

Agenda



Find yourself in good company

Basic Motions

Motion
Calls for Action
Debatable
Simple Majority

Motion to Amend
Changes Original
Debatable
Simple Majority

Other Motions

Table
Postpone Vote
No Discussion
Simple Majority

Close Debate
End Debate & Vote
No Discussion
2/3 Majority

Reconsider
Change Prior Decision
Voted in Majority
Within One Meeting
Debatable
2/3 Majority

Recess
Take a Short Break
No Discussion
Simple Majority

Consensus Process
If 1-Vote Majority
Debatable
3 Votes to Pass

Adjourn
End the Meeting
No Discussion
Simple Majority

Actions and discussion are governed by motions. Only 3 motions on the table at once (a 4th would be out of order). Most recent motion is considered first.

☐ Convene meeting + Reminder: Turn off Cell Phone

I. Roll Call/Quorum _____ Board Members (quorum = 4)

II. Pledge of Allegiance

III. Additions/Deletions/Approval of Agenda

IV. Approval of December 5, 2019 Minutes (Attachment A)

V. Announcements

VI. Public Comment Period

Public Comment Period is a period reserved for comments by the public. A total of 30 minutes is allocated with each individual being allowed no more than 3 minutes each. The Public Comment Period will be closed once the allocated time has been reached.

VII. Commission Reports

a. ECU Sustainability Update (10 mins) Carwein

VIII. Old Business

a. EAC Sustainability Subcommittee Update (10 mins) Ames

b. Finalize 2020 Goals & Objectives (15 mins) Llerena (Attachment B)

IX. New Business

a. Annual Stormwater Report (20 mins) – Norris (Attachment C)

X. Other – FYI

a. Draft Calendar (Attachment D)

XI. Proposed Agenda Items –February 6, 2020

a. Promote 2020-2021 EAC Grant

b. EAC Sustainability Subcommittee Update

XII. Adjourn

Items for Future Consideration

Board Members

Chair

1. Diego LLerena

Commission Members

2. Emilie Kane (Vice-Chair)
3. David Ames
4. Ann Maxwell
5. Derrick Smith
6. Robert Shaw
7. Vacant

Ex-officio

Kevin Mulligan
(Public Works)

Staff Liaison

Daryl Norris
(Engineering)

Staff Secretary

Amanda Braddy
(Engineering)

City Council Liaison

Brian Meyerhoeffer

Environmental Advisory Commission Mission:

The Environmental Advisory Commission is hereby created for the primary purpose of recommending matters of environmental concern and serve as technical advisory to the City Council.

Environmental Advisory Commission Purpose:

- Inventory and review, on a continuing basis, the condition of and threats to the environmental resources of the City; and as technical advisors, to report all needs for improvement and corrective actions to the City Council.
- To be advisory to the City Council. The commission will recommend to the City Council matters of city-wide environmental concern and shall serve as technical advisors to the City Council on environmental matters. In addition, it will review Environmental Impact Statements required by the City on major development projects.

ATTACHMENT A

(December 5, 2019 Minutes)

Action: For your review and approval.

ENVIRONMENTAL ADVISORY COMMISSION MINUTES
December 5, 2019

CALL TO ORDER

Members of the Environmental Advisory Commission met on the above date at 5:30 p.m. in the City Council Chambers. Diego Llerena, Chairperson, called the meeting to order and welcomed all those present. The following attended the meeting:

1. ROLL CALL

MEMBERS:

David Ames	Emilie Kane
Diego Llerena	Ann Maxwell
Derrick Smith	Robert Shaw

OTHERS PRESENT:

Daryl Norris, City of Greenville

2. PLEDGE OF ALLEGIANCE

3. ADDITIONS/DELETIONS/APPROVAL OF AGENDA

A motion was made by Ms. Maxwell to approve the agenda. The motion was seconded by Dr. Kane and passed unanimously.

4. APPROVAL OF NOVEMBER 7, 2019 MINUTES

Mr. Smith made a motion to approve the November 7, 2019 as presented. The motion was seconded by Ms. Maxwell and passed unanimously.

5. ANNOUNCEMENTS

Dr. Kane welcomed visitors to the meeting. Ms. Maxwell attended ECU Sustainability movie night. Mr. Norris stated the stormwater audit was completed today.

6. PUBLIC COMMENT PERIOD

There were no public comments.

7. COMMISSION REPORTS

A. None

8. OLD BUSINESS

A. EAC Sustainability Subcommittee Update

Dr. Ames announced the subcommittee met at City Hall on Friday, November 15, 2019 from 1:00pm to 2:30pm. The next meeting will be Friday, December 13, 2019 at Public Works.

9. NEW BUSINESS

A. 2020 Goals & Objectives

Mr. Llerena directed attention to the goals and objectives attached in the agenda package. Details were discussed and will be finalized by the January 2, 2020 meeting for approval.

B. Council Presentation

Mr. Llerena directed attention to the 2019 Council presentation attached to the agenda package. Details were discussed and will be finalized by the January 6, 2020 Council meeting.

10. OTHER- FYI

A. None

11. PROPOSED AGENDA ITEMS

The following items are proposed for the January 2, 2020 meeting:

- A. Elections**
- B. 2020 Goals & Objectives – Finalize and Approve**
- C. Stormwater Annual Report**
- D. EAC Sustainability Subcommittee Update**
- E. ICLEI Update**

11. ADJOURNMENT

There being no further business to discuss, Mrs. Maxwell made a motion to adjourn the meeting. The motion was seconded by Mr. Smith and the meeting adjourned

ATTACHMENT B

(2020 Goals & Objectives)

Action: For review and approval.

2020 EAC Goals

1. Continue to recommend and work toward establishing and implementing the position of a city Sustainability Coordinator to provide leadership, expertise, and coordination of city operations in reducing greenhouse gas emissions, increasing energy conservation and renewable energy use, and reducing air pollution.

Actions:

- a. Work with the City Manager, city staff, and the ECU Sustainability Office to provide useful information, identify feasible funding options, and recommend preliminary actions that can be taken toward the goal of a sustainability position.
 - b. Continue work of the Sustainability Subcommittee of the EAC to engage citizens in increasing public awareness, information, and support for sustainability.
2. Identify and deploy ways to promote environmental education and engage citizens (including students) in addressing environmental [sustainability] issues.

Actions:

- a) Increase public awareness of the Watershed Master Plan, support its implementation, and continue to receive updates on the progress of the implementation.
 - b) Continue to administer and champion the EAC Grant program.
 - c) Increase recycling initiatives and explore incentives to encourage participation.
 - d) Encourage implementation of environmental initiatives from the City's Horizon's Plan.
3. Continue to increase deliberate and intentional engagement with Council and Boards and Commissions

ATTACHMENT C

(Stormwater Annual Report)

Action: For your information.

October 30, 2019

Trish D'Arconte
NC DWQ – Nonpoint Source Planning Branch
1611 Mail Service Center
Raleigh, NC 27699-1611
(919) 707-3678
trish.darconte@ncdenr.gov

**RE: CITY OF GREENVILLE
TAR-PAMLICO RIVER BASIN 2018-2019 ANNUAL STORMWATER REPORT**

Dear Ms. D'Arconte:

Enclosed is the Annual Report for the City of Greenville's Stormwater Management Program. This report is for the period of **October 2018 – September 2019**.

If you have any questions, please contact me at dnorris@greenvillenc.gov or (252) 329-4350.

Sincerely,



Daryl Norris, PE, CFM, CPSWQ
Civil Engineer III, Stormwater

cc: Jeanette Powell – NC DEQ
Lisa Kirby, PE, CFM, – Director of Engineering
Environmental Advisory Commission

Annual Report for:

City of Greenville Stormwater Management Program



Date Prepared:
October 2019

Reporting Period:
October 2018 – September 2019

Prepared by:	Prepared for:
Daryl Norris, PE, CFM, CPSWQ	Trish D'Arconte
Civil Engineer III, Stormwater	Environmental Program Consultant
City of Greenville – Engineering Department	NC DWR - Nonpoint Source Planning Branch
1500 Beatty Street	1611 Mail Service Center
Greenville, NC 27834	Raleigh, NC 27699-1611
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dnorris@greenvillenc.gov	trish.darconte@ncdenr.gov

I. EXECUTIVE SUMMARY

The City of Greenville has completed its thirteenth annual report to the NC Division of Water Resources. This report highlights the following components of our Stormwater Management Program:

- I. Executive Summary
- II. New Development Review/Approval
- III. Compliance and Enforcement
- IV. Illegal Discharges
- V. Retrofit Opportunities
- VI. Public Education
- VII. Additional NPDES MS4 Components

The appendices provided include summary tables for new development, illicit discharge violations and public education back-up information. In addition, the following are updates to programs or projects managed by the City of Greenville's Stormwater Management Program to address community issues associated with stormwater runoff.

Stream Enhancement Program Update:

The Stream Enhancement Program addresses bank erosion along blue-line streams in an effort to improve water quality, property values and protect the safety of citizens. The program was intended to provide an avenue for property owners to apply for funding from the City to address eroded blue-line stream banks located on private property. This program is typically funded through the Stormwater Utility. During the report period the City received 1 application for funding. The project was however accomplished through our open channel maintenance operations and did not require additional assistance through this program. 1 application was received past the cutoff date for the 2017-2018 budget year and was contracted and completed in the 2018-2019 year. The remaining funds were dedicated to a streambank stabilization project on Meetinghouse Branch from the Watershed Master Plan which included a small flood bench and stabilized slopes with live staking. This project minimized erosion on a flashy portion of the stream with heavy shear stress and helped to protect existing sewer utilities adjacent the stream. 1 application did not meet the criteria to be eligible for funding and 1 is in review. The City will continue to accept applications and rank projects and will resume this effort in 2020 with available funds for eligible projects with any remaining funds to be utilized for other stream restorations identified in the Watershed Master Plans.

Watershed Master Planning Update:

Since the completion of all 7 of the Watershed Master Plans, staff has presented at several civic organizations and technical workshops about the effort and its value to the City. These include local neighborhood associations, national public works conference (PWX), IECA, and NC APWA. The City's master plans capture public infrastructure and develop and prioritize projects for both flood retention and water quality throughout the city.

The goals of the WMP included: (1) evaluating the watershed for existing flooding, water quality, and erosion problems, (2) recommend and prioritize capital improvement projects to mitigate existing flooding by reducing the frequency and severity of flooding for property owners, (3) identifying stream stabilization projects to reduce the risk of property loss along streams and reduce sediment loads as a result of erosion and (4) identify stormwater BMP retrofit locations to address runoff from existing impervious areas in order to minimize negative impacts to water quality in the receiving waters.

Long-Term Operation and Maintenance of Structural Stormwater BMPs Update:

The City continues to recognize the importance of long-term maintenance and intends to develop policies and procedures to address the long-term operation and maintenance of structural stormwater BMPs associated with residential subdivision development.

Currently, the residential developer turns the long-term operation and maintenance of structural stormwater BMPs over to a Home Owners Association (HOA) once the development or a portion of the development is completed. Residential developments that have been built since the implementation of the State regulations will soon be of an age where extensive maintenance and vegetative/nuisance management are required to keep the facilities functioning as designed. Thereafter, HOA's are then unable financially to meet the routine and extensive maintenance program requirements, which then leads to complications for both the City and HOAs to ensure compliance with long-term operation and maintenance requirements.

It is the City's goal to develop policies and procedures in the future to address and alleviate these complications. This will be a topic of discussion with the upcoming Stormwater Advisory Committee.

Environmental Advisory Commission:

The Environmental Advisory Commission (EAC) was created for the primary purpose of recommending matters of environmental concern and serve as technical advisory to the City Council. The Commission purpose statements are:

- Inventory and review, on a continuing basis, the condition of and threats to the environmental resources of the City; and as technical advisors, to report all needs for improvement and corrective actions to the City Council.
- To be advisory to the City Council. The commission will recommend to the City Council matters of city-wide environmental concern and shall serve as technical advisors to the City Council on environmental matters. In addition, it will review Environmental Impact Statements required by the City on major development projects.

The Commission is comprised of citizens that reside in the City and is composed of 1 (one) lawyer or other person with knowledge of environmental regulations and environmental safety practices; 1 (one) building contractor, land developer or someone familiar with construction techniques; 1 (one) member of a local environmental group; 1 (one) educator of the natural or physical sciences or physician; 1 (one) professional engineer; 1 (one) at-large member from the Greenville community; and 1 (one) at-large member from the Greenville community with skills and an interest in environmental health, safety, and/or medicine.

The Commission meets the first Thursday of every month (except July) and is broadcast live on our local television network and recorded for playback throughout the month and online. The Commission is also responsible for selecting the recipients of the EAC Stormwater Grant detailed later in this report.

Stormwater Advisory Committee and Utility Rate Study:

The establishment of this stakeholder's group was a natural outgrowth of the City's forward-thinking Watershed Master Planning (WSMP) process, the results of which were presented to the City Council on August 25, 2016. The Master Plans took a holistic look at the City's drainage basins and stormwater management program to identify current and future needs both in terms of infrastructure and programming to reduce the severity, duration, and frequency of flooding, stabilize streambanks, and provide water quality treatment for impaired watersheds. The total implementation cost identified in the Master Plans for capital projects is approximately \$170 Million in 2016 dollars. Additionally, the City will be required to replace aging infrastructure nearing the end of its life cycle. Staff currently estimates the maintenance cost to replace this infrastructure over a 40-50-year timeframe is approximately \$230 Million. When evaluating these needs in comparison with current revenues, it became clear that there is a growing deficit that must be addressed.

The City contracted with a consultant to help facilitate a Stormwater Advisory Committee (SWAC) to complete a stormwater level of service and rate assessment linking capital improvement needs, financing and policy.

The SWAC met a total of 14 times starting in early 2017 through October of 2018. The first two meetings early in 2017 provided introductory material to the committee members regarding the City's Stormwater Program, its utility funding, and the objectives of the committee. Meetings 3 through 14, starting in October 2017, addressed the following topics:

- Extent of Service (EOS) – Where should the City provide stormwater services?
- Level of Service (LOS) – What is the type and frequency of service the City should provide?
- Financial Analysis – Are changes to the utility rate structure and rates necessary to provide the recommended EOS and LOS.
- Capital Spending Plan - How should capital projects be prioritized?

Presentations were provided by the consultant team and City staff to educate the SWAC on the current practices and budgets of the City's Stormwater Program. Within those presentations, the consultant team identified key areas that can impact the extent of service and level of service of the City's Stormwater Program. The SWAC then discussed those areas to develop recommendations. Despite the stakeholders' diverse backgrounds and differing vested interests, the group unanimously supported a higher level of service. They also unanimously recommended an increase to stormwater utility fees to achieve the desired levels of service and fund the substantial capital improvement program and infrastructure replacement needs determined necessary to ensure a sustainable stormwater program.

A final report including recommendations on extent and level of service as well as a rate increase and capital spending plan was presented to City Council in October and November 2018. Council then directed staff to study additional funding and level of service options for consideration. All of these options for improvement and further investment into the stormwater program were presented to City Council in April.

