Environmental Advisory Commission

February 2, 2017

5:30pm City Council Chambers

Agenda

Greenville NORTH CAROLINA

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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 January 5, 2017 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. New Business

a. Wastershed Master Plan Update (Attachment B) (20 mins) – L. Kirby
b. Town Creek Culvert Update (Attachment C) (10 mins) – L. Kirby
c. Stormwater Annual Report (Attachment D) (15 mins) – D. Norris

VIII. Old Business

a. Council Presentation Update (5 mins) – D. Tyson
b. Clean Energy Symposium Update (5 mins) – D. Ames

IX. Other – FYI

X. Proposed Agenda Items – March 2, 2017

a. Keep Greenville Beautiful Update
b. 2017-2018 EAC Grant
c. Goals/Work Plan – Establish work plan and action items
d. Plastic Bag Resolution – Update on staff assignment

XI. Adjourn

Items for Future Consideration

_____ _____

_____ _____

_____ _____

2017

Board Members

Chair

1. Durk Tyson

Commission Members

2. David Ames
3. Drake Brinkley
4. Nathaniel Hamilton
5. Emilie Kane (Vice-Chair)
6. Ann Maxwell
7. Vacant

Ex-officio

Kevin Mulligan
(Public Works)

Staff Liaison

Daryl Norris
(Public Works)

City Council Liaison

McLean Godley

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

(January 5, 2017 Minutes)

Action: For your review and approval.

DRAFT OF MINUTES PROPOSED FOR ADOPTION BY THE ENVIRONMENTAL ADVISORY COMMISSION
January 5, 2017

CALL TO ORDER

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

1. ROLL CALL

MEMBERS:

David Ames
Drake Brinkley
Durk Tyson
Emilie Kane
Ann Maxwell

OTHERS PRESENT:

Daryl Norris, City of Greenville
Amanda Braddy, City of Greenville
Lamont Jackson, City of Greenville
Chad Carwein, ECU

2. PLEDGE OF ALLEGIANCE

3. ADDITIONS/DELETIONS TO THE AGENDA

Mr. Tyson requested New Business Item C be added to discuss the Active Transportation Committee. Dr. Ames also requested an update for the Clean Energy Symposium and Plastic Resolution be added for discussion in Old Business. A motion was made by Ms. Maxwell to approve the agenda as amended. Dr. Kane seconded and the motion passed unanimously.

4. APPROVAL OF NOVEMBER 3, 2016 MINUTES

Dr. Ames requested clarification in Old Business Item A. Ms. Braddy will correct the minutes to reflect Dr. Ames concern in the EAC's role of the presentation to Council for the Plastics Resolution. A motion was made by Dr. Ames to approve the minutes of November 3, 2016 as amended. The motion was seconded by Ms. Maxwell and passed unanimously.

5. ANNOUCEMENTS

- Ms. Maxwell stated she felt the Clean Energy Symposium held in December was a huge success and thanked Dr. Ames and Mr. Carwein for their efforts in arranging the symposium.

6. PUBLIC COMMENT PERIOD

There were no comments from the public.

7. NEW BUSINESS

A. Elections

Dr. Kane made a motion to nominate Mr. Tyson as the Chair for the upcoming year. Mr. Tyson accepted the nomination and nominated Dr. Kane as Vice-Chair. A motion was made by Dr. Ames to receive the nominations. The motion was seconded by Mr. Brinkley and passed unanimously.

B. Greenville Transportation Activity Center Update

Mr. Lamont Jackson, Transit Director with the City of Greenville, was present to give an update on the Greenville Transportation Activity Center (GTAC). Mr. Jackson stated the project has moved to the construction phase and is scheduled for completion in December 2017. Mr. Jackson also stated the GTAC will replace the transfer station at Reade Circle and will accommodate Transit vehicles as well as ECU Transit, Greyhound, PATS, Amtrak and taxi services.

C. Active Transportation Master Plan Committee Representative Request

Mr. Tyson stated that with the departure of Mr. Weaver from EAC, a new representative will need to be elected to represent EAC on the Active Transportation Master Plan Committee. Mr. Tyson asked if anyone would volunteer to serve on this committee. Ms. Maxwell volunteered and will attend the next meeting scheduled for February 28, 2016 from 10am – 12noon in City Hall Conference Room 337.

8. OLD BUSINESS

A. Council Presentation

Mr. Tyson requested members review the presentation as presented in the agenda package and provide comments or revisions by 12 noon on Friday, January 6, 2017. Mr. Tyson will be giving the presentation to Council on January 9, 2017 and invited members to attend.

B. Goals & Objectives

Mr. Tyson stated the 2017 Goals & Objectives for the EAC need to be established and directed attention to the 2016 Goals & Objectives for review. Ms. Maxwell stated that most of the goals currently in place are active goals and should continue.

Upon reviewing the current goals, it was determined that the current goals & objectives would remain in place for the 2017 year with the following adjustments:

Goal 1. Add Recycling as an action item

Goal 2. Discuss assignments in New Business Item D

Update Action Item B to read "Meet with individual Council Members to discuss importance of environmental issues relevant to Greenville."

Goal 3. Remove action item for Plastic Bag Resolution.
Add action item to discuss recycling in medical/commercial areas of Greenville.

Goal 4. Add action item to update on Stormwater Committee activities.

Goal 6. Add action item to explore feasibility of Sustainability Coordinator for the City of Greenville.

