stormwater Plan Review & Related Activity**

<table>
<thead>
<tr>
<th></th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>Total Plan Review Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan Reviews/MS4 Reviews</td>
<td>208</td>
<td>242</td>
<td>253</td>
<td>53</td>
<td>47</td>
<td>37</td>
<td>27</td>
<td>63</td>
<td>88</td>
<td>88</td>
<td>7</td>
<td>23</td>
<td>1,040 Hrs.</td>
</tr>
<tr>
<td>Sureties</td>
<td>52</td>
<td>59</td>
<td>62</td>
<td>53</td>
<td>47</td>
<td>37</td>
<td>27</td>
<td>63</td>
<td>88</td>
<td>88</td>
<td>7</td>
<td>23</td>
<td>1,210 Hrs.</td>
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<tr>
<td>Certificate of Construction Compliance Inspections</td>
<td>53</td>
<td>50</td>
<td>96</td>
<td>47</td>
<td>45</td>
<td>7</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,265 Hrs.</td>
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<tr>
<td>Pre-Construction Meetings</td>
<td>47</td>
<td>32</td>
<td>47</td>
<td>37</td>
<td>45</td>
<td>7</td>
<td>23</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Pre-Clearing Inspections</td>
<td>32</td>
<td>32</td>
<td>47</td>
<td>27</td>
<td>63</td>
<td>88</td>
<td>88</td>
<td>1,040 Hrs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-Constructions BMP Inspections</td>
<td>88</td>
<td>88</td>
<td>88</td>
<td>63</td>
<td>1,040 Hrs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-Application Meetings</td>
<td>7</td>
<td>23</td>
<td>23</td>
<td>63</td>
<td>1,040 Hrs.</td>
<td></td>
<td></td>
<td></td>
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</table>
Citizen Drainage Concern Heat Map
(Dispatch, Maintenance and Inspections)

<table>
<thead>
<tr>
<th></th>
<th>Number of Drainage Concerns Investigated</th>
<th>Number of Meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2019 YTD Totals</td>
<td>54</td>
<td>59</td>
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<tr>
<td>FY 2018 Totals</td>
<td>48</td>
<td>75</td>
</tr>
<tr>
<td>FY 2017 Totals</td>
<td>72</td>
<td>80</td>
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</table>

6/19/2019
Citizen Request for Watershed Mngt. Services & Activities Map

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Number of Citizen Requests Investigated</th>
<th>Number of Meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2019 YTD</td>
<td>49</td>
<td>52</td>
</tr>
<tr>
<td>FY 2018 Totals</td>
<td>75</td>
<td>79</td>
</tr>
<tr>
<td>FY 2017 Totals</td>
<td>53</td>
<td>82</td>
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</tbody>
</table>

6/19/2019
Septic System Maintenance Assistance

Number of Septic Systems Maintained

<table>
<thead>
<tr>
<th>Month</th>
<th>Number of Septic Systems Maintained</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2019 YTD Totals</td>
<td>4</td>
</tr>
<tr>
<td>FY 2018 Totals</td>
<td>16</td>
</tr>
<tr>
<td>FY 2017 Totals</td>
<td>18</td>
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</tbody>
</table>
### Development Permit (COC's)

<table>
<thead>
<tr>
<th>TYPE</th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>Last 12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development Permit (COC's)</td>
<td>9</td>
<td>2</td>
<td>21</td>
<td>11</td>
<td>1</td>
<td>12</td>
<td>20</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>9</td>
<td>12</td>
<td>44</td>
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<td>Plan Review</td>
<td>5</td>
<td>9</td>
<td>9</td>
<td>15</td>
<td>7</td>
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<td>10</td>
<td>8</td>
<td>7</td>
<td>11</td>
<td>17</td>
<td>81</td>
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<tr>
<td>Permits Issued</td>
<td>45</td>
<td>33</td>
<td>31</td>
<td>33</td>
<td>18</td>
<td>25</td>
<td>38</td>
<td>36</td>
<td>42</td>
<td>34</td>
<td>40</td>
<td>20</td>
<td>160</td>
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<tr>
<td>TYPE</td>
<td>July</td>
<td>August</td>
<td>September</td>
<td>October</td>
<td>November</td>
<td>December</td>
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<td>May</td>
<td>June</td>
<td>Last 12 Months</td>
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<tr>
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<td>-------</td>
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<td>------</td>
<td>----------------</td>
</tr>
<tr>
<td>Inspections Performed</td>
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<td>271</td>
<td>255</td>
<td>252</td>
<td>303</td>
<td>409</td>
<td>498</td>
<td>307</td>
<td>394</td>
<td>305</td>
<td>369</td>
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<td>Drainage Complaints</td>
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<td>3</td>
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<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td>IDDE Issues Investigated</td>
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<td>2</td>
<td>1</td>
<td>2</td>
<td>0</td>
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<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Violations</td>
<td>10</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>0</td>
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<td>10</td>
<td>21</td>
<td>9</td>
<td>17</td>
<td>14</td>
<td>52</td>
</tr>
</tbody>
</table>
Beaufort County Weather Stations
Daily Rainfall Amounts - June 2019