Upon the recommendations of staff and the Stormwater Advisory Committee, Council voted to approve long term expansion of the stormwater program including addition of new staff, equipment, office space, and funds for priority capital improvement projects from the Watershed Master Plans. This is planned to be funded through a combination of existing Stormwater Utility fund balance, systematic increases in the Stormwater Utility fee, and use of revenue bonds.

The next objective of the Stormwater Advisory Committee will be to work with stakeholders to update and revise development ordinances to current standards and as a result of upcoming changes to the Tar-Pam and Neuse NSW rules.

Program for Public Information:

The City of Greenville participates in the Community Rating System of the National Flood Insurance Program. In an effort to increase the City's score and insurance premium discount, the City has contracted with Wood Environmental, PLC to develop and conduct a Program for Public Information (PPI). Part of this process involves the creation of a Program for Public Information Committee. This committee is comprised of City of Greenville staff from Planning, Emergency Management, Public Information Office, and Floodplain Management, and also includes citizens with special expertise in real estate, lending, insurance, and education.

The purpose of this committee is to develop a plan to better educate and distribute information about flooding and flood insurance to the public in Greenville. This committee has met once during this reporting year but will continue to meet into the next reporting year and develop a final program plan that will be incorporated into future public education efforts.

New Department of Engineering:

Engineering was previously a division within the City's Public Works Department. The newly created Department of Engineering will manage traffic services, transportation planning (MPO), land development, stormwater management, capital projects, and asset management.

The Public Works Department will continue to handle operations for sanitation, Greenville Area Transit (GREAT), fleet maintenance, street maintenance, and buildings and grounds. Creating a standalone Department of Engineering was done in an effort to meet the priorities and initiatives set by City Council.

The new Engineering Department is in the process of updating the City's Stormwater Management Plans, operating procedures, and personnel responsibilities as a result of the new organizational structure.

II. PROGRAM ELEMENT: New Development Review/Approval

October 2018 – September 2019

Development Types	Total # Projects		Total # Acres	
	Neuse	Tar-Pam	Neuse	Tar-Pam
New development projects meeting rule criteria	7	13	116.26	307.57
New development projects requiring BMPs	4	6	89.61	47.02
New development projects requiring Peak Rate Match	5	11	93.07	296.37

Best Management Practice (BMP) Nutrient Removal Efficiencies	Number of BMPs Implemented
Wet Detention Pond	4
Stormwater Wetland	7
Sand Filter	0
Bioretention	0
Dry Detention Basin	1
Grass Swales	0
Vegetated Filter Strip With Level Spreader	0
Proprietary Device	1
Total Number of all BMPs Approved	13

A summary table is provided in Appendix A for new development and redevelopment projects subject to the Rule during the 2018-2019 permit year.

Description of off-site options:

No off-site facilities were approved within this reporting period.

Results of jurisdictional review of planning issues:

There are no outstanding planning issues at this time.

III. PROGRAM ELEMENT: Compliance and Enforcement

Construction Compliance and Enforcement	2016	2017	2018	2019
Construction projects completed and signed off	3 ¹	6 ⁶	3 ⁶	5
Construction projects with enforcement action taken for deficient stormwater systems	0	0	0	0

Operation & Maintenance Compliance and Enforcement	2016	2017	2018	2019
Total of newly completed projects ²	100	102	108	111
Projects submitting reports	79	53	53	73
Projects inspected by COG	100	98 ⁵	108	111
Projects with deficiencies	30	49	72	58
Projects w/ deficiencies corrected ³	6	2	2	7
Projects taking steps to correct deficiencies ⁴	29	49	70	51
Projects w/ enforcement action taken	1	0	0	0

¹One BMP in this value was a reconstruction of a former BMP due to an expansion of the facility.

²This value represents the actual number of sites for which stormwater BMPs were operational for the entire reporting period and does not include the construction projects with newly constructed stormwater BMPs completed and signed off as noted in the first table under this section.

³These values include projects with deficiencies corrected this program year but may have been discovered this program year or previous years.

⁴These values include projects that have submitted plans of action as well as those who are within the 90 day response period from the notice of deficiency.

⁵ 4 sites experienced change of ownership and inspections had not yet been scheduled with the new owners at the time of the report.

⁶ Corrected from last year's report of 6 that included a facility already listed, a facility not yet complete, and a demonstration facility.

Description of any compliance issues:

Construction-

The City has some challenge with phased developments that were not originally designed to be phased. Most common is that of a multi-building apartment complex submitted all under one phase site plan, but during construction the owners want individual certificates of occupancy for each building as they are built but while the rest of the site remains under construction. This poses a challenge with the timing and assurance of when an erosion control basin can be converted to the permanent post-construction stormwater control.

Operation and Maintenance- 2018-2019

Out of the 111 sites inspected during this permit cycle, 58 were found to have deficiencies; of which 7 have corrected deficiencies, 0 were undergoing enforcement action and 51 were still within their 90 day response period from the City of Greenville's notice of deficiency to complete the necessary corrective actions. To date the City has received 1 plan of action to

address the deficiency. 22 of the 58 deficiencies were due to not having submitted an annual report by their due date but otherwise compliant.

Inspection forms and copies of the annual reports are on file at the City of Greenville Engineering Department and may be provided upon request.

Describe enforcement actions taken and current status:

Construction-

There are no outstanding construction enforcement actions for this permit cycle.

Operation & Maintenance-

2018-2019

Out of the 111 sites inspected during this permit cycle, as of the date of this report, 0 was under Notice of Violation (NOV) with 0 of those progressing to Civil Penalty.

12 of the sites were found to be non-compliant, have had other deficiencies in the previous year. These sites will be considered for a Notice of Violation unless they respond with corrective action or action plan in a timely manner.

The most common deficiencies and violations include:

- Lack of response to correspondence and/or acknowledgment of deficiencies.
- Lack of receiving maintenance logs or annual reports.
- Vegetation management.

IV. PROGRAM ELEMENT: Illegal Discharges

In accordance with the Tar-Pamlico River Basin – Nutrient Sensitive Water Management Strategy: Basinwide Stormwater Requirements, the City of Greenville developed an Illicit Discharge/Connection Program. This program establishes the process and legal authority to detect and eliminate any illegal discharge or connection within the city limits and up to 1 mile outside the contiguous city limits.

The table presented on the next page is a summary of the violations that were investigated during this permit cycle and the resulting action taken. The City also continued to issue multiple door hanger notices throughout the year at residences and businesses to provide education on the impacts of placing lawn debris and other materials in the street.

The City of Greenville continues to rely on the NC Department of Environment and Natural Resources Environmental Help Line for water quality concerns in our area. The number is 1-877-623-6748. We did not receive any calls as a result of the state hotline during this permit cycle. In addition, through our pollution prevention education efforts, reports on water quality concerns have continued to be regularly received at the Public Works and Engineering Departments.

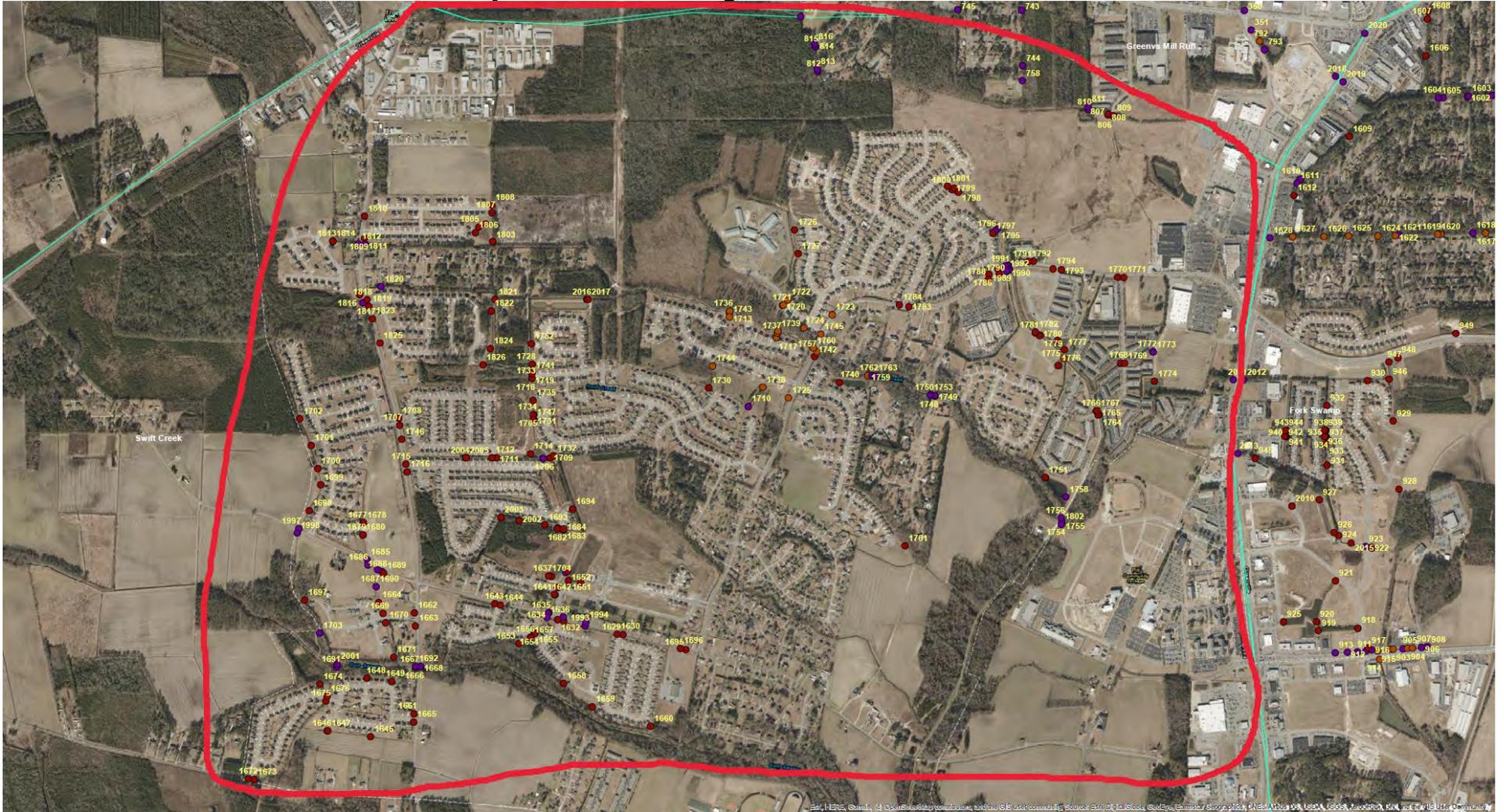
As presented in previous Annual Reports, the City of Greenville has completed the collection and organization of jurisdiction-wide information identified in the permit. This information was compiled from various resources such as Greenville Utility Commission's GIS database, City of Greenville's GIS database, NC Division of Water Quality records and NC Division of Environmental and Natural Resources records. We have completed our annual update of this information.

As part of Section 3-E in the City of Greenville Stormwater Management Program (COG SMP), the City contracted with a private consultant, The East Group, to conduct dry weather field screening of outfalls in a specified area. To select the area, a map was created showing all seven watersheds within the City's jurisdiction. Due to the size, feasibility, and location within what the City determined to be a high risk area; the Swift Creek watershed was chosen which represents approximately 10% of the geographic jurisdiction area. There were 71 outfalls in this area that fit the criteria outlined in the COG SMP. Of the 71 outfalls in this area only 11 were observed to be dry while 30 were observed to have standing water and 30 had a slight trickle of flow. The ground water in this area is extremely high and much of the storm drainage system allows seepage into the pipes resulting in constant flow from most of the outfalls. To be certain that the water in these outfalls were not results of illicit discharge, pH and chlorine tests were performed. None of the samples showed levels of either above what would be expected in ground or surface water.

2018-2019

SITE	VIOLATION	ACTIONS TAKEN	NOV SENT	RESPONSIBLE PARTY
John Paul II High School	Discharge of sediment laden water to an off-site ditch.	Had the contractors install on-site measures for de-watering.	y	Eddie White
Captain's Cove	Discharge of sediment laden water to an off-site ditch.	Had the contractors install on-site measures for de-watering.	Y	Eastern Medical Properties, LLC
Jack Place (Paramore Farms Subdivision)	Painting contractors washing out paint brushes in the curb & gutter flow line.	Educated painting contractor on proper disposal methods.	Y	Front Line Painting, INC
Lord Ashley Drive	Oil in catch basin.	Investigated and found minimal oil in basin. Educated surrounding homeowners on the proper disposal of oil.	N	None
201 Harmony Drive	Yard debris in street.	Talked with homeowner and had them place debris at the back of curb for pickup.	N	Homeowner
1200 Clark street	Grease poured in catch basin.	Investigated and found to grease or grease residue in any catch basins in the area.	N	None
The Scullery	Washing grease vent filters in alley	Investigated and found discharge to street and catch basins. Educated to discontinue washing filters in the alley.	Y	The Scullery, LLC
301 Stanley Loop	Direct Connection of Pool Drain/Backwash	Investigated, sent educational letter, pipe disconnected to discharge to land surface once dechlorinated.	N	John & Susan Causey
Wyneston Rd	Yard debris in street	Investigated, sent educational letter to entire neighborhood block	N	Multiple

2019 Dry Weather Screening Area – Swift Creek Watershed



V. PROGRAM ELEMENT: Retrofit Opportunities

As discussed in the Executive Summary, the City of Greenville completed all of the Watershed Master Plans. Throughout this planning process numerous locations were identified by citizens, staff and the consultant (via stream walks) that were either severely eroded or had the potential for a structural BMP. All locations were assessed and viable locations were prioritized. A stakeholders group will be formed to further prioritize projects on a City-wide level. The table below identifies the top 12 water quality and/or stream stabilization projects across the Meetinghouse Branch Watershed and the estimated cost to design and construction the retrofit:

Prioritization	Project	Cost
1	Charles Boulevard Stream Stabilization	\$152,900
2	Perkins Field – Bioretention	\$90,500
3	Eastern Elementary School – Bioretention	\$80,200
4	Oakmont Drive – Bioretention	\$41,200
5	Brook Valley Golf Course Stream Stabilization	\$135,500
6	Bloomsbury Road Stream Stabilization	\$59,500
7	Crooked Creek Road Stream Stabilization	\$85,200
8	Jaycee Park - Bioretention	\$151,100
9	Brook Valley Country Club – Bioretention	\$55,500
10	Eleanor Street – Bioretention	\$57,500
11	Kensington Drive Stream Stabilization	\$174,200
12	Free First Baptist Church - Bioretention	\$82,900

The project assessment, summary, and map of projects and the project summaries, and sizing calculations are included on the following pages.