C. Draft Calendar

Mr. Tyson directed attention to the draft calendar for EAC in the agenda package and asked members to make suggestions for topics of discussion they would like to address throughout the upcoming year. Mr. Tyson requested a field trip to ECVC be taken in September if possible. Staff will work to coordinate this and report back to members. The commission assignment reports will also be added to the calendar once assignments have been established.

D. Commission Assignments

Mr. Tyson reviewed the list of commission assignments by EAC members. Mr. Tyson noted the Recreation and Parks Commission and Planning & Zoning Commission needed an EAC representative. Ms. Maxwell asked if another member would be available to take the Public Transportation & Parking Commission assignment.

Upon further review, Mr. Brinkley made a motion to make the following assignments for Commission reports upon acceptance of Dr. Hamilton's assignment to Recreation & Parks Commission:

Redevelopment Commission - Durk Tyson
Greenville Utilities Commission - Durk Tyson
Greenville Bike & Pedestrian Commission - Emilie Kane
Recreation & Parks Commission - Nathaniel Hamilton

Community Appearance Commission - David Ames
Neighborhood Advisory Board - Ann Maxwell
Public Transportation & Parking Commission - Emilie Kane
Planning & Zoning Commission - Drake Brinkley

The motion was seconded by Ms. Maxwell and passed unanimously.

E. Clean Energy Symposium Update
This item was not discussed and will be added to the February 2, 2017 meeting agenda.

F. Plastic Resolution
Mr. Norris reported that Council requested a City staff person be assigned to research and investigate the components of the Plastic Resolution. Mr. Norris will report at the March 2, 2017 EAC meeting with an update on the staff assigned and progress made in developing an action plan.

9. OTHER– FYI

A. Recycling Report
No report given

10. PROPOSED AGENDA ITEMS
The following items are proposed for the February 2, 2017 meeting:

A. Council Presentation Update
B. Watershed Master Plan Update
C. Town Creek Culvert Update
D. Stormwater Annual Report

11. ADJOURNMENT
There being no further business to discuss, Ms. Maxwell made a motion to adjourn. The motion was seconded by Mr. Brinkley and passed unanimously.

ATTACHMENT B

(Watershed Master Plan)

Action: For your information.

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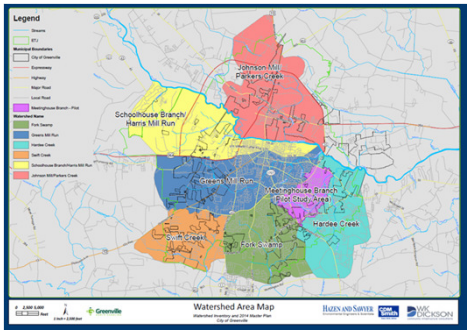
2.2.2017

Watershed Master Plan Overview



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Agenda

- Watershed Master Plan (WSMP) Overview
- Implementation
- Operational Impacts (Maintenance/ Ordinance)
- Utility Impacts

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Data Collection

No inventory of the closed system and had just begun mapping open system being maintained by the City…

The following was collected for project:

- 1.25 M linear feet (lf) of pipe – 237 miles
- 17,000 drainage structures
- 236,000 lf of stream walks – 44 miles

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Benefits of Inventory

Moving from reactive to proactive

- Debris blockages removed
- Broken structures repaired
- Illicit discharges
- System connectivity
- Increased efficiency for maintenance and service calls

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Public Outreach

- Stakeholder Meetings
- Project website
- Public meetings - 9
- Local events
  - Sunday in the Park
  - Freeboot Fridays
- Neighborhood Advisory Board
- Survey questionnaires - 230

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Modeling

- Model results show existing and future level of service (LOS)
- Results for existing LOS validated against data collected in public outreach efforts
- Future build-out conditions based on City and County zoning, land use plans, and feedback from City Planning

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Recommendations

Culvert/Bridge Improvements

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Recommendations

Floodplain Storage/Benching

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Recommendations

Closed System Improvements

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Recommendations

Detention

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Recommendations

Stream Stabilization

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Prioritization

- Projects within each watershed prioritized based on 9 categories
- Four prioritization lists for each watershed created based on project type
- Primary flood control projects may be grouped based on dependency on other projects
- Prioritization consistent across watersheds to create Citywide Prioritization lists

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Prioritization

Prioritization can be adjusted for numerous reasons:

- Development
- Failures
- Funding (MOAs, grants, loans, etc.)

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Summary of Costs

Maintenance Costs	$ 230M
Capital Costs	$ 150M
Operational Costs	$ 3M
Annual Needs =	$15M/YR

Annual Utility Revenue = $5.5M

Prioritization is paramount!

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Results

- Asset inventory
- Prioritized list of Capital Projects
- Recommendations for development regulations
- Assessment of stream health and water quality on impaired streams

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What do we do with this information?

- Immediate impacts to Operations
- Immediate impacts to Stormwater Ordinance
- Stormwater Advisory Committee (stakeholder group)

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Operational Impacts

- Inventory/Video
- Condition Assessment
- Infrastructure Inspection
- Asset Management

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Ordinance Impacts

- Identify areas for 25 year detention
- Require inspections during construction

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Stormwater Advisoy Committee (SWAC)

- Committee of 9 members
- Kick-off Meeting
  - Friday, February 3rd
- Main Objectives
  - Development Regulations
  - Pursuit of 4B/4C status for GMR and de-listing for Swift Creek
  - Project Implementation
  - Impacts to Utility Rate Structure

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Thank You

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ATTACHMENT C

(Town Creek Culvert)

Action: For your information.