Monthly Totals (inches)

St. Helena: 11.48
Sheldon: 15.63

***Due to technical malfunctions, data unavailable for remaining three stations***
MEMORANDUM

Date: July 10, 2019

To: Stormwater Management Utility Board

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

Re: Maintenance Project Report

This report will cover four major projects and nine minor projects. The Project Summary Reports are attached.

Major Project:

- **Dogwood Street/Magnolia Street – Port Royal Island (SWUD 6):** This project improved 2,898 feet of drainage system. The scope of work included grubbing and clearing 925 feet of workshelf, cleaning out 2,273 feet of channel, installing 3 access pipes, 1 access gate, jetting 3 crossline pipes and 2 driveway pipes. The total cost was $30,445.92.

- **Old Distant Island Road – Lady’s Island (SWUD 7):** This project improved 514 feet of drainage system. The scope of work included grubbing and clearing 240 feet of workshelf, cleaning out 240 feet of channel, upsizing 1 crossline pipe, installing 1 access pipe, 244 feet of roadside pipe, rip rap and hydroseeding for erosion control. The total cost was $26,622.99.

- **Mitchell Road – Sheldon (SWUD 5):** This project improved 4,199 feet of drainage system. The scope of work included grubbing and clearing 20 feet of workshelf, cleaning out 3,429 feet of channel, 750 feet of roadside ditch, jetting 2 crossline pipes, 1 driveway pipe, replacing 1 crossline pipe and installing rip rap for erosion control. The total cost was $24,283.90.

- **Chesterfield Subdivision – Port Royal Island (SWUD 6):** This project improved 5,067 feet of drainage system. The scope of work included cleaning out 4,735 feet of roadside ditch, 2 catch basins, jetting 39 driveway pipes, 2 crossline pipes, 332 feet of roadside pipe and hydroseeding for erosion control. The total cost was $21,354.01.

Minor or Routine Projects:

- **Hummingbird Lane – Bluffton (SWUD 4):** This project improved 3,379 feet of drainage system. The scope of work included cleaning out 3,379 feet of roadside ditch and hydroseeding for erosion control. The total cost was $14,890.06.

- **Varsity Street/Alumni Road – Lady’s Island (SWUD 7):** This project improved 3,625 feet drainage system. The scope of work included cleaning out 3,625 feet of roadside ditch, jetting 21 driveway pipes, 4 crossline pipes, 1 access pipe and handseeding for erosion control. The total cost was $14,748.66.
• **Bellinger Bluff Road Channel – Bluffton (SWUD 4):** This project improved 810 feet of drainage system. The scope of work included grubbing and clearing 200 feet workshelf, constructing 10 feet of swale, 400 feet of channel, reconstructing 200 feet of channel, installing 1 access pipe and rip rap for erosion control. The total cost was $12,852.86.

• **Katie Miller/Cesar Place – Hilton Head (SWUD 3):** This project improved 2,915 feet of drainage system. The scope of work included cleaning out 2,915 feet of roadside ditch and hydroseeding for erosion control. The total cost was $12,660.91.

• **Pinewood Circle – Port Royal Island (SWUD 6):** This project improved 2,562 feet of drainage system. The scope of work included cleaning out 2,562 feet of roadside ditch, jetting 48 driveway pipes, 2 crossline pipes and handseeding for erosion control. The total cost was $8,897.31.

• **Alljoy Area – Bluffton (SWUD 4):** This project improved 561 feet of drainage system. The scope of work included cleaning out 461 feet of roadside ditch, jetting 100 feet of channel pipe and 2 crossline pipes. The total cost was $6,049.35.