Charles Boulevard Stream Stabilization – Project Assessment

Bank Erosion Hazard Rating Guide												
Stream		Meetinghouse		Assessment Number		2		Date		Crew		
Bank Height (ft):		Bank Height/		Root Depth/		Root		Bank Angle		Surface		
Bankfull Height (ft):		Bankfull Ht		Bank Height		Density %		(Degrees)		Protection%		
Bank Erosion Potential	VERY LOW	Value	1.0-1.1		1.0-0.9	0.98	100-80		0-20		100-80	
		Index	1.0-1.9	0.00	1.0-1.9	1.23	1.0-1.9	0.00	1.0-1.9	0.00	1.0-1.9	
	LOW	Value	1.11-1.19		0.89-0.5		79-55		21-60		79-55	
		Index	2.0-3.9	0.00	2.0-3.9	0.00	2.0-3.9	0.00	2.0-3.9	0.00	2.0-3.9	
	MODERATE	Value	1.2-1.5		0.49-0.3		54-30		61-80	70.00	54-30	
		Index	4.0-5.9	0.00	4.0-5.9	0.00	4.0-5.9	0.00	4.0-5.9	4.90	4.0-5.9	
	HIGH	Value	1.6-2.0		0.29-0.15		29-15	15.00	81-90		29-15	
	Index	6.0-7.9	0.00	6.0-7.9	0.00	6.0-7.9	7.90	6.0-7.9	0.00	6.0-7.9		
VERY HIGH	Value	2.1-2.8		0.14-0.05		14-5.0		91-119		14-10		
	Index	8.0-9.0	0.00	8.0-9.0	0.00	8.0-9.0	0.00	8.0-9.0	0.00	8.0-9.0		
EXTREME	Value	>2.8	4.00	<0.05		<5		>119		<10		
	Index	10	10.00	10	0.00	10	0.00	10	0.00	10		
V = value, I = index										SUB-TOTAL (Sum one index from each column):		31.5

Bank Material Description:	
Bank Materials	
Bedrock (Bedrock banks have very low bank erosion potential)	
Boulders (Banks composed of boulders have low bank erosion potential)	
Cobble (Subtract 10 points. If sand/gravel matrix greater than 50% of bank material, then do not adjust)	
Gravel (Add 5-10 points depending percentage of bank material that is composed of sand)	
Sand (Add 10 points)	
Silt Clay (+ 0; no adjustment)	
BANK MATERIAL ADJUSTMENT:	10

Stratification Comments:	
Stratification	
Add 5-10 points depending on position of unstable layers in relation to bankfull stage	
STRATIFICATION ADJUSTMENT:	

VERY LOW	LOW	MODERATE	HIGH	VERY HIGH	EXTREME	
5-9.5	10-19.5	20-29.5	30-39.5	40-45	46-50	
Bank location description (circle one)					GRAND TOTAL:	41.5
Straight Reach		Outside of Bend			BEHI RATING:	VERY HIGH

Charles Boulevard Stream Stabilization – Project Summary

Stream Stabilization Project #1 – Charles Boulevard – The Charles Boulevard project begins on Meetinghouse Branch immediately downstream of Charles Boulevard. As shown on Figure 5-1, the project begins at the culvert crossing and continues downstream for approximately 650 linear feet. The Charles Boulevard project is a second order perennial section of Meetinghouse Branch and has a drainage area of 114 acres. Land use surrounding this project consists mainly of small business offices and residential houses. The proposed project reach flows west to east and is confined within a steep eroded channel feature. The bottom width (streambed) is approximately 3 to 4 feet wide. Both left and right banks are nearly 10 feet tall and have bank angles of 70 degrees. The average top channel width is 15 feet wide. This channel does not have a forested buffer making it highly susceptible to bank erosion. Herbaceous bank vegetation is dominant throughout and is being overtaken by the invasive species kudzu (*Pueraria montana*). Bank conditions are currently unstable and eroding at an accelerated pace due to loamy sand soil texture and lack of sufficient bank vegetation. Another factor contributing to erosion and down cutting of the streambed is the high flow velocity from flashy storm events. In some locations along the project reach, right bank erosion is extreme enough that it reaches landscape fences in adjacent property owners' lawns (See Picture 5-2).



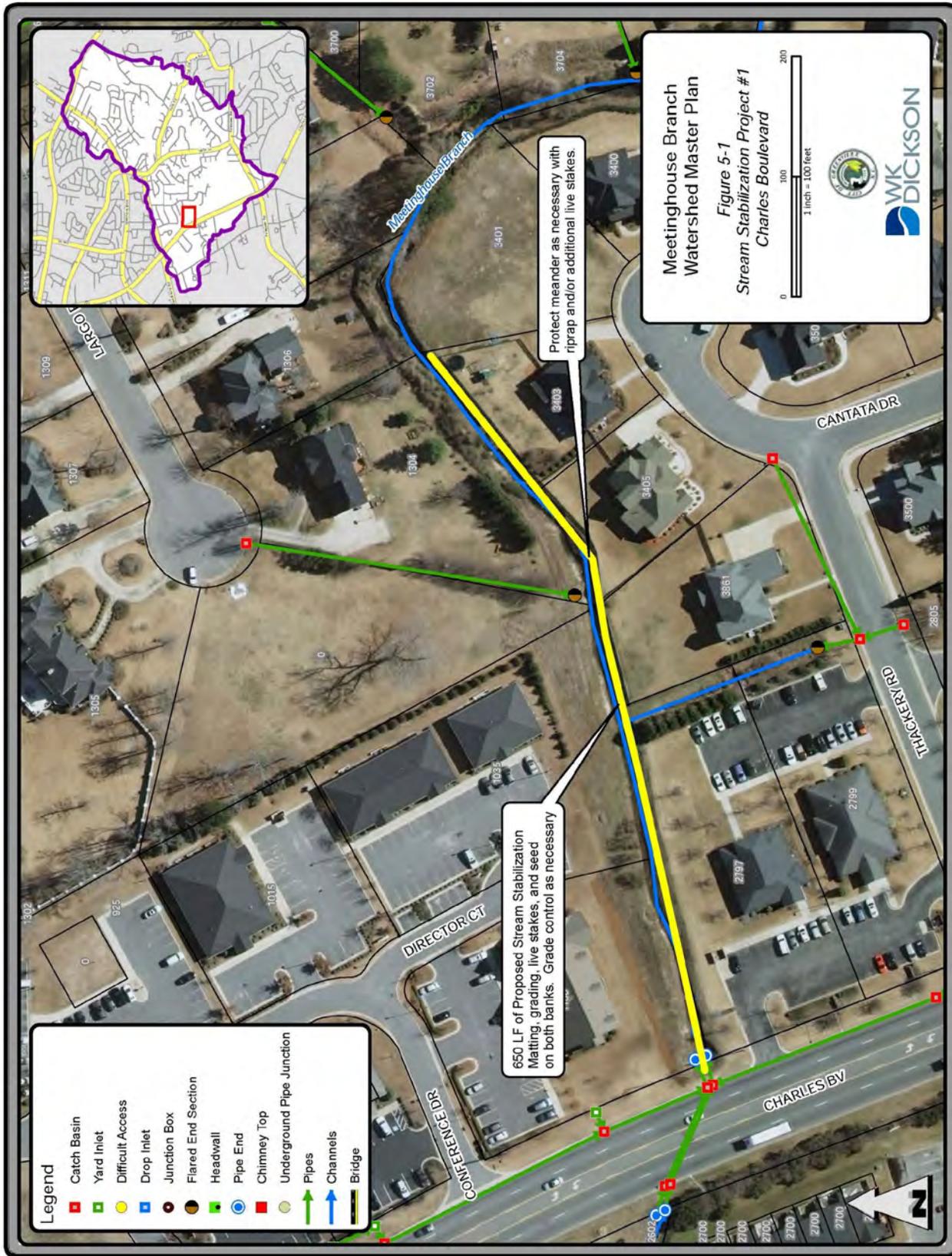
Picture 5-2. Severe bank erosion along landscaping fence

The proposed project reach has opportunities for bank stabilization to prevent sediment loading and bank erosion to Meetinghouse Branch. Open lawn areas adjacent to this stream segment would make this project accessible. To improve bank stability and reduce bank erosion along the proposed reach, several tasks need to be performed. Bank erosion can be reduced by grading channel banks back to a minimum 2 to 1 slope and placement of coir erosion control matting along banks and bare areas. Live staking stream banks along both stream banks will also help prevent undercutting and bank failures in the future. The entire project area should be treated for invasive species (kudzu removal) and planted with a permanent riparian seed mix. To reduce water velocity, several large boulder structures or rip-rap can be placed within the streambed at the toe of bank. This will help to stabilize the streambed and toe.

The estimated cost for the Charles Boulevard project is \$152,900. The stream stabilization project will run along the backside of several private properties, which may result in potential impacts to landscaping and fencing at the following private properties:

- 1100 Conference Drive;
- 1035 Director Court;
- 2797 Charles Boulevard;
- 3861 Thackery Road;
- 1304 Largo Road;
- 3403 and 3405 Canata Drive.

Charles Boulevard Stream Stabilization – Project Map



Perkins Field Bioretention – Project Summary

Water Quality Project #5: Perkins Field

A bioretention project is proposed in the open space located between the Perkins Field parking lot and an open channel system. This area is adjacent to a ½-acre parking lot that currently drains to an existing closed system before discharging to an open channel. The proposed project location is shown in Picture 5-16.

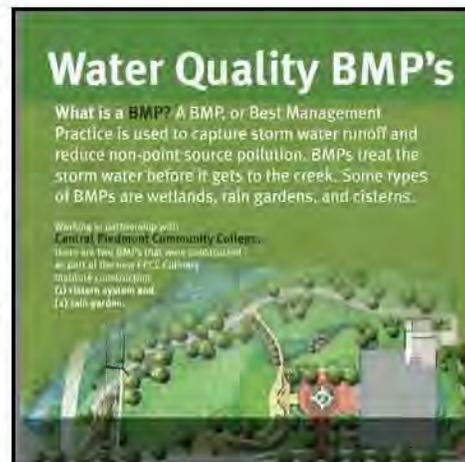


Picture 5-16. Proposed Location for Perkins Field Bioretention Area

The required surface area for the proposed bioretention area is approximately 2,800 square feet (0.06 acres). A concept level plan of the proposed improvements is shown in Figure 5-10. The proposed Perkins Field bioretention project consists of the following improvements:

- Install a bioretention area designed to treat runoff from the adjacent parking lot.
- Install a yard inlet with an 18" outfall pipe directing flow into the existing open channel system.

The estimated construction cost for the Perkins Field bioretention project is \$90,500. The proposed water quality project is located on public property owned by the City of Greenville therefore no easement agreements are required. Another benefit of the bioretention area being located on public property with access to numerous residents, the BMP can provide an educational opportunity to discuss the water quality benefits of a bioretention area. Educational signage (See Picture 5-17) can be installed adjacent to the project.



Perkins Field Bioretention – Project Sizing

Bioretention Area - Perkins Field

Project: City of Greenville - Pilot Watershed Master Plan

Prepared by: EVH

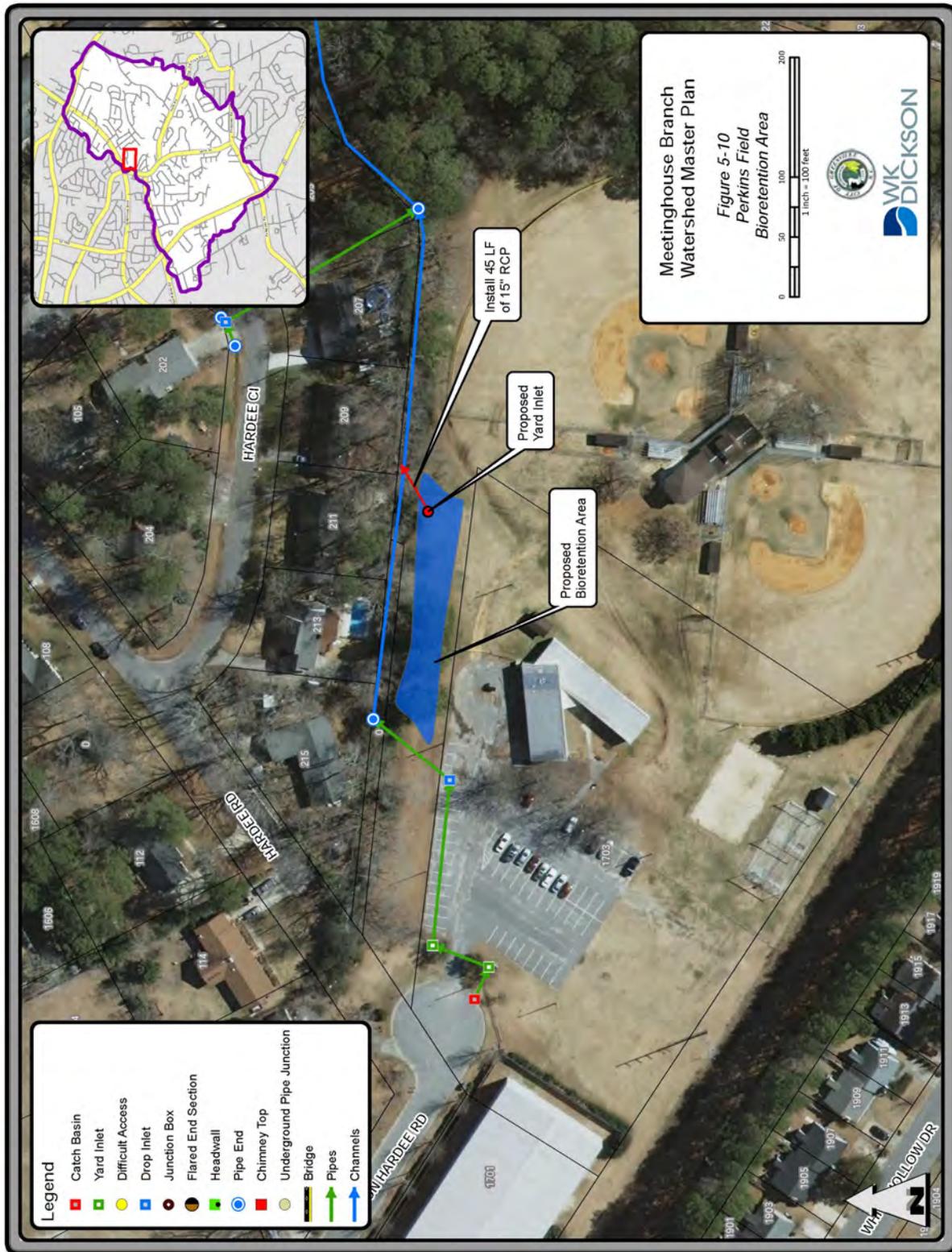
Checked by: TLM

Date: 10/10/12

DRAINAGE AREA INPUT PARAMETERS

Water Quality Event (in)	1.00		Input
	Pervious	Impervious	
Drainage Area (sq ft)	50,690	30,897	Input
Sub-basin CN	79	98	Input
S (in)	2.66	0.20	Calculated
R/O (in)	0.07	0.79	Calculated
Sub-basin WQ Volume (sf*in)	3556	24437	Calculated
Sub-basin WQ Volume (cf)	296	2036	Calculated
Summary Calculations			
Total Watershed area (sq ft)	81,587		Calculated
Total Watershed area (acres)	1.87		Calculated
Total WQ Runoff Volume (sf*in)	27,993		Calculated
Total WQ Runoff Volume (cf)	2,333		Calculated
Surface area of bioretention			
Average depth of water (in)	10		Input
Surface area of bioretention (sf)	2,799		Calculated
Surface area of bioretention (ac)	0.06		Calculated
Depth of Bioretention (in)	36		Input
Length of Bioretention (ft)	92		Input
Width of Bioretention (ft)			
Assuming 3:1 Ratio (L:W)	31		Calculated

Perkins Field Bioretention – Project Map



Eastern Elementary School Bioretention – Project Summary

Water Quality Project #6: Eastern Elementary School

A bioretention area is proposed in the open space located in the northeastern corner of the parcel owned by the Greenville Board of Education (See Picture 5-18). This area is adjacent to one of the Eastern Elementary School parking lots and its entrance road. The open space is ideal for constructing a bioretention project that collects runoff from the parking lot that currently drains directly into the existing closed system. Currently, there is a curb cut that directs flow from the school's entrance road to the gutter along Cedar Lane. It is recommended that a similar curb cut be installed to direct flow to the proposed bioretention area. The proposed water quality project is located outside of the Meetinghouse Branch Watershed. However a portion of the school is located on the watershed boundary therefore this project was included as part of the Master Plan.