Memorandum

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TO: Barbara Lipscomb, City Manager

FROM: Kevin Mulligan, PE, Director of Public Works

DATE: January 25, 2017

SUBJECT: Town Creek Culvert – Update

Town Creek Culvert Storm Drain Improvements consist of rehabilitating and replacing segments of the aging stormwater conveyance system that conveys runoff from an existing highly urbanized 308.6 acre watershed, with an additional 45.6 acres included with a future NCDOT project, while installing a variety of BMPs that will remove Total Suspended Solids, Nitrogen and Phosphorus from the watershed.

The proposed project was advertised initially with a bid opening scheduled for September 21, 2016. The Public Works Department received one (1) bid. Complying with state purchasing laws, the bid was returned, and the project was re-advertised with a bid opening date of October 19, 2016. Public Works received one (1) bid. As dictated by purchasing laws, the bid was opened and read publically.

The bid exceeded the City's budget for the project, and Public Works began negotiations with the contractor. It became apparent early on that to reduce the cost, the City would need to modify the scope. As a result, the Public Works Department has moved forward with the scope changes that include phasing to allow more contractors the opportunity to bid on the project. In addition, utility relocations will be reviewed for opportunities to simplify construction sequences.

This scope modification will require an amendment to be filed for the approved Engineering Report with the NC Division of Water Infrastructure. Public Works intends to advertise the updated project in the summer of 2017.

Should you have any questions, do not hesitate to contact me.

cc: Lisa Kirby, PE, Senior Engineer

1021129

ATTACHMENT D

(Stormwater Annual Report)

Action: For your information.

Greenville
NORTH CAROLINA
PUBLIC WORKS

October 30, 2016

Jim Hawhee
NC DWQ – Nonpoint Source Planning Unit
1617 Mail Service Center
Raleigh, NC 27699-1617
(919) 807-6438
Jim.hawhee@ncdenr.gov

RE: CITY OF GREENVILLE
TAR-PAMLICO RIVER BASIN 2014-2015 & 2015-2016 ANNUAL STORMWATER REPORTS

Dear Mr. Hawhee:

Enclosed is the Annual Report for the City of Greenville's Stormwater Management Program. This report is for the period of **October 2014 – September 2016**.

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

Sincerely,

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

cc: Mike Randall – NC DWQ
Kevin Mulligan, PE – Director of Public Works
Scott P.M. Godefroy, PE – City Engineer
Lisa Kirby, PE, CFM, – Senior Engineer
Environmental Advisory Commission

Annual Report for:

City of Greenville
Stormwater Management Program

Date Prepared:
October 2016

Reporting Period:
October 2014 – September 2016

Prepared by:	**Prepared for:**
Daryl Norris, PE, CFM, CPSWQ	Jim Hawhee
Civil Engineer II, Stormwater	Senior Environmental Specialist
City of Greenville – Public Works Department	NC DWR - Nonpoint Source Planning Unit
1500 Beatty Street	1617 Mail Service Center
Greenville, NC 27834	Raleigh, NC 27699-1617
252-329-4350	919-807-6438
dnorris@greenvillenc.gov	Jim.hawhee@ncdenr.gov

I. EXECUTIVE SUMMARY

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

1. New Development Review/Approval
2. Compliance and Enforcement
3. Illegal Discharges
4. Retrofit Opportunities
5. Public Education

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 Section 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 did not receive any eligible applications and the funds were utilized for large capital projects like Town Creek Culvert Drainage Project and the Watershed Master Plans. The City will continue to accept applications and rank projects and will resume this effort in 2016 with available funds for eligible projects.

Watershed Master Planning Update:

During the 2012-13 reporting cycle, the City completed the pilot watershed master plan (WMP) for the Meetinghouse Branch watershed along with the development of standard operating procedures (SOPs) for watershed master planning. 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.

Since the completion and presentation of the Meetinghouse Branch Watershed Master Plan, City Council recognized the importance of these plans and their impacts on the Stormwater Utility Fund. As a result, the remaining watershed plans were completed so that the City can expend Stormwater Utility funds in a prudent manner. Based on the volume of work (inventory, modeling and project prioritization), multiple prime contracts were awarded in May 2014 and completed and presented to City Council in August 2016. The City's master plans capture public infrastructure and develop and prioritize projects for both flood retention and water quality throughout the city.

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, beyond routine, vegetative/nuisance management, is 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.

II. PROGRAM ELEMENT: New Development Review/Approval

October 2014 – September 2015

Development Types	Total # Projects		Total # Acres	
	Neuse	Tar-Pam	Neuse	Tar-Pam
New development projects meeting rule criteria	4	11	3.08	83.12
New development projects requiring BMP's	0	3	0	17.84
New development projects requiring Peak Rate Match	1	5	3.08	27.73

Best Management Practices (BMP) Nutrient Removal Efficiencies	Number of BMPs Implemented in the Tar-Pamlico Basin
Wet Detention Pond	2
Stormwater Wetland	0
Sand Filter	0
Bioretention	0
Grass Swales	0
Proprietary Device	1
Vegetated Filter Strip w/ Level Spreader	0
Dry Detention	1
Total Number of BMPs Implemented (Approved)	**4**

A summary table is provided in Appendix A for new development and redevelopment projects subject to the Rule during the 2014-2015 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.