• **Smith Road – Port Royal Island (SWUD 6):** This project improved 2,040 feet of drainage system. The scope of work included cleaning out 1,735 feet of channel and 305 feet of roadside ditch, jetting 5 driveway pipes and 2 crossline pipes. The total cost was $4,940.30.

• **Huron Drive – Port Royal Island (SWUD 6):** This project improved 182 feet of drainage system. The scope of work included cleaning out 182 feet of roadside ditch, installing 1 catch basin, repairing a washout and hydroseeding for erosion control. The total cost was $4,272.21.

• **Burton Wells Road/Middleton Recreation Dr – Port Royal Island (SWUD 8):** This project improved 510 feet of drainage system. The scope of work included cleaning out 510 feet of roadside ditch. The total cost was $1,417.76.
**Project Summary:** Dogwood Street, Magnolia Street
Baynard Street and Morning Mist Drive

**Narrative Description of Project:**

### 2018-528 / Dogwood Street and Magnolia Street Street

<table>
<thead>
<tr>
<th>Activity</th>
<th>Search</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routine/Preventive Maintenance</td>
<td></td>
<td>10/16/17-02/18/18</td>
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<table>
<thead>
<tr>
<th>Project Summary</th>
<th></th>
<th></th>
</tr>
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<tbody>
<tr>
<td>Stormwater Infrastructure</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>2018-528 / Dogwood Street and Magnolia Street Sub Total</th>
<th>Labor Hours</th>
<th>Labor Cost</th>
<th>Equipment Cost</th>
<th>Material Cost</th>
<th>Contractor Cost</th>
<th>Indirect Labor</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGI / Access Gate - Installed</td>
<td>10.0</td>
<td>$201.60</td>
<td>$9.00</td>
<td>$118.59</td>
<td>$0.00</td>
<td>$94.13</td>
<td>$423.32</td>
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<tr>
<td>APINS / Access pipe - installed</td>
<td>40.0</td>
<td>$846.50</td>
<td>$346.63</td>
<td>$213.78</td>
<td>$0.00</td>
<td>$390.90</td>
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<tr>
<td>AUDIT / Audit Project</td>
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<td>$0.00</td>
<td>$0.00</td>
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<tr>
<td>CCO / Channel - cleaned out</td>
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<td>$3,295.22</td>
<td>$818.10</td>
<td>$153.99</td>
<td>$0.00</td>
<td>$1,563.46</td>
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<tr>
<td>CLPJT / Crossline Pipe - Jetted</td>
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<td>$7,051.97</td>
<td>$30,445.92</td>
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</table>
Installed (1) access pipe. Cleaned out 100 LF of channel.

Cleaned out 348 LF of channel.
Grubbed and cleared 170 LF of workshelf. Cleaned out 535 LF of channel.

Jetted (2) crossline pipes.

Cleaned out 160 LF of channel.

Jetted (1) crossline pipe.

Jetted (2) driveway pipes.

Jetted (2) crossline pipes.

Project: Dogwood Street, Magnolia Street, Baynard Road and Morning Mist Drive Map #2

Activity: Routine/Preventive Maintenance

Project #: 2018-528

Township/SW Dist: Port Royal Island/6

Completed: February 2018

Prepared By: BC Stormwater Management Utility

Date Print: 04/09/19

File: C:\project summaries map/Dogwood Street and Magnolia Street Map #2_2018-528
Legend

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

Project: Dogwood Street, Magnolia Street, Baynard Road and Morning Mist Drive Map #3
Activity: Routine/Preventive Maintenance
Project #: 2018-528
Township/SW Dist: Port Royal Island/6
Completed: February 2018

Prepared By: BC Stormwater Management Utility
Date Print: 04/09/19
File: C:\project summaries map/Dogwood Street and Magnolia Street Map #3_2018-528

- Installed (1) access pipe. Handseeded for erosion control.
- Cleaned out 1,000 LF of channel.
- Grubbed and cleared 75 LF of workshelf.
- Grubbed and cleared 450 LF of workshelf.
- Cleaned out 1,000 LF of channel.
Grubbed and cleared 100 LF of workshelf.

Grubbed and cleared 130 LF of workshelf. Cleared out 130 LF of channel.