Picture 5-18. Proposed Location for Eastern Elementary School Bioretention Area

The required surface area for the proposed bioretention area is approximately 2,300 square feet (0.05 acres). A concept level plan of the proposed improvements is shown in Figure 5-11. The proposed Eastern Elementary School bioretention project consists of the following improvements:

- Install a bioretention area designed to treat runoff from the adjacent parking lot and entrance road.
- Install a concrete curb that will allow water to access the proposed bioretention area.
- Install a yard inlet with an 18" outfall pipe directing flow into the existing closed drainage system along Cedar Lane.

The estimated construction cost for the Eastern Elementary School bioretention area is \$80,200. The proposed water quality project is located on public property therefore no easement agreements are required. Similar to the Perkins Field bioretention area, this project can also serve as an educational opportunity to discuss the water quality benefits of BMPs through signage and engagement with the student body of Eastern Elementary School.

Eastern Elementary School Bioretention – Project Sizing

Bioretention Area - Eastern Elementary School

Project: City of Greenville - Pilot Watershed Master Plan

Prepared by: EVH

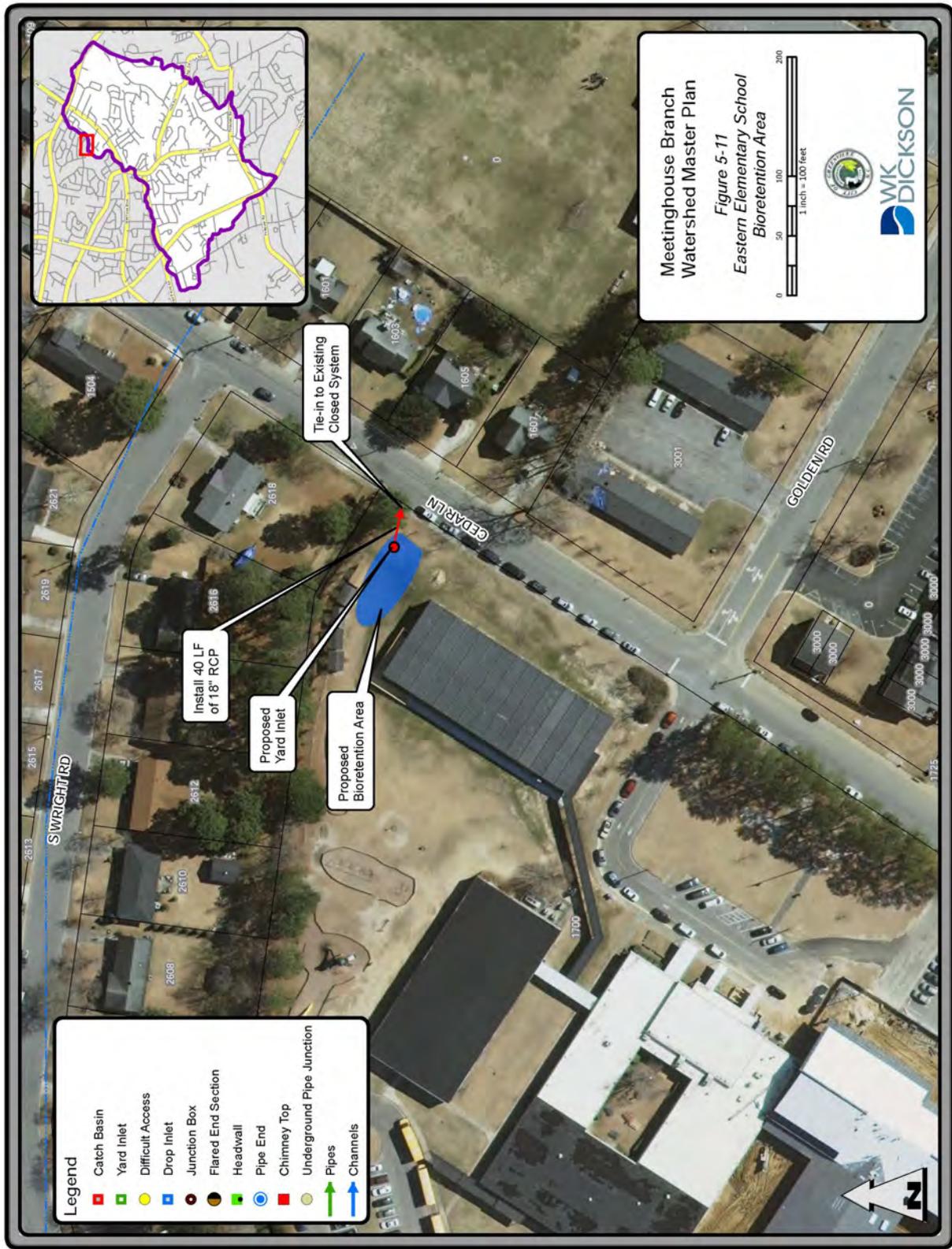
Checked by: TLM

Date: 10/10/12

DRAINAGE AREA INPUT PARAMETERS

Water Quality Event (in)	1.00		Input
	Pervious	Impervious	
Drainage Area (sq ft)	81,151	29,255	Input
Sub-basin CN	65	98	Input
S (in)	5.38	0.20	Calculated
R/O (in)	0.00	0.79	Calculated
Sub-basin WQ Volume (sf*in)	90	23138	Calculated
Sub-basin WQ Volume (cf)	8	1928	Calculated
Summary Calculations			
Total Watershed area (sq ft)	110,406		Calculated
Total Watershed area (acres)	2.53		Calculated
Total WQ Runoff Volume (sf*in)	23,228		Calculated
Total WQ Runoff Volume (cf)	1,936		Calculated
Surface area of bioretention			
Average depth of water (in)	10		Input
Surface area of bioretention (sf)	2,323		Calculated
Surface area of bioretention (ac)	0.05		Calculated
Depth of Bioretention (in)	36		Input
Length of Bioretention (ft)	84		Input
Width of Bioretention (ft)			
Assuming 3:1 Ratio (L:W)	28		Calculated

Eastern Elementary School Bioretention – Project Map



VI. PROGRAM ELEMENT: Public Education

	ACTIVITY	Point Value	# Complete 2018-2019	Actual Points	Actual Costs	# Planned 2019-2020	Est. Points	Est. Costs
1	Demonstration Sites (BMPs)	4 /EA	Y/4	16	\$2000.00	Y/4	16	\$100000.00
2	Newspaper Ads.	2 /EA	N	0	\$0.00	N	0	\$0.00
3	Technical Workshops	4 /EA	Y/5	20	\$2000.00	Y/5	20	\$2,000.00
4	Environmental Contest	4 /EA	N	0	\$0.00	N	0	\$0.00
5	Presentations for Civic Organizations*	1 /EA	Y/11	11	\$100.00	Y/8	8	\$100.00
6	Web Page / Web Site Links	2 /YR	Y	2	\$0.00	Y	2	\$0.00
7	Fact sheets / Brochures* (public places)	2 /YR	Y	2	\$100.00	Y	2	\$1,000.00
8	Utility Bill Inserts	3 /YR	Y	3	\$0.00	Y	3	\$0.00
9	Developer Packages	3 /YR	Y	3	\$500.00	Y	3	\$500.00
10	Storm Drain Stenciling	2 /YR	Y	2	\$0.00	Y	2	\$150.00
11	Adopt-A-Street	4 /YR	Y	4	\$3500.00	Y	4	\$3500.00
12	Adopt-A-Stream	4 /YR	N	0	\$0.00	N	0	\$0.00
13	SW Education Grant Program	1 /YR	Y	1	\$600.00	Y	1	\$2500.00
14	Hotline	3 /YR	Y	3	\$0.00	Y	3	\$0.00
15	Direct Mail	3 /YR	N	0	\$0.00	N	0	\$0.00
16	Booths & Events	2/YR	Y	4	\$1500.00	Y	4	\$2500.00
17	Major Media Advertising	6 /YR	N	0	\$0.00	N	0	\$0.00
18	TV or Radio Spots (City Scene)	3 /YR	Y	3	\$0.00	Y	3	\$0.00
			'18-'19 TOTAL	74	\$10,300	'19-'20 TOTAL	71	\$112,250

*See Appendix C for supporting documentation.

VII. PROGRAM ELEMENT: Additional NPDES MS4 Components

The City of Greenville's NPDES MS4 Permit #NCS000437 requires that the City implement its Stormwater Management Plan for the following measures:

Post-Construction Site Runoff Controls
Illicit Discharge Detection and Elimination (IDDE)
Public Education and Outreach
Public Involvement and Participation
Construction Site Runoff Controls
Pollution Prevention and Good Housekeeping for Municipal Operations
Total Maximum Daily Loads (TMDLs)

The MS4 permit Part IV, B. 2. States:

Reports submitted to satisfy other State Stormwater Reporting requirements satisfy the annual reporting requirements of this permit to the extent that the reports satisfy Part III, paragraph B 1-5, Part IV, paragraph B 3 (c) and Part II **Section I, Electronic Reporting [g.s. 143-215.1(b)]** of this permit

This section is included in this NSW report to ensure that it satisfies all additional NPDES measures and reporting requirements.

Previously Described Measures

The Post-Construction (section II & III), IDDE (section IV), and Public Education (section VI) are all required components of our NSW program and are detailed in the previous sections of this report. The City applies the NSW requirements across its entire jurisdiction in both the Neuse and Tar-Pam river basins.

Public Involvement and Participation

The Public Involvement and Participation measure is not specifically part of the NSW program but the City of Greenville implements this measure in tandem with its Public Education efforts and those results are detailed in section VI Public Education. Specifically the Public Involvement activities include Storm Drain Stenciling, Sidewalk Stenciling Adopt-A-Street, and the SW Education Grant Program. Also part of the Public Involvement and Participation measure are our public advisory boards and committees; Environmental Advisory Commission, Stormwater Advisory Committee, and the floodplain Program for Public Information Committee. These are detailed in the Executive Summary of this report.

Construction Site Runoff Controls

The City of Greenville will rely on its locally delegated Erosion and Sediment Control Program established June 8, 1978. The City Of Greenville will rely on the NCDEQ to administer NPDES Stormwater Discharge Permit for Construction Activities (NCG010000).

The City has established and maintains a 24-hour online reporting software to provide a means for concerned citizens and agencies to contact the appropriate authorities when they see water quality and erosion control problems. The City will record the number of concerns received and the number of problems/incidents remedied as a result of the entries. The City also relies on the state telephone hotline (NCDEQ “Stop Mud”) to provide this service as well.

Pollution Prevention and Good Housekeeping for Municipal Operations

The municipal operations that will be impacted by this operation and maintenance program would be the following: the Street Maintenance Division, Buildings and Grounds Division, Sanitation Division, Fleet Maintenance Division, Transit Division, and Recreation and Parks Department Operation and Maintenance, which would include Bradford Creek Municipal Golf Course.

List of Industrial Facilities Requiring Individual NPDES Permits:

- City of Greenville Sand Pit- NCDENR- Division of Land Resources Mining Permit # 74-9.
- City of Greenville Public Works Complex – NCG080000 Industrial Permit.

The City maintains operation and maintenance procedures for all municipal facilities. The Public Works facility is also covered by a NCG08 industrial stormwater permit. Inspection, sampling, and maintenance procedures are detailed in the facility’s specific Stormwater Pollution Prevention Plan (SWPPP).

Annual inspections are conducted by the Fire/Rescue Department and monthly by Public Works Staff to identify unsafe conditions, including the potential for discharging of hazardous materials. The City routinely conducts self-inspections to insure OSHA compliance. There are regular inspections and cleaning of oil separators associated with Fleet Maintenance located at the Public Works Complex. These oil separators were cleaned 2 times during the year and waste oil and used oil dry were disposed of by a professional environmental management contractor 3 times during the year.

All paved areas within the Public Works Complex are swept on a semi-annual basis. Litter patrol, is performed on a weekly basis and as needed, collects debris and/or litter at the Public Works Complex. Salt is stored under storage until needed. Waste from street sweeping is stored on-site in a contained area until transferred to a certified landfill.

A SWPPP for the Public Works Complex has been developed and is updated annually. The last update was completed on September 6th, 2018 and is scheduled to be updated again on September 4, 2019.

All waste produced and collected as a result of maintenance operations is taken to a certified landfill, recycled, or spread and stabilized appropriately.

The City maintains a written Spill Prevention and Response Plan as part of the SWPPP.

City streets are swept on an ongoing basis by a fleet of 4 street sweepers that results in cleaning all city streets approximately 6 times per year. The City has an active street sweeping program that includes 263.82 miles of City maintained streets and 34 miles of State maintained streets.

City staff will conduct semi-annual stormwater system inspections specifically of the stormwater system, of the stormwater controls, and for stormwater pollution potential at the City' operations. Major culverts and open channels are policed for debris clogs after each major storm event. Pipe systems and catch basins are cleaned by hand with a vacuum truck based on flooding reports and as identified through regular maintenance activities. Approximately 70 miles of streams/open channels are manually inspected/checked and cleared of obstructions twice a year.

Most post-construction stormwater control structures are privately owned and maintained but the City does have a small number of municipal owned and maintained control structures. City owned and maintained stormwater control structures follow the same O&M agreements as do privately owned controls. The Engineering Division performs annual inspection of these structures and coordinates with the responsible department for appropriate maintenance efforts.

The City ensures that all municipal employees and contractors are properly trained and certified for any pesticide, herbicide, or fertilizer application used and that appropriate measures are followed. The City conducted an initial training program of all employees that are actively involved in facility operations and routine orientation training of new employees about stormwater management; potential sources of contaminants; reduction in usage of fertilizers, pesticides, and water usage; and Best Management Practices to eliminate stormwater runoff pollution. Operational employees receive formal training and information through brochures, flyers, posters, employee meetings, bulletin boards, and with training that shows areas of potential stormwater contamination and associated pollutants.

Employees in all relevant City departments/divisions are also trained on how to recognize an illicit discharge and respond appropriately, with may include containment, cleanup, disposal, and reporting as well as proper fueling procedures.