October 2015 – September 2016

Development Types	Total # Projects		Total # Acres	
	Neuse	Tar-Pam	Neuse	Tar-Pam
New development projects meeting rule criteria	9	15[1]	138.82	139.41
New development projects requiring BMP's	3	5	68.84	52.06
New development projects requiring Peak Rate Match	9	12	138.82	74.81

[1] Two of the 15 projects were a new phase of a previously approved project and were within the previously approved allocations.

Best Management Practices (BMP) Nutrient Removal Efficiencies	Number of BMPs Implemented in the Tar-Pamlico Basin
Wet Detention Pond	7
Stormwater Wetland	3
Sand Filter	0
Bioretention	0
Grass Swales	0
Vegetated Filter Strip w/ Level Spreader	0
Dry Detention	0
Total Number of BMPs Implemented (Approved)	**10**

A summary table is provided in Appendix A for new development and redevelopment projects subject to the Rule during the past 2015-2016 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	2013	2014	2015	2016
Construction projects completed and signed off	17	10[1]	6	3
Construction projects with enforcement action taken for deficient stormwater systems	0	0	0	0

Operation & Maintenance Compliance and Enforcement	2013	2014	2015	2016
Total of newly completed projects[2]	87	92	98	100
Projects submitting reports	17	63	83	79
Projects inspected by COG	35	92	98	100
Projects with deficiencies	19	49	31	30
Projects w/ deficiencies corrected[3]	0	16	17	6
Projects taking steps to correct deficiencies[4]	NA	10	10	29
Projects w/ enforcement action taken	0	23	21	1

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

[2]This 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.

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

[4] These 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.

Description of any compliance issues:

Construction-
There are no current construction issues or concerns.

Operation and Maintenance-
2014-2015
Out of the 98 sites inspected during this permit cycle, 31 were found to have deficiencies; of which 21 were undergoing enforcement action and 10 were still within their 90 day response period from the City of Greenville's notice of deficiency to complete the necessary corrective actions.

2015-2016
Out of the 100 sites inspected during this permit cycle, 30 were found to have deficiencies; of which 1 was undergoing enforcement action and 27 were still within their 90 day response period from the City of Greenville's notice of deficiency to complete the necessary corrective actions and 2 had submitted a plan of action to address the deficiency.

Inspection forms and copies of the annual reports are on file at the City of Greenville Public Works 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-

2014-2015
Out of the 98 sites inspected during this permit cycle, 21 were under Notice of Violation (NOV) with 12 of those progressing to Civil Penalty.

2015-2016
Out of the 100 sites inspected during this permit cycle, 1 was under Notice of Violation (NOV) with 0 of those progressing to Civil Penalty.

The most common violations include:

- Lack of response to correspondence and/or acknowledgment of deficiencies.
- Lack of receiving maintenance logs or annual reports.
- Management or ownership changes.

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. In addition, Appendix B includes copies of the initial reports. As noted in the table several of the issues were reported to the City by crews working on the WMP. 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 Department.

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.

In addition to updating our jurisdiction-wide information, the City moved forward with a City-wide WMP process outlined in the Executive Summary of this report. The WMP process utilized the SOPs developed to complete a City wide storm municipal separate storm sewer system (MS4) inventory that collected all MS4 as well as all open and closed systems draining to the outfall. The inventory was completed with survey-grade GPS and traditional surveying techniques and is maintained in a GIS geodatabase. Specific to illicit discharge detection and elimination (IDDE), the inventory process included an assessment of each MS4 structure (inlet, manhole, outfall…etc.) of whether or not any water flow was present in the system. When present, the flow was evaluated by the survey crew for odor or discoloration and when such characteristics were observed, City staff followed-up within 48 hours to determine if an illicit discharge or illegal connection were present. Such instances are documented and maintained within the GIS geodatabase for future reference.