Installed (1) access pipe and (1) access gate. Handseeded for erosion control.

Prepared By: BC Stormwater Management Utility
Date Print: 04/09/19
File: C:\project summaries map/Dogwood Street and Magnolia Street Map #4_2018-528
Project Summary: Old Distant Island Road

Narrative Description of Project:

| Activity: Drainage Improvement | Duration: 02/27/19-04/03/19 |

<table>
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<th>2019-552 / Old Distant Island Road</th>
<th>Labor Hours</th>
<th>Labor Cost</th>
<th>Equipment Cost</th>
<th>Material Cost</th>
<th>Contractor Cost</th>
<th>Indirect Labor Cost</th>
<th>Total Cost</th>
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<td>$0.00</td>
<td>$0.00</td>
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</table>

Before | During | After

Before | During | After
Installed (1) access pipe. Hydroseeded for erosion control.
Project: Old Distant Island Road
Map #1

Activity: Drainage Improvement

Project #: 2019-552

Township/SW Dist: Lady's Island/7

Completed: April 2019

Prepared By: BC Stormwater Management Utility
Date Print: 05/07/19
File:C:\project summaries map/Old Distant Island Road Map #1_2019-552

Legend

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

Installed 244 LF of roadside pipe.

Upsized (1) crossline pipe. Installed rip rap for erosion control.

Grubbed and cleared 240 LF of workshelf. Cleaned out 240 LF of channel.
**Project Summary:** Mitchell Road

**Activity:** Routine/Preventive Maintenance

**Duration:** 02/22/18-04/17/19

**Narrative Description of Project:**

### 2018-538 / Mitchell Road

<table>
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<tr>
<th>Activity</th>
<th>Labor Hours</th>
<th>Labor Cost</th>
<th>Equipment Cost</th>
<th>Material Cost</th>
<th>Contractor Cost</th>
<th>Indirect Labor</th>
<th>Total Cost</th>
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<td>$0.00</td>
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<td>$0.00</td>
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<tr>
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<td><strong>Grand Total</strong></td>
<td><strong>502.5</strong></td>
<td><strong>$11,055.85</strong></td>
<td><strong>$3,490.46</strong></td>
<td><strong>$3,130.86</strong></td>
<td><strong>$0.00</strong></td>
<td><strong>$6,606.73</strong></td>
<td><strong>$24,283.90</strong></td>
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</table>
Replaced (1) crossline pipe. Installed rip rap for erosion control.

Jetted (1) driveway pipe.
Jetted (2) crossline pipes.

Cleaned out 486 LF of roadside ditch.
Cleaned out 1,390 LF of channel.

Cleaned out 645 LF of channel.

Cleaned out 365 LF of channel.

Legend

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

Project: Mitchell Road Map #3
Activity: Routine/Preventive Maintenance
Project #: 2018-538
Township/SW Dist: Sheldon/5
Completed: April 2019

Prepared By: BC Stormwater Management Utility
Date Print: 06/05/19
File:C:\project summaries map/Mitchell Road Map #3_2018-538
Grubbed and cleared 20 LF of workshelf.

Cleaned out 1,029 LF of channel.

Cleaned out 264 LF of roadside ditch.
**Project Summary:** Chesterfield Subdivision-Chesterfield Lake Drive and Chesterfield Drive

**Activity:** Routine/Preventive Maintenance

**Duration:** 01/08/19-02/07/19

**Narrative Description of Project:**
Project improved 5,067 L.F. of drainage system. Cleaned out 4,735 L.F. of roadside ditch and (2) catch basins. Jetted (39) driveway pipes, (2) crossline pipes and 332 L.F. of roadside pipe. Hydroseeded for erosion control.

### 2019-543 / Chesterfield Drive Subdivision

<table>
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<th>Description</th>
<th>Labor Hours</th>
<th>Labor Cost</th>
<th>Equipment Cost</th>
<th>Material Cost</th>
<th>Contractor Cost</th>
<th>Indirect Labor</th>
<th>Total Cost</th>
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<td><strong>Grand Total</strong></td>
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<td><strong>$0.00</strong></td>
<td><strong>$5,640.41</strong></td>
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</table>
Chesterfield Subdivision - Chesterfield Drive Map #1

Activity: Routine/Preventive Maintenance

Project #: 2019-543

Township/SW Dist: Port Royal Island/6

Completed: February 2019

Legend

Drainage Type

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

Prepared By: BC Stormwater Management Utility
Date Print: 06/13/19
File: C:\es project summaries map/Chesterfield S/D- Chesterfield Drive Map #1_2019-543

Jetted (39) driveway pipes.