As part of the City's controls for reducing discharge of pollutants it does not permit steam cleaning wash water to enter the storm drain. Existing wash pits for street maintenance and Sanitation are plumbed through a separator to the wastewater sewer system. Vehicle and equipment fueling is provided at a protected designated fueling area. All discharges within Fleet Maintenance go through oil separators. These areas are pumped out and cleaned twice per year or more often as needed.

The City continues to evaluate its Stormwater Management Program annually to ensure all measurable goals are being met and to plan strategies to address any differences identified. The review includes at least the following positions within the City: Public Works Director, City Engineer, and the Stormwater Engineer. A Stormwater Pollution Prevention Team meeting is held annually with representatives from the Street Maintenance Division, Buildings and Grounds Division, Sanitation Division, Fleet Maintenance Division, Transit Division, Recreation and Parks Department Operation and Maintenance, and the Engineering Department. Team members review inspection reports from the Engineering Department and discusses compliance and suggested improvements and adjustments to the plan and municipal operations and training.

This annual evaluation has resulted in improvements to our fueling and fuel deliver procedures, storage and disposal of wastes, storage of liquid materials, storage of equipment and materials, and vehicle maintenance procedures.

TMDLs

The City currently has no issued TMDLs within its jurisdiction.

APPENDIX A

(New Development Projects – Summary Table)

2018-2019 Tar-Pam Loading Summary
 (The Categories Listed Below Are Automatically Calculated)

LOADING SUMMARY CALCULATIONS		
		Units
Sum of All Project Acres Post Development	307.57	Acres
Sum of Nitrogen Load For All Projects Post Development	1002.11	N lbs/yr
N Load per acre per year for all Projects Post Development	3.26	N lbs/ac/yr
Sum of Phosphorus Load For All Projects Post Development	128.83	P lbs/yr
P Load per acre per year for all Projects Post Development	0.42	P lbs/ac/yr

Notes:

1	Summary Table (Table 2) includes all projects approved for construction in the Neuse / Tar-Pamlico River Basin.
2	Project ID's listed in RED are projects located in the Neuse River Basin. These are not included in the Loading Summary Calculations table above.
3	Projects with the Post-Development and Post-BMP Nutrient Export values listed in GREEN utilized the buy-down option for the applicable nutrients.
4	For the purposes of compiling the numbers for the Loading Summary Calculations table above, the final loading amounts account for the resultant loading after offsets for the buy-down projects.
5	Area taken up by BMP was added to the managed pervious area for the reporting of Post Development Project Acreage.

**TAR-PAMLICO STORMWATER RULE
NEW DEVELOPMENTS PROJECTS SUMMARY TABLE
OCTOBER 2018 - SEPTEMBER 2019
City / County: Greenville / Pitt County**

Project ID / Catchment #	Brighton Park Apartments	West Arlington Commercial Park	Allen Road Mini Storage	Greenville Auto Auction Phase 2	Woodridge Corporate Park Phase 3	Pirates Cove 3	Redeeming Faith International Ministries, Inc	Allen Ridge Section 3
Pre-Development Project Acreage (Acres)	1.98	28.04	5.37	27.8	19.22	1.01	5.83	63.78
Transportation Impervious	0.01	0.25	0.18	1.16	0.00	0.02	0.00	0.00
Roof Impervious	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
Managed Pervious (lawn/landscaped)	0.90	0.57	0.92	0.00	0.00	0.99	0.00	0.00
Managed Pervious (cropland)	0.00	27.15	4.18	0.00	16.41	0.00	5.18	44.65
Managed Pervious (pasture)	0.00	0.00	0.00	26.64	0.00	0.00	0.00	0.00
Wooded Pervious	1.07	0.07	0.00	0.00	2.81	0.00	0.65	19.13
Post Development Project Acreage (Acres)								
Transportation Impervious	0.67	18.30	1.32	5.26	0.56	0.50	2.87	7.83
Roof Impervious	0.31	3.23	2.09	0.40	0.00	0.09	0.91	5.33
Managed Pervious	1.00	6.51	1.96	22.14	17.53	0.42	2.05	50.62
Wooded Pervious	0.00	0.00	0.00	0.00	1.13	0.00	0.00	0.00
Total Project Acres	1.98	28.04	5.37	27.80	19.22	1.01	5.83	63.78
Predevelopment Nutrient Export								
Nitrogen lbs/year	1.31	69.00	18.70	51.04	36.76	1.01	11.50	105.60
Nitrogen lbs/acre/year	0.66	2.46	3.48	1.84	1.91	1.00	1.97	1.66
Phosphorous lbs/year	0.23	19.90	5.20	14.89	10.49	0.19	3.30	29.38
Phosphorous lbs/acre/year	0.12	0.71	0.97	0.54	0.55	0.19	0.57	0.46
Post-development & Pre-BMP Nutrient Export								
Nitrogen lbs/year	18.81	271.70	64.70	108.44	21.25	12.07	77.89	245.02
Nitrogen lbs/acre/year	9.50	9.69	12.05	3.90	1.11	11.95	13.35	3.84
Phosphorous lbs/year	2.21	24.40	6.50	17.11	4.01	1.30	7.82	38.79
Phosphorous lbs/acre/year	1.12	0.87	1.21	0.62	0.21	1.28	1.34	0.61
BMPs Implemented								
Number of BMPs	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00
Post-development & Post-BMP Nutrient Export								
Nitrogen lbs/year	18.83	271.70	64.70	108.44	21.25	12.07	47.00	183.69
Nitrogen lbs/acre/year	9.51	9.69	12.05	3.90	1.11	11.95	8.06	2.88
Phosphorous lbs/year	2.22	24.40	6.50	17.11	4.01	1.30	4.40	28.06
Phosphorous lbs/acre/year	1.12	0.87	1.21	0.62	0.21	1.28	0.75	0.44
Other Site Information (expect some variations due to auto calculations and rounding)								
Peak Flow Match Required?	Yes	Yes	No	Yes	Yes	Yes	No	Yes
Redevelopment?	No	Yes	Yes	Yes	No	Yes	No	No
Tar-Pam or Neuse River Basin	Tar-Pam	Tar-Pam	Tar-Pam	Tar-Pam	Tar-Pam	Tar-Pam	Tar-Pam	Tar-Pam
Type of BMP Implemented	N/A	Wetland	N/A	N/A	N/A	N/A	Wetland	Wet Pond
Buydown?	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Nitrogen buydown lbs	327.29	4785.75	1296.56	0.00	0.00	240.89	710.58	0.00
Phosphorus buydown lbs	42.77	134.57	38.66	66.72	0.00	37.57	61.26	76.54
Nitrogen lbs/year Final	7.92	112.16	21.48	108.42	21.33	4.04	23.32	183.69
Nitrogen lbs/acre/year Final	4.00	4.00	4.00	3.90	1.11	4.00	4.00	2.88
Nitrogen lbs over 30 years	237.60	3364.80	644.40	3252.60	640.03	121.20	699.60	5510.59
Phosphorus lbs/year Final	0.79	19.91	5.21	15.01	4.04	0.40	2.33	25.51
Phosphorus lbs/acre/year Final	0.40	0.71	0.97	0.54	0.21	0.40	0.40	0.40
Phosphorous lbs over 30 years	23.76	597.25	156.27	450.36	121.09	12.12	69.96	765.36

Project ID / Catchment #	Previous Approva							
	SECU Parkside Drive	Cypress Bluff Apartments	GUC Operations Center	River Bend Section 1, 2, & 3	South Greenville Church of Christ	Sam's Xpress	Arbor Hills South Phases 7-13	Cook Out
Pre-Development Project Acreage	2.88	2.35	82.83	32.06	34.41	2.53	63.92	21.81
Transportation Impervious	0.00	0.00	0.52	0.12	0.00	0.06	0.00	0.00
Roof Impervious	0.02	0.00	0.00	0.12	0.00	0.00	0.00	0.00
Managed Pervious (lawn/landscaped)	1.47	0.00	0.00	0.00	0.00	2.47	0.00	0.00
Managed Pervious (cropland)	0.00	0.00	37.54	30.01	23.87	0.00	48.06	0.00
Managed Pervious (pasture)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.81
Wooded Pervious	1.40	2.35	44.77	1.81	10.54	0.00	15.86	0.00
Post Development Project Acreage								
Transportation Impervious	1.23	0.52	34.12	9.93	0.90	1.49	14.56	4.39
Roof Impervious	0.27	0.24	4.78	3.27	0.15	0.10	5.70	2.00
Managed Pervious	1.38	1.31	42.23	18.87	33.36	0.94	43.66	15.42
Wooded Pervious	0.00	0.28	1.70	0.00	0.00	0.00	0.00	0.00
Total Project Acres	2.88	2.35	82.83	32.07	34.41	2.53	63.92	21.81
Predevelopment Nutrient Export								
Nitrogen lbs/year	1.94	1.14	114.94	74.70	56.60	2.66	111.36	67.40
Nitrogen lbs/acre/year	0.67	0.48	1.39	2.33	1.64	1.05	1.74	3.09
Phosphorous lbs/year	0.34	0.17	29.80	21.51	15.73	0.51	31.28	N/A
Phosphorous lbs/acre/year	0.12	0.07	0.36	0.67	0.46	0.20	0.49	N/A
Post-development & Pre-BMP Nutrient Export								
Nitrogen lbs/year	29.91	13.65	763.47	250.96	39.39	33.66	376.66	212.90
Nitrogen lbs/acre/year	10.39	5.81	9.22	7.83	1.14	13.30	5.89	9.76
Phosphorous lbs/year	3.41	1.84	91.23	32.04	7.51	3.47	53.01	N/A
Phosphorous lbs/acre/year	1.19	0.78	1.10	1.00	0.22	1.37	0.83	N/A
BMPs Implemented								
Number of BMPs	2.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Post-development & Post-BMP Nutrient Export								
Nitrogen lbs/year	17.20	13.65	498.60	142.71	39.23	19.13	281.25	185.07
Nitrogen lbs/acre/year	5.98	5.81	6.02	4.45	1.14	7.56	4.40	3.55
Phosphorous lbs/year	1.73	1.84	44.73	18.60	7.57	1.06	35.20	N/A
Phosphorous lbs/acre/year	0.60	0.78	0.47	0.58	0.22	0.42	0.55	N/A
Other Site Information (expect some)								
Peak Flow Match Required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Redevelopment?	No	No	Yes	Yes	No	Yes	No	Yes
Tar-Pam or Neuse River Basin	Tar-Pam	Tar-Pam	Tar-Pam	Tar-Pam	Tar-Pam	Neuse	Neuse	Neuse
Type of BMP Implemented	Wetland/Dry Pond	N/A	Wetland	Wetland	N/A	Stormfilter	Wet Pond	N/A
Buydown?	Yes	No	Yes	Yes	No	Yes	Yes	No
Nitrogen buydown lbs	171.07	127.66	1317.00	432.85	0.00	270.20	767.04	0.00
Phosphorus buydown lbs	17.28	26.80	173.94	173.14	0.00	0.00	0.00	0.00
Nitrogen lbs/year Final	11.52	9.40	331.32	128.28	39.23	10.12	255.68	0.00
Nitrogen lbs/acre/year Final	4.00	4.00	4.00	4.00	1.14	4.00	4.00	0.00
Nitrogen lbs over 30 years	345.60	282.00	9939.60	3848.40	1176.82	303.60	7670.40	0.00
Phosphorus lbs/year Final	1.15	0.94	33.13	12.83	7.57	0.00	0.00	0.00
Phosphorus lbs/acre/year Final	0.40	0.40	0.40	0.40	0.22	0.00	0.00	0.00
Phosphorous lbs over 30 years	34.56	28.20	993.96	384.84	227.11	0.00	0.00	0.00

Project ID / Catchment #	Old Firetower Place	Stonehenge Place	Captains Cove	Paramore Farms Phases 4-5
Pre-Development Project Acreage	3.91	2.3	2.5	19.28
Transportation Impervious	0.00	0.00	0.09	0.03
Roof Impervious	0.00	0.00	0.00	0.00
Managed Pervious (lawn/landscaped)	0.00	1.41	0.00	9.06
Managed Pervious (cropland)	3.55	0.00	2.41	0.00
Managed Pervious (pasture)	0.00	0.00	0.00	0.00
Wooded Pervious	0.36	2.30	0.07	10.19
Post Development Project Acreage				
Transportation Impervious	1.39	0.75	0.81	1.96
Roof Impervious	0.56	0.32	0.18	3.18
Managed Pervious	1.96	1.24	1.51	10.16
Wooded Pervious	0.00	0.00	0.00	3.98
Total Project Acres	3.91	2.31	2.50	19.28
Predevelopment Nutrient Export				
Nitrogen lbs/year	7.84	1.10	8.54	11.95
Nitrogen lbs/acre/year	2.01	0.48	3.42	0.62
Phosphorous lbs/year	2.25	0.16	2.44	N/A
Phosphorous lbs/acre/year	0.58	0.07	0.98	N/A
Post-development & Pre-BMP Nutrient Export				
Nitrogen lbs/year	37.83	12.80	18.93	86.57
Nitrogen lbs/acre/year	9.68	5.56	7.59	4.49
Phosphorous lbs/year	4.42	1.40	2.45	N/A
Phosphorous lbs/acre/year	1.13	0.62	0.98	N/A
BMPs Implemented				
Number of BMPs	1.00	0.00	1.00	1
Post-development & Post-BMP Nutrient Export				
Nitrogen lbs/year	22.40	12.80	12.78	74.60
Nitrogen lbs/acre/year	5.73	5.56	5.11	3.87
Phosphorous lbs/year	2.50	1.40	1.22	N/A
Phosphorous lbs/acre/year	0.65	0.62	0.49	N/A
Other Site Information (expect some)				
Peak Flow Match Required?	No	Yes	Yes	No
Redevelopment?	No	No	No	No
Tar-Pam or Neuse River Basin	Neuse	Neuse	Neuse	Neuse
Type of BMP Implemented	Wetland	Wetland	Wetpond	Wet Pond
Buydown?	Yes	Yes	Yes	No
Nitrogen buydown lbs	202.93	253.08	83.25	0.00
Phosphorus buydown lbs	0.00	0.00	0.00	0.00
Nitrogen lbs/year Final	15.64	9.24	10.00	74.61
Nitrogen lbs/acre/year Final	4.00	4.00	4.00	3.87
Nitrogen lbs over 30 years	469.20	277.20	300.00	2238.41
Phosphorus lbs/year Final	0.00	0.00	0.00	0.00
Phosphorus lbs/acre/year Final	0.00	0.00	0.00	0.00
Phosphorous lbs over 30 years	0.00	0.00	0.00	0.00

APPENDIX B

(Illicit Discharge/Connection Violations)

CERTIFIED LETTER

#

**NOTICE OF VIOLATION OF THE
STORMWATER MANAGEMENT AND CONTROL ORDINANCE**

March 7, 2019

The Scullery, LLC
431 Evans St
Greenville, NC 27858-1835

**RE: ILLICIT DISCHARGE OF FOOD WASTE INTO THE STORMWATER
CONVEYANCE**

Dear Mr. Scully:

This letter is to inform you that your business, The Scullery, at 431 Evans Street was found to be in violation of the City of Greenville Stormwater Management and Control Ordinance of the Greenville City Code. This violation was observed by City staff on February 22, 2019 when an employee of your restaurant was spraying kitchen mats off in the alley behind your restaurant. This waste water was discharging directly into the street where it entered the stormwater conveyance system. See the attached report from our inspection for more details related to the occurrence. Please note that this is our second attempt to correct this issue. The City sent an illicit discharge notice to property owners Garry and Wanda Nobles on January 25, 2019 after receiving several complaints from neighboring businesses and City staff.