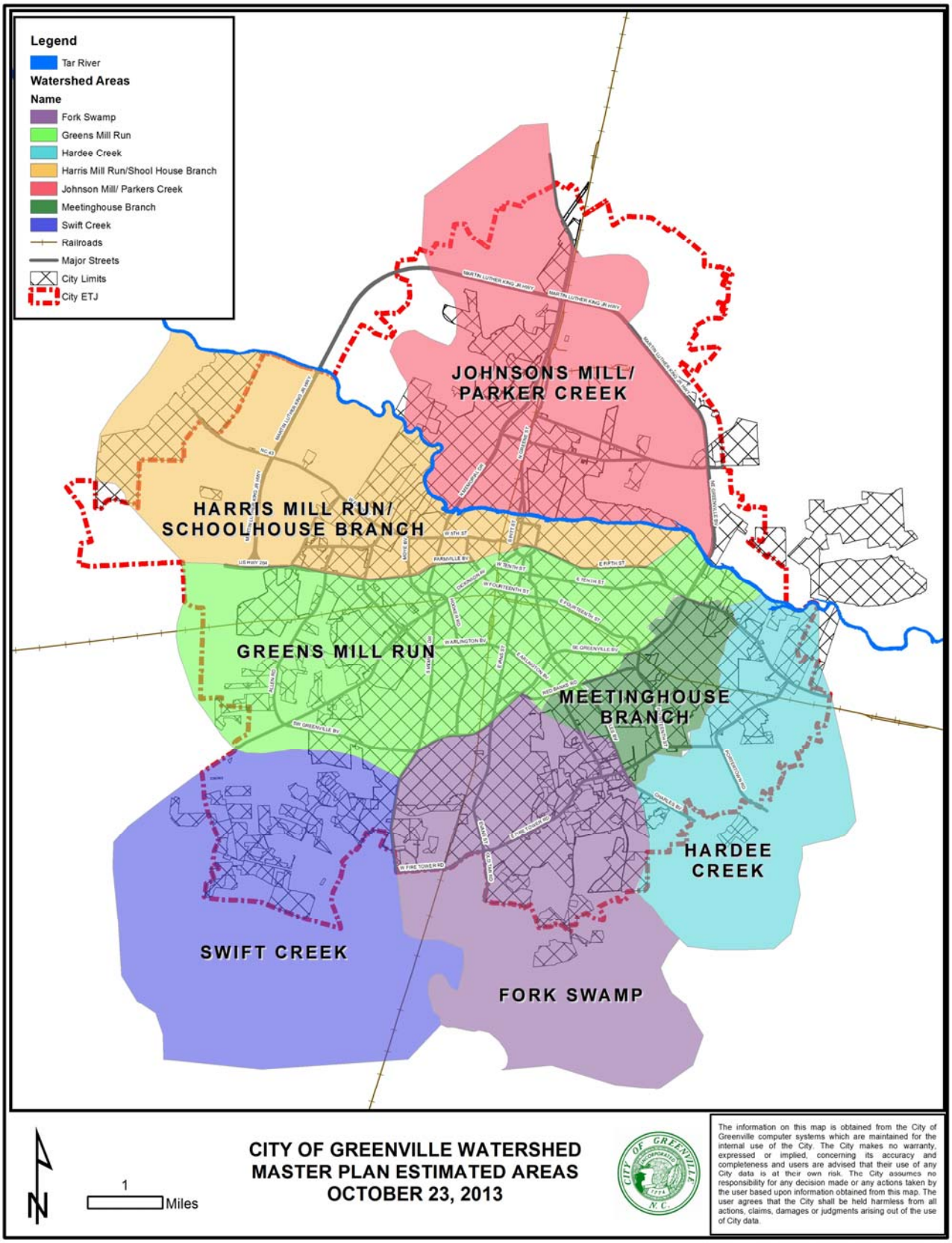
As a result of the above outlined plan of action for the MS4 inventory the City has completed dry weather inspections across our entire jurisdiction. For clarification, the map of the watersheds inventoried through the WMP process has been provided to represent the outfall screening areas completed in accordance with the Tar-Pamlico Stormwater Rule.

2014-2015

SITE	VIOLATION	ACTIONS TAKEN	NOV SENT	RESPONSIBLE PARTY
Topaz Drive	Someone in the neighborhood dumping oil in stormdrain. No evidence of the specific source.	Mailed letter to entire block detailing the ordinance and how to properly dispose of used oil.	No	unknown
1400 Charles Blvd	A China King Employee was washing exhaust vents covered with grease over a drop inlet.	Instructed employee to use the washout area present on site and management to ensure all new employees aware of proper procedure.	Yes	China King
2615 Jefferson Drive	Resident dug a trench to allow sewage to run from under their house to a drop inlet in the front yard	Owner repaired the sewage leak, filled the trench, and treated the affected area with Borax.	Yes	Battle Properties, LLC
317 St. Andrews Drive	City staff investigating a drainage ditch found a drain hose in the ditch coming from a neighboring swimming pool.	Owner was instructed to remove the direct discharge or ensure that all discharges have been properly dechlorinated.	No	Michelle Vera

2015-2016

SITE	VIOLATION	ACTIONS TAKEN	NOV SENT	RESPONSIBLE PARTY
420 Cotanche St	Overfilled grease recycle container behind the Blackened Kracken spilled.	Owner emptied container and cleaned the affected area.	No	Blackened Kracken
2420 Emerald Place	Sewer leaking out of 2 clean outs and discharging to storm drain.	Owner had a plumber clear the blockage in the sanitary line and clean up the discharge in the parking lot.	Yes	Wesley Measamer & Robert Duncan
Dickenson Ave & 10th St	Century Link boring operations by P&H Underground hit a water main creating a large discharge and sediment plume.	Greenville Utilities repaired the main, P&H with assistance from CSX railroad repaired the washout and cleaned up the sediment and flushed drain lines.	Yes	P&H Underground


Legend
Tar River
Watershed Areas
Name
Fork Swamp
Greens Mill Run
Hardee Creek
Harris Mill Run/Shool House Branch
Johnson Mill/ Parkers Creek
Meetinghouse Branch
Swift Creek
Railroads
Major Streets
City Limits
City ETJ
JOHNSONS MILL/
PARKER CREEK
HARRIS MILL RUN/
SCHOOLHOUSE BRANCH
GREENS MILL RUN
MEETINGHOUSE
BRANCH
HARDEE
CREEK
SWIFT CREEK
FORK SWAMP
1
Miles
CITY OF GREENVILLE WATERSHED
MASTER PLAN ESTIMATED AREAS
OCTOBER 23, 2013
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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.