Cleaned out 212 LF of roadside ditch. Jetted (1) crossline pipe.

Cleaned out 151 LF of roadside ditch. Jetted 120 LF of roadside pipe.

Jetted (1) crossline pipe.

Jetted (1) crossline pipe.
Cleaned out 177 LF of roadside ditch and (1) catch basin.

Cleaned out 393 LF of roadside ditch.
Project:
Chesterfield Subdivision - Chesterfield Drive Map #4

Activity: Routine/Preventive Maintenance

Project #:
2019-543

Township/SW Dist:
Port Royal Island/6

Completed:
February 2019

Prepared By: BC Stormwater Management Utility
Date Print: 06/13/19
File: C:\es project summaries map/Chesterfield S/D- Chesterfield Drive Map #4_2019-543

Legend

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

Cleaned out 531 LF of roadside ditch.

Hydroseeded for erosion control.

Cleaned out 913 LF of roadside ditch.

Cleaned out 529 LF of roadside ditch.
Legend

Drainage Type

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

Project:
Chesterfield Subdivision - Chesterfield Lake Drive Map #5

Activity: Routine/Preventive Maintenance

Project #:
2019-543

Township/SW Dist:
Port Royal Island/6

Completed:
February 2019

Prepared By: BC Stormwater Management Utility
Date Print: 06/13/19
File: C:\es project summaries map/Chesterfield S/D- Chesterfield Lake Drive Map #5_2019-543

Cleaned out 660 LF of roadside ditch.
Cleaned out 499 LF of roadside ditch.
**Project Summary:** Hummingbird Lane, Oriole Lane and Cardinal Lane

**Activity:** Routine/Preventive Maintenance

**Duration:** 02/06/18-04/15/19

**Narrative Description of Project:**

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<th>Labor Cost (AUD)</th>
<th>Equipment Cost (AUD)</th>
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<th>Contractor Cost (AUD)</th>
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**Before**

**During**

**After**
Project: Hummingbird Lane, Cardinal Lane and Oriole Lane Map #1

Activity: Routine/Preventive Maintenance

Project #: 2019-548

Township/SW Dist: Bluffton/4

Completed: April 2019

Prepared By: BC Stormwater Management Utility

Date Print: 06/05/19

File: C:\project summaries map/Hummingbird Lane and Cardinal Lane Map #1_2019-548

Legend

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

Cleaned out 873 LF of roadside ditch.

Cleaned out 735 LF of roadside ditch.
Project: Hummingbird Lane, Cardinal Lane and Oriole Lane Map #2

Activity: Routine/Preventive Maintenance

Project #: 2019-548

Township/SW Dist: Bluffton/4

Completed: April 2019

Legend

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

Prepared By: BC Stormwater Management Utility
Date Print: 06/05/19
File: C:\project summaries map/Hummingbird Lane and Cardinal Lane Map #2_2019-549

Cleaned out 860 LF of roadside ditch.
Project: Hummingbird Lane, Cardinal Lane and Oriole Lane Map #3

Activity: Routine/Preventive Maintenance

Project #: 2019-548

Township/SW Dist: Bluffton/4

Completed: April 2019

Prepared By: BC Stormwater Management Utility
Date Print: 06/05/19
File: C:\project summaries map/Hummingbird Lane and Cardinal Lane Map #3_2019-549

Legend

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

Cleaned out 911 LF of roadside ditch.
Project Summary: Varsity Street and Alumni Road

Activity: Routine/Preventive Maintenance
Duration: 04/15/19-05/20/19

Narrative Description of Project:

<table>
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<tr>
<th>Activity</th>
<th>Duration</th>
<th>Before</th>
<th>During</th>
<th>After</th>
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<tbody>
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<td></td>
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<tr>
<td>DEBRIS / Debris Removal</td>
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<td>DPJT / Driveway Pipe - Jetted</td>
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Grand Total: $14,748.66
Jetted (21) driveway pipes.

Handseeded for erosion control.

Jetted (1) crossline pipe.
Cleaned out 1,298 LF of roadside ditch.