This was in direct violation of the following section of the Greenville City Code:

1. (Section 9-9-16(A) of the Greenville City Code) “No person shall cause or allow the discharge, emission, disposal, pouring, or pumping directly or indirectly to any stormwater conveyance, the waters of the State, or upon the land in such proximity to the same (such that the substance is likely to reach a stormwater conveyance or the waters of the State), any fluid, solid, gas, or other substance, other than stormwater.”

Immediate action must be taken to eliminate such discharges and prevent any further contaminates from discharging into the stormwater conveyance. Please be advised that continued violations could result in the City assessing fines of up to ten thousand dollars (\$10,000.00) per violation or per day for continuing violations as prescribed by City Ordinance. The intent of this notice is not to levy a fine but to ensure compliance with the intent of the ordinance. **Therefore, within 3 calendar days of receipt of this notice, you must clear the streets, gutter, catch basins, and storm drain pipes of any accumulated food waste and provide notice to the City of the completion of such efforts.** Upon review of the response, City staff will inspect the property for compliance with the City Code. A copy of the Stormwater Management and Control Ordinance has been attached for your review.

Should you have any questions concerning this notice, please contact me at (252) 329-4350.
Your immediate attention in this matter is appreciated.

Sincerely,

Daryl Norris, P.E., CPSWQ, CFM
Civil Engineer II (Stormwater)

Attachments: Illicit Discharge Report
Stormwater Management and Control Ordinance
Photographs of Illicit Discharge Source

cc: Scott Godefroy, PE, City Engineer/ Interim Director of Public Works (*via email*)
Lisa Ann Kirby, PE, Senior Engineer (*via email*)
File Copy

CERTIFIED LETTER
7013 2250 0002 1515 1436

**NOTICE OF VIOLATION OF THE
STORMWATER MANAGEMENT AND CONTROL ORDINANCE**

January 25, 2019

Eastern Medical Properties, LLC
511 Paladin Dr
Greenville, NC 27834

Ernie Everett Site Prep. & Demolition
1517 Hwy 258 South
Kinston, NC 28504

**RE: ILLICIT DISCHARGE OF SEDIMENT INTO THE STORMWATER
CONVEYANCE**

Dear Property Owner:

This letter is to inform you that your construction activities at 565 Regency Blvd were found to be in violation of the City of Greenville Stormwater Management and Control Ordinance of the Greenville City Code. This violation was observed by City staff on January 25, 2019 where a sediment laden water was being directly pumped into a catch basin which flows to an offsite stormwater pond and then into the city's stormwater conveyance system. See the attached report from our inspection for more details related to the occurrence.

This was in direct violation of the following section of the Greenville City Code:

1. (Section 9-9-16(A) of the Greenville City Code) "No person shall cause or allow the discharge, emission, disposal, pouring, or pumping directly or indirectly to any stormwater conveyance, the waters of the State, or upon the land in such proximity to the same (such that the substance is likely to reach a stormwater conveyance or the waters of the State), any fluid, solid, gas, or other substance, other than stormwater."

Immediate action must be taken to eliminate such discharges and prevent any further contaminates from discharging into the stormwater conveyance. Please be advised that continued violations could result in the City assessing fines of up to ten thousand dollars (\$10,000.00) per violation or per day for continuing violations as prescribed by City Ordinance. The intent of this notice is not to levy a fine but to ensure compliance with the intent of the ordinance. **Therefore, within 3 calendar days of receipt of this notice, you must clear the streets, gutter, catch basins, and storm drain pipes of any accumulated sediment and provide notice to the City of the completion of such efforts.** Upon review of the response,

City staff will inspect the property for compliance with the City Code. A copy of the Stormwater Management and Control Ordinance has been attached for your review.

Should you have any questions concerning this notice, please contact me at (252) 329-4350. Your immediate attention in this matter is appreciated.

Sincerely,

Daryl Norris, P.E., CPSWQ, CFM
Civil Engineer II (Stormwater)

Attachments: Illicit Discharge Report
Stormwater Management and Control Ordinance
Photographs of Illicit Discharge Source

cc: Scott Godefroy, PE, City Engineer/ Interim Director of Public Works (*via email*)
Lisa Ann Kirby, PE, Senior Engineer (*via email*)
Scott Anderson, PE, Ark Consulting Group (*via email*)
File Copy

CERTIFIED LETTER
7013 2250 0002 1515 1276

March 26, 2019
John & Susan Causey
301 Slaney Loop
Winterville, NC
28950

RE: 4" Pipe in Stormwater Catch Basin

Dear Mr. and Mrs. Causey,

During a field investigation of the stormwater catch basin at the front of your property, City staff became aware of a 4 inch drain tied into the basin that appears to be attached to your swimming pool. This letter is to inform you drainage from your swimming pool to the City stormwater conveyance system may be in violation of the Stormwater Management and Control Ordinance of the Greenville City Code.

This action may be in direct violation of Section 9-9-16(b)(1) of the Greenville City Code:

“Connections to a stormwater conveyance or stormwater conveyance system that allow the discharge of non-stormwater, other than the exclusions described in section (a) above, are unlawful. Prohibited connections include, but are not limited to: floor drains, waste water from washing machines or sanitary sewers, was water from commercial vehicle washing or steam cleaning, and waste water from septic systems.”

Please contact Ms. Shea McMurry at (252) 329-4681 upon receipt of this letter to discuss this inquiry further. Your attention and assistance regarding this matter are greatly appreciated.

Sincerely,

Daryl Norris, PE
Civil Engineer II (Stormwater)

Attachments: Stormwater Management and Control Ordinance

CERTIFIED LETTER
7013 1090 0000 9671 7106

**NOTICE OF VIOLATION OF THE
STORMWATER MANAGEMENT AND CONTROL ORDINANCE**

November 27, 2018

Attn: Eddie White
4JP II, LLC
1698 E Arlington Blvd
Greenville, NC 27858

**RE: ILLICIT DISCHARGE OF SEDIMENT INTO THE STORMWATER
CONVEYANCE**

Dear Mr. White:

This letter is to inform you that your construction activities near the intersection of E 14th Street and Quail Ridge Rd were found to be in violation of the City of Greenville Stormwater Management and Control Ordinance of the Greenville City Code. This violation was observed by City staff on November 20, 2018 where a large flow of sediment laden water was being discharged to the ditch along 14th St and into the city's stormwater conveyance system. The sediment accumulation was significant in the street, gutter, catch basin, and storm drain lines. See the attached report from our inspection for more details related to the occurrence.

This was in direct violation of the following section of the Greenville City Code:

1. (Section 9-9-16(A) of the Greenville City Code) "No person shall cause or allow the discharge, emission, disposal, pouring, or pumping directly or indirectly to any stormwater conveyance, the waters of the State, or upon the land in such proximity to the same (such that the substance is likely to reach a stormwater conveyance or the waters of the State), any fluid, solid, gas, or other substance, other than stormwater."

Immediate action must be taken to eliminate such discharges and prevent any further contaminates from discharging into the stormwater conveyance. Please be advised that continued violations could result in the City assessing fines of up to ten thousand dollars (\$10,000.00) per violation or per day for continuing violations as prescribed by City Ordinance. The intent of this notice is not to levy a fine but to ensure compliance with the intent of the ordinance. **Therefore, within 3 calendar days of receipt of this notice, you must clear the streets, gutter, catch basins, and storm drain pipes of any accumulated sediment and provide notice to the City of the completion of such efforts.** Upon review of the response, City staff will inspect the property for compliance with the City Code. A copy of the Stormwater Management and Control Ordinance has been attached for your review.

Should you have any questions concerning this notice, please contact me at (252) 329-4350.
Your immediate attention in this matter is appreciated.

Sincerely,

Daryl Norris, P.E., CPSWQ, CFM
Civil Engineer II (Stormwater)

dpf

Attachments: Illicit Discharge Report
Stormwater Management and Control Ordinance
Photographs of Illicit Discharge Source

cc: Scott Godefroy, PE, City Engineer/ Interim Director of Public Works (*via email*)
Lisa Ann Kirby, PE, Senior Engineer (*via email*)
Bryan Fagundus, PE, Ark Consulting Group (*via email*)
File Copy



PUBLIC WORKS

September 18, 2018

Re: Stormwater Management – Illicit Discharge/ Connection Program
Placement of Yard Debris

Dear Resident,

As part of our overall Stormwater Management Program, the City of Greenville has taken several steps to improve the water quality of stormwater runoff. In an effort to address stormwater pollution, the City has developed the Illicit Discharge/Connection Program in accordance with Section 9-9-16(a) of the City code which states:

“No person shall cause or allow the discharge, emission, disposal, or pumping directly or indirectly to any stormwater conveyance, the waters of the State, or upon the land in such proximity to the same (such that the substance is likely to reach a stormwater conveyance or the waters of the State), any fluid, solid, gas or other substance, other than stormwater...”

Recently, the City was made aware of several instances in your neighborhood where:

1. Yard debris was stored in the curb and gutter along ditches and stream banks.

This debris should be placed behind the curb & gutter at locations where City sanitation services are able to collect it. Yard debris is not to be dumped into or placed near the curb & gutter, storm drains, ditches, or stream banks.

The purpose of this notice is to help educate and inform citizens of the issues associated with these practices. In an effort to protect our environment, we must all work together to keep our waterways clean. Please be conscience of your actions and educate your neighbors on these issues. It is the citizen’s responsibility to ensure compliance with the intent of the ordinance. Penalties can be applied to those that violate the City Code on this matter. A civil penalty of up to \$100 per violation per day may be assessed to a first time offender for these illicit discharges.

Call the Engineering Division at (252) 329-4681 with any questions or concerns about this program.

Sincerely,

A handwritten signature in black ink that reads 'Shea McMurry'.

Shea McMurry
Engineering Assistant I (Stormwater)

City of Greenville
Engineering Division

Note: Shaded areas
should be filled in
before going out to field



**WATER QUALITY COMPLAINT /
INSPECTION RECORD**

Complainant's Description of Problem and Location:

Description: Illicit discharge of sediment laden water to off-site ditch

Location: John Paul II High School Rec. Center construction site (14th St. + Quail Ridge Rd)

Complaint from: Name: <u>City employee</u> Address: _____ Home Phone #: _____ Work Phone #: _____ Other: _____ <small>(pager, e-mail, etc.)</small>	Complaint Date and Source: Call date: <u>11-20-2018</u> Time: _____ <input type="checkbox"/> Hotline <input checked="" type="checkbox"/> Eng. Staff <input type="checkbox"/> Walk-In <input type="checkbox"/> Emerg. Mgt. <input type="checkbox"/> Call In <input type="checkbox"/> Health Dept. <input type="checkbox"/> DWQ <input type="checkbox"/> Erosion Ctrl. <input type="checkbox"/> Other City employee <input type="checkbox"/> Other _____	First Callback: Date: _____ Time: _____ Results Callback: Date: _____ <input type="checkbox"/> Phone <input type="checkbox"/> Letter <input type="checkbox"/> In Person	Investigation: Date: _____ Time: _____ Duration: _____ Team (initials of staff): <input type="checkbox"/> DB <input type="checkbox"/> KQ <input type="checkbox"/> LS <input type="checkbox"/> CJ <input type="checkbox"/> TC <input type="checkbox"/> VL <input type="checkbox"/> other
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Field Observations (if different):

Investigator's Description: _____
 Street Address (Nearest): E. 14th Street and Quail Ridge Rd. (south of 2725 E. 14th St.)

Property Type: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential <input type="checkbox"/> Industrial <input type="checkbox"/> Unimproved	Observations: <input type="checkbox"/> Sheen <input type="checkbox"/> Odor <input type="checkbox"/> Floatables .. <input checked="" type="checkbox"/> Other <u>Sediment</u>	Drainage Basin: Crk _____ Sub-Basin _____ <input type="checkbox"/> Flow reached storm drain? <input type="checkbox"/> Flow reached creek?
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Probable Source of Water Quality Problem (check main items that apply): Construction Erosion & Sed: <input type="checkbox"/> Controls not provided <input checked="" type="checkbox"/> Controls not maintained <input checked="" type="checkbox"/> Sediment in drainage system On-site sewage treatment: <input type="checkbox"/> Discharging sand filter system <input type="checkbox"/> Failing septic leachfield <input type="checkbox"/> Piping failure, leak, etc (on-site only) <input type="checkbox"/> Laundry discharge (household)	City Sanitary Sewer System: <input type="checkbox"/> Overflow <input type="checkbox"/> Leak (small flow) <input type="checkbox"/> Break (large flow) <input type="checkbox"/> Other _____ Manhole: Up-MH: _____ Down-MH: _____ Private Connection to City System: <input type="checkbox"/> Sewer lateral (house/duplex) <input type="checkbox"/> Sewer lateral (apart/commercial) Other: <input type="checkbox"/> Illicit Connection	<input type="checkbox"/> Yard wastes/leaves <input type="checkbox"/> Source Unknown <input type="checkbox"/> Water Leak <input type="checkbox"/> Other WQ Prob (see details) <input type="checkbox"/> No WQ Problem Found <input type="checkbox"/> Drainage Problem _____ <input type="checkbox"/> Paint spill/release/dumping <input type="checkbox"/> Grease/Cooking oil/food wastes <input type="checkbox"/> Improper Housekeeping <input type="checkbox"/> Trash/Garbage in Channel <input type="checkbox"/> Contaminated Groundwater <input type="checkbox"/> Petroleum spill/release
--	--	---

Details, Sample Locations, Findings, Actions:
Large volume of sediment laden water was bypassing on-site control measures and draining into off-site ditch located along 14th St.

Continue on back, if necessary

<input checked="" type="checkbox"/> Need NOV? Date Sent <u>11-28-2018</u> NOV Sent to (usu. Prpty Owner): <u>4JPII, LLC Attn: Eddie White</u> Mailing Address: <u>1048 E. Arlington Blvd.</u> <u>Greenville NC 27838</u>	Departments copied on NOV: <input type="checkbox"/> Health Dept. <input type="checkbox"/> Land Qual <input type="checkbox"/> GUC <input type="checkbox"/> DOT <input type="checkbox"/> Pitt Co. <input type="checkbox"/> Other: _____	Photo File Name: _____ Respond to Complainant By: (date) _____ <input type="checkbox"/> Phone <input type="checkbox"/> Letter <input type="checkbox"/> In Person
--	---	--

**City of Greenville
Engineering Division**

Note: Shaded areas
should be filled in
before going out to field



**WATER QUALITY COMPLAINT /
INSPECTION RECORD**

Complainant's Description of Problem and Location:

Description: Sediment laden water being pumped directly into catch basin

Location: FKC Captain's Cove - 565 Regency Blvd.