Bank Erosion Hazard Rating Guide

Stream	Meetinghouse	Assessment Number	2	Date		Crew			
Bank Erosion Potential	Bank Height (ft): / Bankfull Height (ft):	Bank Height/ Bankfull Ht		Root Depth/ Bank Height		Root Density %		Bank Angle (Degrees)		Surface Protection%	
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	0.00
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	0.00
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	0.00
HIGH	Value	1.6-2.0		0.29-0.15		29-15	15.00	81-90		29-15	18.00
	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	7.49
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	0.00
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	0.00
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)

Straight Reach Outside of Bend

GRAND TOTAL: **41.5**

BEHI RATING: **VERY HIGH**

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).

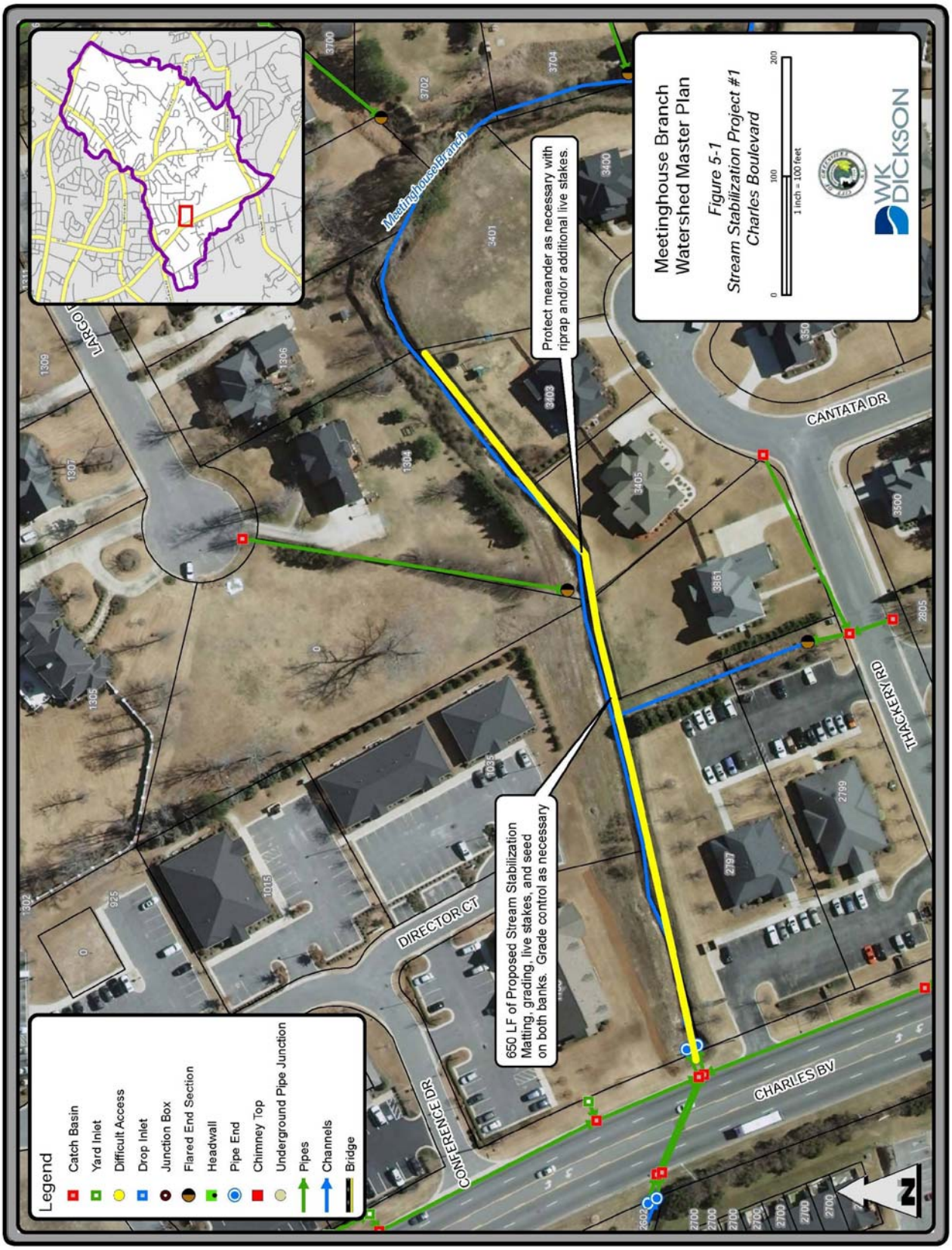
Picture 5-2. Severe bank erosion along landscaping fence

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*



Water Quality Project #5: Perkins Field

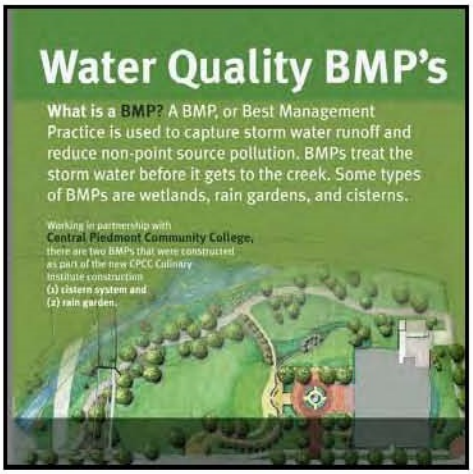
A bioretention project is proposed in the open space located between the Perkins Field parking lot and an open channel system. This area is adjacent to a ½-acre parking lot that currently drains to an existing closed system before discharging to an open channel. The proposed project location is shown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