Cleaned out 477 LF of roadside ditch.

Cleaned out 344 LF of roadside ditch.

Cleaned out 294 LF of roadside ditch.

Project: Varsity Street and Alumni Road Map #2

Activity: Routine/Preventive Maintenance

Project #: 2019-562

Township/SW Dist: Lady's Island/7

Completed: May 2019

Legend

Drainage Type

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

Prepared By: BC Stormwater Management Utility
Date Print: 06/19/19
File: C:\project summaries map/Varsity Street and Alumni Road Map #2_2019-562
Cleaned out 668 LF of roadside ditch.

Legend

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

Project: Varsity Street and Alumni Road Map #3
Activity: Routine/Preventive Maintenance
Project #: 2019-562
Township/SW Dist: Lady's Island/7
Completed: May 2019

Prepared By: BC Stormwater Management Utility
Date Print: 06/19/19
File: C:\project summaries map/Varsity Street and Alumni Road Map #3_2019-562
Jetted (1) access pipe.

Cleaned out 268 LF of roadside ditch.

Jetted (2) crossline pipes.

Cleaned out 276 LF of roadside ditch.

Legend

Drainage Type

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

Prepared By: BC Stormwater Management Utility
Date Print: 06/19/19
File: C:\project summaries map/Varsity Street and Alumni Road Map #4_2019-562
**Project Summary:** Bellinger Bluff Road Channel

**Activity:** Drainage Improvement

**Duration:** 12/04/18-02/19/19

**Narrative Description of Project:**

### 2018-004A / Bellinger Bluff Road Channel

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<thead>
<tr>
<th>Activity</th>
<th>Hours</th>
<th>Labor Cost</th>
<th>Equipment Cost</th>
<th>Material Cost</th>
<th>Contractor Cost</th>
<th>Indirect Labor</th>
<th>Total Cost</th>
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**Grand Total**

<table>
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<th>Before</th>
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<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>(No Picture Available)</td>
<td>(No Picture Available)</td>
<td>(No Picture Available)</td>
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</table>
Reconstructed 200 LF of channel.

Installed (1) access pipe and rip rap for erosion control.
Grubbed and cleared 200 LF of workshelf.

Constructed 10 LF of swale and 400 LF of channel.
**Project Summary:** Katie Miller Drive and Ceasar Place

**Activity:** Routine/Preventive Maintenance

**Duration:** 03/07/18-03/26/19

**Narrative Description of Project:**

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<tr>
<th>Description</th>
<th>Hours</th>
<th>Labor Cost</th>
<th>Equipment Cost</th>
<th>Material Cost</th>
<th>Contractor Cost</th>
<th>Indirect Labor Cost</th>
<th>Total Cost</th>
</tr>
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**Before**

![Before Image](image1.png)

**During**

![During Image](image2.png)

**After**

![After Image](image3.png)
Cleaned out 889 LF of roadside ditch. Hydroseeded for erosion control.

Cleaned out 1,013 LF of roadside ditch. Hydroseeded for erosion control.
Cleaned out 333 LF of roadside ditch. Hydroseeded for erosion control.

Cleaned out 347 LF of roadside ditch. Hydroseeded for erosion control.

Prepared By: BC Stormwater Management Utility
Date Print: 05/29/19
File: C:\project summaries map/Katie Miller Drive and Ceasar Place Map #2_2019-554
**Project Summary:** Pinewood Circle

**Activity:** Routine/Preventive Maintenance

**Duration:** 05/02/19-05/20/19

**Narrative Description of Project:**

<table>
<thead>
<tr>
<th>Activity / Description</th>
<th>Hours</th>
<th>Labor Cost</th>
<th>Equipment Cost</th>
<th>Material Cost</th>
<th>Contractor Cost</th>
<th>Indirect Labor Cost</th>
<th>Total Cost</th>
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</tr>
<tr>
<td>DPJT / Driveway Pipe - Jetted</td>
<td>40.0</td>
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<tr>
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<tr>
<td><strong>Grand Total</strong></td>
<td>195.0</td>
<td><strong>$4,446.61</strong></td>
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<td><strong>$742.84</strong></td>
<td><strong>$0.00</strong></td>
<td><strong>$1,882.50</strong></td>
<td><strong>$8,897.31</strong></td>
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</table>

(No Pictures Available)
Jetted (48) driveway pipes.