Complaint from: Name: <u>City staff</u> Address: _____ Home Phone #: _____ Work Phone #: _____ Other: _____ (pager, e-mail, etc.)	Complaint Date and Source: Call date: <u>1-25-19</u> Time: <u>10:28 AM</u> <input type="checkbox"/> Hotline <input type="checkbox"/> Eng. Staff <input type="checkbox"/> Walk-In <input type="checkbox"/> Emerg. Mgt. <input type="checkbox"/> Call In <input type="checkbox"/> Health Dept. <input type="checkbox"/> DWQ <input checked="" type="checkbox"/> Erosion Ctrl. <input type="checkbox"/> Other City employee <input type="checkbox"/> Other _____	First Callback: Date: _____ Time: _____ Results Callback: Date: _____ <input type="checkbox"/> Phone <input type="checkbox"/> Letter <input type="checkbox"/> In Person	Investigation: Date: _____ Time: _____ Duration: _____ Team (initials of staff): <input type="checkbox"/> DB <input type="checkbox"/> KQ <input type="checkbox"/> LS <input type="checkbox"/> CJ <input type="checkbox"/> TC <input type="checkbox"/> VL <input type="checkbox"/> other
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Field Observations (if different):

Investigator's Description: Muddy water from site was being directly pumped into catch basin

Street Address (Nearest): 565 Regency Blvd.

Property Type: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential <input type="checkbox"/> Industrial <input type="checkbox"/> Unimproved	Observations: <input type="checkbox"/> Sheen <input type="checkbox"/> Odor <input type="checkbox"/> Floatables .. <input type="checkbox"/> Other	Drainage Basin: Crk _____ Sub-Basin _____ <input checked="" type="checkbox"/> Flow reached storm drain? <input type="checkbox"/> Flow reached creek?
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Probable Source of Water Quality Problem (check main items that apply): Construction Erosion & Sed: <input type="checkbox"/> Controls not provided <input checked="" type="checkbox"/> Controls not maintained <input type="checkbox"/> Sediment in drainage system On-site sewage treatment: <input type="checkbox"/> Discharging sand filter system <input type="checkbox"/> Failing septic leachfield <input type="checkbox"/> Piping failure, leak, etc (on-site only) <input type="checkbox"/> Laundry discharge (household)	City Sanitary Sewer System: <input type="checkbox"/> Overflow <input type="checkbox"/> Leak (small flow) <input type="checkbox"/> Break (large flow) <input type="checkbox"/> Other _____ Manhole: Up-MH: _____ Down-MH: _____ Private Connection to City System: <input type="checkbox"/> Sewer lateral (house/duplex) <input type="checkbox"/> Sewer lateral (apart/commercial) Other: <input checked="" type="checkbox"/> Illicit Connection	<input type="checkbox"/> Yard wastes/leaves <input type="checkbox"/> Source Unknown <input type="checkbox"/> Water Leak <input type="checkbox"/> Other WQ Prob (see details) <input type="checkbox"/> No WQ Problem Found <input type="checkbox"/> Drainage Problem _____ <input type="checkbox"/> Paint spill/release/dumping <input type="checkbox"/> Grease/Cooking oil/food wastes <input type="checkbox"/> Improper Housekeeping <input type="checkbox"/> Trash/Garbage in Channel <input type="checkbox"/> Contaminated Groundwater <input type="checkbox"/> Petroleum spill/release
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Details, Sample Locations, Findings, Actions:

City employee from erosion control drove by site + saw the pipe laying on the ground. He stopped to investigate + observed that muddy water from the site was being directly pumped into a (unprotected) catch basin. This catch basin drains to a stormwater treatment pond offsite that is owned by the neighboring property, Walmart - Neighborhood Market. City employee took photos + called in violation to stormwater management.

Continue on back, if necessary

<input checked="" type="checkbox"/> Need NOV? Date Sent <u>1-25-19</u> NOV Sent to (usu. Prpty Owner): <u>Eastern Medical Properties, LLC</u> Mailing Address: <u>511 Paladin Dr.</u> <u>Greenville, NC 27834</u>	Departments copied on NOV: <input type="checkbox"/> Health Dept. <input type="checkbox"/> Land Qual <input type="checkbox"/> GUC <input type="checkbox"/> DOT <input type="checkbox"/> Pitt Co. <input type="checkbox"/> Other: _____	Photo File Name: <u>2019-1-25 Captain's Cove Illicit Discharge Photos</u> Respond to Complainant By: (date) _____ <input type="checkbox"/> Phone <input type="checkbox"/> Letter <input type="checkbox"/> In Person
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**City of Greenville
Engineering Division**

Note: Shaded areas
should be filled in
before going out to field



**WATER QUALITY COMPLAINT /
INSPECTION RECORD**

Complainant's Description of Problem and Location:

Description: Paint crew washing brushes in street gutter + flowing to catch basin.
Location: Jack Place - Paramore Farms subdivision

Complaint from:
Name: Chris Cox - City Emp.
Address: _____
Home Phone #: _____
Work Phone #: _____
Other: _____
(pager, e-mail, etc.)

Complaint Date and Source:
Call date: 2-12-19
Time: 1 P.M.
 Hotline Eng. Staff
 Walk-In Emerg. Mgt.
 Call In Health Dept.
 DWQ Erosion Ctrl.
 Other City employee
 Other _____

First Callback:
Date: _____
Time: _____
Results Callback:
Date: _____
 Phone
 Letter
 In Person
Investigation:
Date: _____
Time: _____
Duration: _____
Team (Initials of staff):
 SG DN
 LK SM
 CM VL
 other

Field Observations (if different):

Investigator's Description: _____
Street Address (Nearest): _____

Property Type:
 Public Commercial
 Residential Industrial
 Unimproved

Observations:
 Sheen _____
 Odor _____
 Floatables _____
 Other white paint

Drainage Basin:
Crk _____
Sub-Basin _____
 Flow reached storm drain?
 Flow reached creek?

Probable Source of Water Quality Problem (check main items that apply):
Construction Erosion & Sed:
 Controls not provided
 Controls not maintained
 Sediment in drainage system
On-site sewage treatment:
 Discharging sand filter system
 Failing septic leachfield
 Piping failure, leak, etc (on-site only)
 Laundry discharge (household)

City Sanitary Sewer System:
 Overflow
 Leak (small flow)
 Break (large flow)
 Other _____
Manhole: Up-MH: _____
Down-MH: _____
Private Connection to City System:
 Sewer lateral (house/duplex)
 Sewer lateral (apart/commercial)
Other:
 Illicit Connection

Yard wastes/leaves
 Source Unknown
 Water Leak
 Other WQ Prob (see details)
 No WQ Problem Found
 Drainage Problem
 Paint spill/release/dumping
 Grease/Cooking oil/food wastes
 Improper Housekeeping
 Trash/Garbage in Channel
 Contaminated Groundwater
 Petroleum spill/release

Details, Sample Locations, Findings, Actions:

Paint crew on Jack Place in Paramore Farms subdivision were washing used paint brushes in the street. Paint-laden water was then flowing to catch basin.

Continue on back, if necessary

Need NOV? Date Sent 2-13-19
NOV Sent to (usu. Prpty Owner):
Front Line Painting Inc.
Mailing Address:
12869 Buck Rd. Lot 6
Middlesex, NC 27557

Departments copied on NOV:
 Health Dept. Land Qual
 GUC DOT
 Pitt Co. Other: _____

Photo File Name: _____
Respond to Complainant By:
(date) _____
 Phone Letter In Person



**WATER QUALITY COMPLAINT /
INSPECTION RECORD**

Complainant's Description of Problem and Location:

Description: Dirt in catch basins on Lord Ashley Dr.

Location: Lord Ashley Dr. catch basins

Complaint from: Name: _____ Address: _____ Home Phone #: _____ Work Phone #: _____ Other: _____ (pager, e-mail, etc.)	Complaint Date and Source: Call date: <u>5-1-19</u> Time: <u>11 AM</u> <input type="checkbox"/> Hotline <input type="checkbox"/> Eng. Staff <input type="checkbox"/> Walk-In <input type="checkbox"/> Emerg. Mgt. <input type="checkbox"/> Call In <input type="checkbox"/> Health Dept. <input type="checkbox"/> DWQ <input type="checkbox"/> Erosion Ctrl. <input checked="" type="checkbox"/> Other City employee <input type="checkbox"/> Other _____	First Callback: Date: _____ Time: _____ Results Callback: Date: _____ <input type="checkbox"/> Phone <input type="checkbox"/> Letter <input type="checkbox"/> In Person	Investigation: Date: <u>5-1-19</u> Time: <u>11:15 AM</u> Duration: <u>20 mins</u> Team (initials of staff): <input type="checkbox"/> DB <input type="checkbox"/> KQ <input type="checkbox"/> LS <input type="checkbox"/> CJ <input type="checkbox"/> TC <input type="checkbox"/> VL <input checked="" type="checkbox"/> other <u>SW</u>
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Field Observations (if different):
 Investigator's Description: _____
 Street Address (Nearest): _____

Property Type: <input type="checkbox"/> Public <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Industrial <input type="checkbox"/> Unimproved	Observations: <input checked="" type="checkbox"/> Sheen <input type="checkbox"/> Odor <input type="checkbox"/> Floatables <input type="checkbox"/> Other	Drainage Basin: Crk <u>Fork Swamp</u> Sub-Basin _____ <input type="checkbox"/> Flow reached storm drain? <input type="checkbox"/> Flow reached creek?
--	---	--

Probable Source of Water Quality Problem (check main items that apply): Construction Erosion & Sed: <input type="checkbox"/> Controls not provided <input type="checkbox"/> Controls not maintained <input type="checkbox"/> Sediment in drainage system On-site sewage treatment: <input type="checkbox"/> Discharging sand filter system <input type="checkbox"/> Failing septic leachfield <input type="checkbox"/> Piping failure, leak, etc (on-site only) <input type="checkbox"/> Laundry discharge (household)	City Sanitary Sewer System: <input type="checkbox"/> Overflow <input type="checkbox"/> Leak (small flow) <input type="checkbox"/> Break (large flow) <input type="checkbox"/> Other _____ Manhole: Up-MH: _____ Down-MH: _____ Private Connection to City System: <input type="checkbox"/> Sewer lateral (house/duplex) <input type="checkbox"/> Sewer lateral (apart/commercial) Other: <input type="checkbox"/> Illicit Connection	<input type="checkbox"/> Yard wastes/leaves <input checked="" type="checkbox"/> Source Unknown <input type="checkbox"/> Water Leak <input type="checkbox"/> Other WQ Prob (see details) <input type="checkbox"/> No WQ Problem Found <input type="checkbox"/> Drainage Problem <input type="checkbox"/> Paint spill/release/dumping <input type="checkbox"/> Grease/Cooking oil/food wastes <input type="checkbox"/> Improper Housekeeping <input type="checkbox"/> Trash/Garbage in Channel <input type="checkbox"/> Contaminated Groundwater <input type="checkbox"/> Petroleum spill/release
--	--	--

Details, Sample Locations, Findings, Actions:
 David Fields was camera-ing pipe on Lord Ashley Dr. + noticed oil covering camera + in catch basin. Shea McMurry responded + investigated. She observed sheen in both catch basins on Lord Ashley, but saw no sign of a source. She spoke with residents + they also had not seen anything. Catch basins upstream + down stream on Crown Point Rd + Martinsborough Rd, respectively, were inspected + did not show signs of an oil sheen or possible source. Fork Swamp branch was inspected + did not show any signs of being contaminated. There appeared to be no more than 2 gallons of oil in catch basins on Lord Ashley Dr.

Need NOV? Date Sent _____ Departments copied on NOV: _____
 NOV Sent to (usu. Prpty Owner): _____
 Mailing Address: _____
 Respond to Complainant By: _____
 (date) _____
 Phone Letter In Person



**WATER QUALITY COMPLAINT /
INSPECTION RECORD**

Complainant's Description of Problem and Location:

Description: Yard debris in street

Location: 201 Harmony

Complaint from:

Name: Darby Norris

Address: _____

Home Phone #: _____

Work Phone #: _____

Other: _____
(pager, e-mail, etc.)

Complaint Date and Source:

Call date: 7-22-19

Time: _____

- Hotline Eng. Staff
 Walk-In Emerg. Mgt.
 Call In Health Dept.
 DWQ Erosion Ctrl.
 Other City employee
 Other _____

First Callback:

Date: 7-22-19

Time: _____

Results Callback:

Date: _____

Phone

Letter

In Person

Investigation:

Date: 7-22-19

Time: _____

Duration: _____

Team (initials of staff):

DB KQ

LS CJ

TC VL

other

Field Observations (if different):

Investigator's Description: Yard debris in curbline

Street Address (Nearest): 201 Harmony

Property Type:

- Public Commercial
 Residential Industrial
 Unimproved

Observations:

- Sheen _____
 Odor _____
 Floatables _____
 Other _____

Drainage Basin:

- Crk _____
 Sub-Basin _____
 Flow reached storm drain?
 Flow reached creek?

Probable Source of Water Quality Problem (check main items that apply):

- Construction Erosion & Sed:**
 Controls not provided
 Controls not maintained
 Sediment in drainage system

- On-site sewage treatment:**
 Discharging sand filter system
 Failing septic leachfield
 Piping failure, leak, etc (on-site only)
 Laundry discharge (household)

City Sanitary Sewer System:

- Overflow
 Leak (small flow)
 Break (large flow)
 Other _____
 Manhole: Up-MH: _____
 Down-MH: _____

Private Connection to City System:

- Sewer lateral (house/duplex)
 Sewer lateral (apart/commercial)
 Other: _____
 Illicit Connection

- Yard wastes/leaves
 Source Unknown
 Water Leak
 Other WQ Prob (see details)
 No WQ Problem Found
 Drainage Problem
 Paint spill/release/dumping
 Grease/Cooking oil/food wastes
 Improper Housekeeping
 Trash/Garbage in Channel
 Contaminated Groundwater
 Petroleum spill/release

Details, Sample Locations, Findings, Actions:

Resident had placed leaves in street for city pick-up
 Informed resident that the yard debris needs to be
 At back of curb & not in street. Resident moved
 debris while I was onsite.

Continue on back, if necessary

Need NOV? Date Sent _____

NOV Sent to (usu. Prpty Owner): _____

Mailing Address: _____

Departments copied on NOV:

- Health Dept. Land Qual
 GUC DOT
 Pitt Co. Other: _____

Photo File Name: _____

Respond to Complainant By:
(date) _____

- Phone Letter In Person

Note: Shaded areas
should be filled in
before going out to field



**WATER QUALITY COMPLAINT /
INSPECTION RECORD**

Complainant's Description of Problem and Location:

Description: GREASE IN STORM DRAIN

Location: 1200 Clark Street

Complaint from:
Name: David Fields

Address: _____

Home Phone #: _____

Work Phone #: _____

Other: _____
(pager, e-mail, etc.)