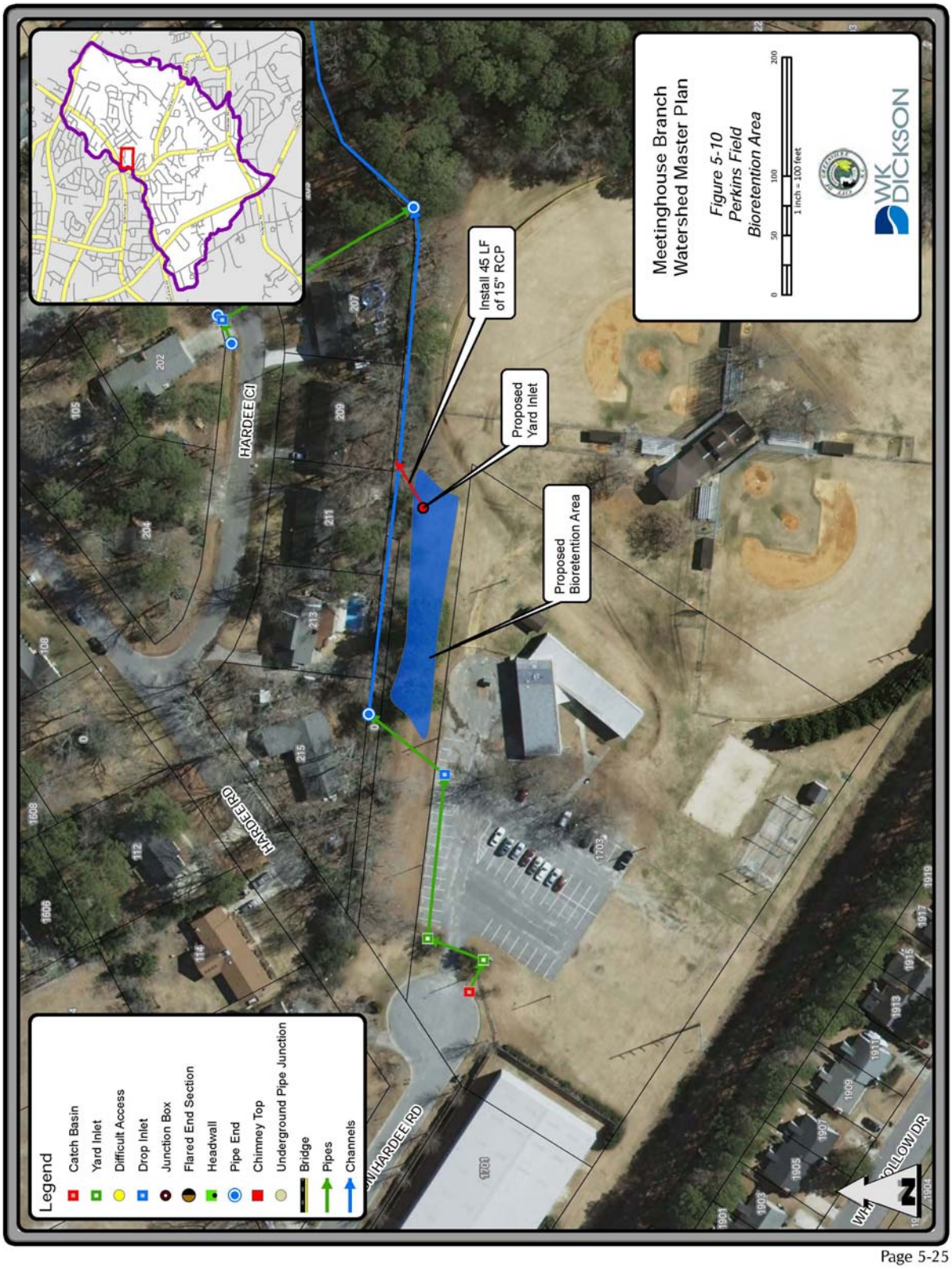
Bioretention Area - Perkins Field

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*



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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.