Jetted (1) crossline pipe.
Cleaned out 382 LF of roadside ditch. Handseeded for erosion control.

Cleaned out 1,045 LF of roadside ditch. Handseeded 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
Cleaned out 378 LF of roadside ditch. Handseeded for erosion control.

Cleaned out 388 LF of roadside ditch. Handseeded for erosion control.

Cleaned out 369 LF of roadside ditch. Handseeded 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

1 inch = 330 feet
**Project Summary:** Alljoy Area

Tillman Street and Scotia Street

**Activity:** Routine/Preventive Maintenance

**Duration:** 01/17/19-02/19/19

**Narrative Description of Project:**

Project improved 561 L.F. of drainage system. Cleaned out 461 L.F. of roadside ditch. Jetted 100 L.F. of channel pipe and (2) crossline pipes.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Hours</th>
<th>Labor Cost</th>
<th>Equipment Cost</th>
<th>Material Cost</th>
<th>Contractor Cost</th>
<th>Indirect Labor</th>
<th>Total Cost</th>
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<td>AUDIT / Audit Project</td>
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<td><strong>$977.36</strong></td>
<td><strong>$313.26</strong></td>
<td><strong>$0.00</strong></td>
<td><strong>$1,195.60</strong></td>
<td><strong>$6,049.35</strong></td>
</tr>
</tbody>
</table>

**Before**

![Before Image](image1)

**During**

![During Image](image2)

**After**

![After Image](image3)
Project: Alljoy Area
Tillman Street and Scotia Street Map #1

Activity: Routine/Preventive Maintenance

Project #: 2019-003

Township/SW Dist: Bluffton/4

Completed: February 2019

Legend

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

Prepared By: BC Stormwater Management Utility
Date Print: 05/14/19
File: C:\project summaries map\Alljoy Area-Tillman Street and Scotia Street Map #1_2019-003

Cleaned out 274 LF of roadside ditch.
Cleaned out 20 LF of roadside ditch.
Cleaned out 37 LF of roadside ditch.
Cleaned out 130 LF of roadside ditch.
Jetted 100 LF of channel pipe and (2) crossline pipes.
Project Summary: Smith Road

Activity: Routine/Preventive Maintenance
Duration: 03/07/19-03/20/19

Narrative Description of Project:
Project improved 2,040 L.F. of drainage system. Cleaned out 1,735 L.F. of channel and 305 L.F. of roadside ditch. Jetted (5) driveway pipes and (2) crossline pipes.

<table>
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<th>Labor Hours</th>
<th>Labor Cost</th>
<th>Equipment Cost</th>
<th>Material Cost</th>
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Grand Total
113.5 | $2,536.43 | $1,128.00 | $256.29 | $0.00 | $1,019.59 | $4,940.30

(No Pictures Available)
Project: Smith Road Map #1
Activity: Routine/Preventive Maintenance
Project #: 2019-555
Township/SW Dist: Port Royal Island/6
Completed: March 2019

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

Prepared By: BC Stormwater Management Utility
Date Print: 04/30/19
File: C:\project summaries map\Smith Road Map #1_2019-555

- Cleaned out 134 LF of roadside ditch.
- Cleaned out 31 LF of roadside ditch.
- Cleaned out 142 LF of roadside ditch.
Cleaned out 213 LF of channel.

Cleaned out 322 LF of channel.

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

Project: Smith Road Map #2
Activity: Routine/Preventive Maintenance
Project #: 2019-555
Township/SW Dist: Port Royal Island/6
Completed: March 2019

Prepared By: BC Stormwater Management Utility
Date Print: 04/30/19
File: C:\project summaries map/Smith Road Map #2_2019-555

1 inch = 83 feet
Cleaned out 948 LF of channel.

Cleaned out 100 LF of roadside ditch.
Jetted (1) crossline pipe.
Jetted (3) driveway pipes.

Jetted (1) crossline pipe.