Complaint Date and Source:
Call date: 7-26-19

Time: _____

- Hotline Eng. Staff
 Walk-In Emerg. Mgt.
 Call In Health Dept.
 DWQ Erosion Ctrl.
 Other City employee
 Other _____

First Callback:
Date: 7-26-19

Time: _____

- Results Callback:**
Date: _____
 Phone
 Letter
 In Person

Investigation:
Date: 7-26-19

Time: _____

Duration: _____

- Team (initials of staff):**
 DB KQ
 LS CJ
 TC XL
 other _____

Field Observations (if different):

Investigator's Description: No Grease seen

Street Address (Nearest): 1200 Clark St

- Property Type:**
 Public Commercial
 Residential Industrial
 Unimproved

- Observations:**
 Sheen _____
 Odor _____
 Floatables _____
 Other _____

- Drainage Basin:**
Crk _____
Sub-Basin _____
 Flow reached storm drain?
 Flow reached creek?

Probable Source of Water Quality Problem (check main items that apply):

Construction Erosion & Sed:

- Controls not provided
 Controls not maintained
 Sediment in drainage system

On-site sewage treatment:

- Discharging sand filter system
 Failing septic leachfield
 Piping failure, leak, etc (on-site only)
 Laundry discharge (household)

City Sanitary Sewer System:

- Overflow
 Leak (small flow)
 Break (large flow)
 Other _____
Manhole: Up-MH: _____
Down-MH: _____

Private Connection to City System:

- Sewer lateral (house/duplex)
 Sewer lateral (apart/commercial)
Other: _____
 Illicit Connection

- Yard wastes/leaves
 Source Unknown
 Water Leak
 Other WQ Prob (see details)
 No WQ Problem Found
 Drainage Problem _____
 Paint spill/release/dumping
 Grease/Cooking oil/food wastes
 Improper Housekeeping
 Trash/Garbage in Channel
 Contaminated Groundwater
 Petroleum spill/release

Details, Sample Locations, Findings, Actions:

No Grease seen in Any Catch basin. I will continue to look at the Area for any future issues.

Continue on back, if necessary

Need NOV? Date Sent _____

NOV Sent to (usu. Prpty Owner): _____

Mailing Address: _____

Departments copied on NOV:

- Health Dept. Land Qual
 GUC DOT
 Pitt Co. Other: _____

Photo File Name: _____

Respond to Complainant By:
(date) _____

- Phone Letter In Person

APPENDIX C

(Public Education)

Environmental Advisory Commission Grant

The grant cycle for 2018-2019 were focused on support of citizen activity in stormwater management education with local youth organizations (i.e. PTOs, science clubs...etc.) as the focus group.

A grant of \$600 for stormwater management education for 2019 was awarded to Wintergreen Primary School for installation of a stormwater cistern system to serve the schools community garden and educate students on the capture and use of stormwater.

From the grant application; “By the end of first grade, students in North Carolina are expected to know and understand that people need water, food, and air to support life in their local environment. Students must also know that humans depend on their natural and constructed environment in order to survive. Young children must also understand that water is an Earth material that is used to sustain plant and animal life. One of the most important objectives for students to understand is that humans can change their natural environment in ways that can benefit or harm humans or other living things. It is suggested that students have authentic hands on activities that help deepen their understanding of ways that they can help protect and improve environmental conditions.”

“In order to master these objectives and provide authentic experiences, a garden and raised flower beds have been constructed. Staff members have worked to build the gardens and raised planters, while the students have worked to plant seeds and plants, add rocks and mulch, and move dirt. We have used a variety of materials, including pallets which have provided an opportunity to teach students how things can be reused. Students will be in charge of planting, weeding, and caring for the plants in the gardens after they have had a presentation from a landscaper on proper plant care. We would like to use rain collection barrels to collect rainfall that can be used on days that it has not rained. Students will use the rain collected in the barrel to water the plants in the garden as needed. One of the major benefits of these gardens is that they will not only benefit the current year's first grade students, but they will be used as ongoing project that each new group of first grade students can participate in throughout the years to come. The gardens will be a great hands-on experience for the students to not only interact with their local environment by caring for plants, but it will also illustrate how we can positively sustain plant life using water which is an Earth Material. The water collection will also prevent water from running into our storm drains and then further downstream.”

At the completion of the grant cycle, representatives from Wintergreen Primary School will present the project report to the City's EAC during the June 2020 meeting.

No applications were received for the 2018 EAC Grant so there was no final report or presentation at the June 2019 meeting. Funds last year were instead redirected to promotional items for the other educational booths and events.

ECU Partnership - Sidewalk Stenciling

The City of Greenville and East Carolina University have been working to develop a broader community understanding of storm water pollution and the relationship between clean storm drains (and adjacent surfaces) and clean streams. Enhanced awareness of the connections between our land management decisions, storm drains, and streams can help improve water quality in Greenville's streams, the Tar River and the Pamlico River estuary downstream. This collaborative project involved ECU students, professors, and City of Greenville staff. The goal was to enhance public awareness about the connection between storm sewers and streams.

During Spring 2019 semester design students developed stormwater stencil designs. The students used cutting-edge graphic design software and laser cutters to make detailed stencils that can be painted on local storm drains. Their approach to use hydrophobic paint allows the stencils to appear during storm events to enhance public awareness of the stormwater-stream connections in Greenville, NC. At the end of the semester students presented their designs to City of Greenville staff, ECU faculty, and their peers. The top designs were selected by City Officials to be stenciled on select drains in uptown Greenville and featured in the Art Walk. Fact sheets and brochures were also developed and handed out to participants of the Art Walk

Fact Sheets/Brochures/Other Educational Outreach

Informational materials continued to be distributed during this reporting cycle were fact sheets on common sources of stormwater pollution, protection of riparian buffers and the City's storm drain stenciling program along with rain gauges during the annual Pirates Festival event that is the largest City event of the year. Throughout the year we distribute fact sheets and brochures at presentations; special events; such as Citizen's Academy, City Commissions and to the general public in order to educate on specific concerns.

The City continues to work towards the development of further stormwater related brochures covering such topics as stormwater requirements for new development and redevelopment projects, maintenance practices by the City on open and closed storm drainage systems, street acceptance, commercial car wash operations and illicit discharge issues associated with restaurants.

Presentations

2018-2019

DATE	TOPIC	DESCRIPTION	ATTENDEES
17-Jan-19	Watershed Master Plan Progress – Neighborhood Advisory Board	Presentation of progress of the Watershed Master Plans. Discussed prioritization, funding, and construction schedule.	16
6-Dec-18	Stormwater Annual Report - Environmental Advisory Commission	Presentation of City’s stormwater program, ordinances, utility, and water quality and quantity regulations.	10
9-Apr-19	GUC Breakfast	Brochures on illicit discharges, illicit connections, and storm sewer conflicts	175+
6&7-Mar-19	Wintergreen Primary School Enviroscape Presentation	Presentation of the enviroscape model. Discussed water quality, pollution, recycling, bmps, erosion, and natural protective measures.	150+
31-Jan-19	Town Creek Culvert Public Meeting	Presentation of Town Creek Culvert Project. Discussed property impacts, BMP locations, BMP maintenance, and construction schedule.	75+
4-Apr-19	Stormwater Advisory Committee Recommendations – City Council Meeting	Presentation of recommended stormwater program improvements including capital projects, operating, level of service, staffing, and funding.	30+
10-Oct-18	Chamber of Commerce Leadership Institute	Presentation of Town Creek Culvert Green Infrastructure Project	30+
14-Jan-19	Sierra Club	Presentation of Town Creek Culvert Green Infrastructure Project	50+
21-Mar-19	“Grow Local” South Central Young Engineers Club	Presentation of Town Creek Culvert Green Infrastructure Project and Erosion Control Program	40+
5-Apr-19	Interview with Daily Reflector	News article on Water Quality and Green Infrastructure	1000+

*Brochures on Stormwater Pollution Prevention, IDDE, Adopt-A-Street program, Storm Drain Stenciling Program were provided at all locations.

<https://www.wnct.com/news/storm-water-project-begins-at-jaycee-park-in-greenville/>

<http://www.reflector.com/News/2019/01/05/Stormwater-project-to-begin-at-Jaycee-Park-on-Monday.html>

<https://issuu.com/cookecommunicationsnc/docs/gmg-042619>

Technical Workshops

2018-2019

DATE	TOPIC	DESCRIPTION	ATTENDEES
2-Oct-19	Stormwater Advisory Committee	In depth discussion and evaluation of the City's stormwater program, ordinances, utility, and water quality and quantity regulations.	20+
3 Occurrences	Stormwater Advisory Committee Recommendations – City Council Workshop	Presentation of recommended stormwater program improvements including capital projects, operating, level of service, staffing, and funding.	30+
10-Apr-19	APA Section 5 Workshop	Town Creek Culvert Green Infrastructure Project	75+

*Brochures on Stormwater Pollution Prevention, IDDE, Adopt-A-Street program, Storm Drain Stenciling Program were provided at all locations.

Other Educational Efforts

2018-2019

DATE	TOPIC	DESCRIPTION	ATTENDEES
2 Occurrences	Paint the Drain – L.A.S.T. Stenciling	Storm drain stenciling in multiple locations across the city.	3
16-Mar-19	A Time For Science – Science Fair	Presentation of the enviroscape model. Discussed water quality, pollution, recycling, bmps, erosion, and natural protective measures.	300+
1-Apr-19	PirateFest	Painting and stenciling cisterns, distribution of educational brochures and materials, promotional giveaways	1000+
3&4-Oct-2019	ECU Sidewalk Stenciling & Art Walk	Sidewalk Stenciling and distribution of educational brochures and materials during Art Walk event.	100+
328 Occurrences	Adopt a Street	82 Volunteer Organizations cleaning trash from City Streets 4 times per year each	800+

*Brochures on Stormwater Pollution Prevention, IDDE, Adopt-A-Street program, Storm Drain Stenciling Program were provided at all locations.



Stormwater runoff is one of the greatest threats to our rivers and streams. Runoff is channeled into storm drains and discharged directly to streams. The untreated water carries pollutants from surrounding land areas.



The City of Greenville and ECU partnered to develop stormwater stencils to remind citizens of the connection between storm drains and waterways. These stencils are employed with use of hydrophobic paint, which creates a barrier between concrete and rain by repelling water.



Stencil designs were chosen to be painted on various storm drains in Uptown. See if you can find them when it rains, and take a stroll through the park to see all of the stencil designs that were created for this collaborative project!



It is all Connected! Storm Drains and Links to Our Streams!

City of Greenville/ECU Town Creek Project

Storm Water Runoff

Storm water runoff is water from precipitation that is not absorbed into the ground due to impervious cover such as parking lots and roads. Storm water runoff is a concern because it causes flooding, and it carries pollutants that contaminate rivers/streams. Storm water pollutants are contaminants at the land surface that are picked up and carried by storm water to streams.



Storm Water Pollutants

These pollutants include litter/trash, pet waste, road salt, fertilizers, pesticides, chemicals from motor vehicles, detergents typically connect the drained surface with local streams. The City of Greenville and ECU have been working to develop a broader community understanding of storm water pollution and the relationship between clean storm drains (and adjacent surfaces) and clean streams. Enhanced awareness of the connections between our land management decisions, storm drains, and streams can help improve water quality in Greenville's streams, the Tar River and the Pamlico River estuary downstream. This collaborative project involved ECU students, professors, and City of Greenville staff. The goal was to enhance public awareness about the connection between storm sewers and streams.

Storm Drains Connect to Our Streams

During Spring 2019 semester design students developed stormwater stencil designs. The students used cutting-edge graphic design software and laser cutters to make detailed stencils that can be painted on local storm drains. Their approach to use hydrophobic paint allows the stencils to appear during storm events to enhance public awareness of the stormwater-stream connections in Greenville, NC. At the end of the semester students presented their designs to City of Greenville staff, ECU faculty, and their peers. The top designs were selected by City Officials to be stenciled on select drains in uptown Greenville and featured in the Art Walk.



How We can Help Prevent Storm Water Pollution!



- Use designated receptacles for litter/trash and recyclables (don't throw trash in streets or gutters where it can be washed into culverts and
- Use designated receptacles for pet waste to prevent bacterial contamination
- Use lawn and garden fertilizers sparingly to decrease nutrient supply
- Schedule regular vehicle maintenance and repairs to prevent fluid leakage, and properly dispose of batteries, motor oil and other hazardous chemicals
- Properly dispose of household cleaners/chemicals and paint, never pour hazardous chemicals into yard/street/storm drains
- Use non-toxic alternatives to traditional household cleaners
- Bag and properly dispose of yard debris (grass clippings/leaves) and don't sweep into streets where they can clog storm drains
- Properly dispose of expired medication, never flush in toilet or pour
- Limit pesticide use and implement Integrated Pest Management (IPC) that combine techniques of biological control, habitat manipulation, and resistant varieties



ATTACHMENT D

(Draft Calendar)

Action: For your review.

PROPOSED EAC SCHEDULE

February 6, 2020

1	<u>2020-2021 EAC GRANT:</u> Reminder to promote
2	
3	
4	
5	
6	

PROPOSED EAC SCHEDULE

March 5, 2020

1	<u>2020-2021 EAC GRANT:</u> Reminder to promote
2	
3	
4	
5	
6	

PROPOSED EAC SCHEDULE

April 2, 2020

1	
2	<u>2020-2021 EAC GRANT:</u> Review & discuss
3	
4	
5	
6	

PROPOSED EAC SCHEDULE

May 7, 2020

1	<u>2020-2021 EAC GRANT:</u> Approve award recipient
2	
3	
4	
5	
6	

PROPOSED EAC SCHEDULE

June 4, 2020

1	<u>EAC GRANT RECOGNITION CEREMONY:</u> Presentation.
2	
3	
4	
5	
6	

PROPOSED EAC SCHEDULE

N/A

1	<u>NO MEETING</u>
2	
3	
4	
5	
6	

PROPOSED EAC SCHEDULE

August 6, 2020

1	
2	
3	
4	
5	
6	

PROPOSED EAC SCHEDULE

September 3, 2020

1	
2	
3	
4	
5	
6	

PROPOSED EAC SCHEDULE

October 1, 2020

1	<u>2019-2020 EAC GRANT:</u> Discussion
2	
3	
4	
5	
6	

PROPOSED EAC SCHEDULE

November 5, 2020

1	<u>2021 GOALS & OBJECTIVES:</u> Discussion
2	<u>COUNCIL PRESENTATION:</u> Discussion
3	<u>STORMWATER:</u> Annual report to State
4	
5	
6	

PROPOSED EAC SCHEDULE

December 3, 2020

1	<u>COUNCIL PRESENTATION:</u> Review Draft
2	<u>2021 GOALS & OBJECTIVES:</u> Review Draft
3	
4	
5	
6	

PROPOSED EAC SCHEDULE

January 7, 2021

1	<u>ELECTIONS</u>
2	<u>COUNCIL PRESENTATION:</u> Finalize
3	<u>2021 GOALS & OBJECTIVES:</u> Finalize
4	<u>DRAFT CALENDAR:</u> Review
5	
6	