Jetted (2) driveway pipes.
**Project Summary:** Huron Drive

**Activity:** Routine/Preventive Maintenance  
**Duration:** 04/10/19-04/25/19

**Narrative Description of Project:**  

<table>
<thead>
<tr>
<th>Activity</th>
<th>Labor Hours</th>
<th>Labor Cost</th>
<th>Equipment Cost</th>
<th>Material Cost</th>
<th>Contractor Cost</th>
<th>Indirect Labor</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDIT / Audit Project</td>
<td>1.0</td>
<td>$21.79</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$21.79</td>
</tr>
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<td>CBINS / Catch basin - installed</td>
<td>30.0</td>
<td>$652.55</td>
<td>$206.95</td>
<td>$281.08</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$1,437.58</td>
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<tr>
<td>GRDGEN / Grading - General</td>
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<td>$326.30</td>
<td>$18.00</td>
<td>$58.29</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$551.09</td>
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<tr>
<td>HAUL / Hauling</td>
<td>20.0</td>
<td>$494.00</td>
<td>$283.20</td>
<td>$55.92</td>
<td>$0.00</td>
<td>$329.40</td>
<td>$1,162.52</td>
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<tr>
<td>RSDCL / Roadside Ditch - Cleanout</td>
<td>30.0</td>
<td>$652.60</td>
<td>$111.24</td>
<td>$27.49</td>
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<td>$297.00</td>
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<tr>
<td>UTLOC / Utility locates</td>
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<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$10.90</td>
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<tr>
<td>2019-560 / Huron Drive Sub Total</td>
<td>96.5</td>
<td>$2,158.14</td>
<td>$619.39</td>
<td>$422.79</td>
<td>$0.00</td>
<td>$1,071.90</td>
<td>$4,272.21</td>
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<tr>
<td><strong>Grand Total</strong></td>
<td>96.5</td>
<td>$2,158.14</td>
<td>$619.39</td>
<td>$422.79</td>
<td>$0.00</td>
<td>$1,071.90</td>
<td>$4,272.21</td>
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</tbody>
</table>

**Before**

![Before Image]

**During**

![During Image]

**After**

![After Image]
Installed (1) catch basin.

Cleaned out 182 LF of roadside ditch.

Repaired washout. Hydroseeded for erosion control.
**Project Summary:** Burton Wells Road and Middleton Recreation Drive

**Activity:** Routine/Preventive Maintenance  
**Duration:** 08/22/18-09/10/18

**Narrative Description of Project:**

<table>
<thead>
<tr>
<th>2019-519 / Burton Wells Rd. &amp; Middleton Recreation Dr.</th>
<th>Labor Hours</th>
<th>Labor Cost</th>
<th>Equipment Cost</th>
<th>Material Cost</th>
<th>Contractor Cost</th>
<th>Indirect Labor</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDIT / Audit Project</td>
<td>1.0</td>
<td>$21.79</td>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
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<td>Haul / Hauling</td>
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<td>2019-519 / Burton Wells Rd. &amp; Middleton Recreation Dr. Sub Total</td>
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<td>$770.92</td>
<td>$194.98</td>
<td>$45.72</td>
<td>$0.00</td>
<td>$406.14</td>
<td>$1,417.76</td>
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<tr>
<td><strong>Grand Total</strong></td>
<td><strong>35.5</strong></td>
<td><strong>$770.92</strong></td>
<td><strong>$194.98</strong></td>
<td><strong>$45.72</strong></td>
<td><strong>$0.00</strong></td>
<td><strong>$406.14</strong></td>
<td><strong>$1,417.76</strong></td>
</tr>
</tbody>
</table>

Before  | During  | After
Cleaned out 300 LF of roadside ditch.

Cleaned out 210 LF of roadside ditch.

Project: Burton Wells Road and Middleton Recreation Drive
Activity: Routine/Preventive Maintenance
Project #: 2019-519
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

Prepared By: BC Stormwater Management Utility
Date Print: 03/29/19
File: C:\project summaries map/Burton Wells Road and Middleton Recreation Drive_2019-519

1 inch = 130 feet
1. CALL TO ORDER – 2:00 p.m.
   A. Approval of Agenda
   B. Approval of Minutes – July 10, 2019 (backup)

2. INTRODUCTIONS

3. PUBLIC COMMENT

4. REPORTS
   A. Utility Update – Eric Larson, P.E. (backup)
   B. Monitoring Update – Eric Larson, P.E. (backup)
   D. Stormwater Related Projects – 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)

5. UNFINISHED BUSINESS

6. NEW BUSINESS
   A. Special Presentation - TBD

7. PUBLIC COMMENT

8. NEXT MEETING AGENDA
   A. September 11, 2019 (backup)

9. ADJOURNMENT