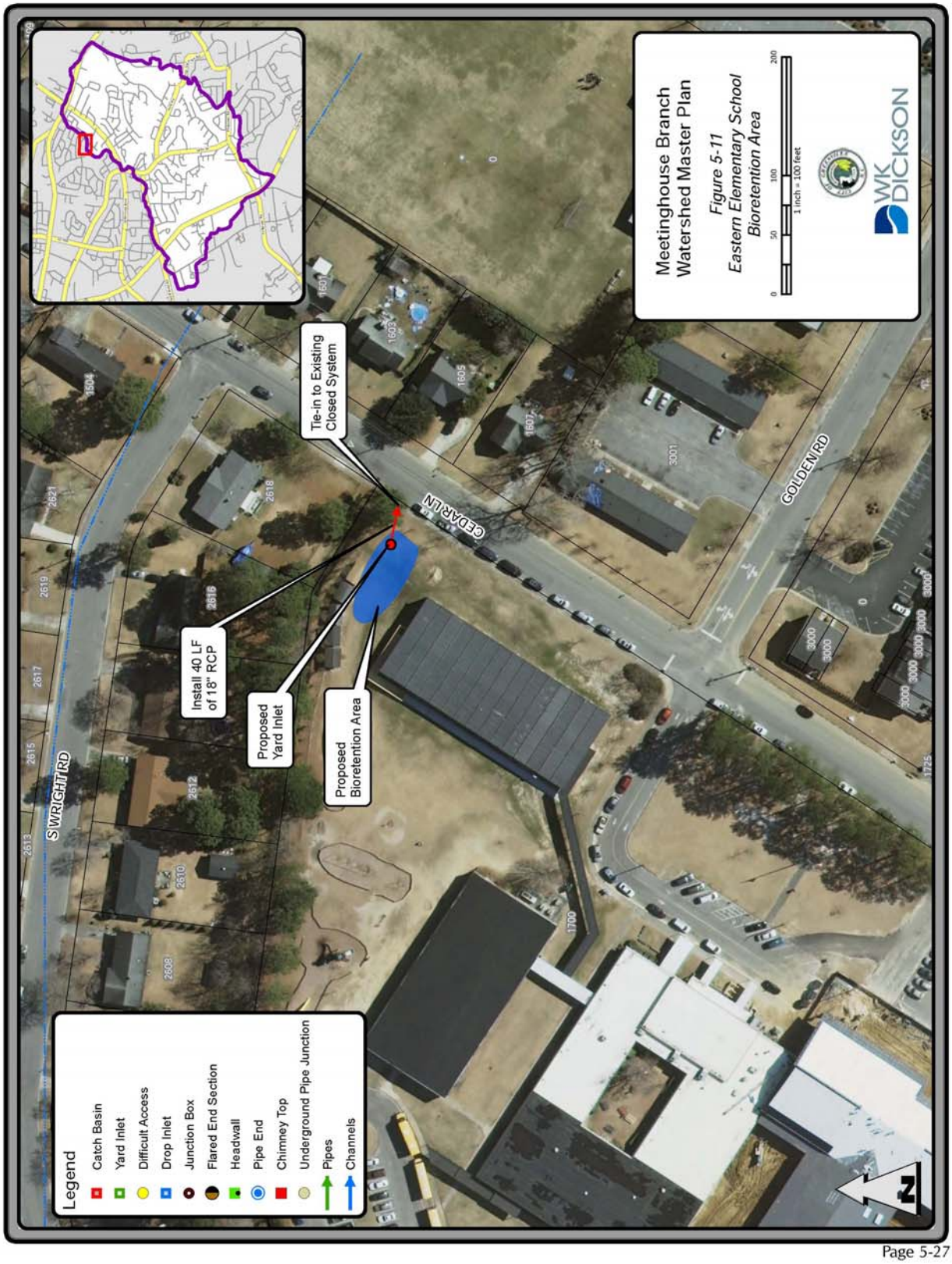
Bioretention Area - Eastern Elementary School

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*



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VI. PROGRAM ELEMENT: Public Education

ACTIVITY		Point Value	# Complete 2014-2015	Actual Points	Actual Costs	# Complete 2015-2016	Actual Points	Actual Costs	# Planned 2016-2017	Est. Points	Est. Costs
1	Demonstration Sites (BMPs)	4 /EA	Y/1	4	$500.00	Y/1	4	$500.00	Y	4	$500.00
2	Newspaper Ads.	2 /EA	N	0	$0.00	N	0	$0.00	N	0	$0.00
3	Technical Workshops	4 /EA	Y/9	36	$1000.00	Y/2	8	$1600.00	Y/3	12	$1,000.00
4	Environmental Contest	4 /EA	N	0	$0.00	N	0	$0.00	N	0	$0.00
5	Presentations for Civic Organizations*	1 /EA	Y/21	21	$100.00	Y/21	21	$500.00	Y/21	21	$300.00
6	Web Page / Web Site Links	2 /YR	Y	2	$0.00	Y	2	$0.00	Y	2	$0.00
7	Fact sheets / Brochures* (public places)	2 /YR	Y	2	$500.00	Y	2	$500.00	Y	2	$1,000.00
8	Utility Bill Inserts	3 /YR	Y	3	$0.00	Y	3	$0.00	Y	3	$0.00
9	Developer Packages	3 /YR	Y	3	$200.00	Y	3	$200.00	Y	3	$500.00
10	Storm Drain Stenciling	2 /YR	N	0	$0.00	Y	2	$0.00	Y	2	$150.00
11	Adopt-A-Street	4 /YR	Y	4	$100.00	Y	4	$100.00	Y	4	$200.00
12	Adopt-A-Stream	4 /YR	N	0	$0.00	N	0	$0.00	N	0	$0.00
13	SW Education Grant Program	1 /YR	Y	1	$2,000.00	Y	1	$0	Y	1	$2,500.00
14	Hotline	3 /YR	Y	3	$0.00	Y	3	$0.00	Y	3	$0.00
15	Water Quality Reporting Program	3 /YR	N	0	$0.00	N	0	$75000.00	N	0	$0.00
16	Booths & Events	2/YR	Y/3	6	$4500.00	Y/4	8	$5000.00	Y	6	$3000.00
17	Major Media Advertising	6 /YR	N	0	$0.00	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	Y	3	$0.00
			'14-'15 TOTAL	**88**	**$8,900**	**'15-'16 TOTAL**	**64**	**$83,400**	**'16-'17 TOTAL**	**66**	**$9,150**

*See Appendix C for supporting documentation.

APPENDIX A

(New Development Projects – Summary Table)

2014-2015 Tar-Pam Loading Summary

(The Categories Listed Below Are Automatically Calculated)

LOADING SUMMARY CALCULATIONS		
		Units
Sum of All Project Acres Post Development	**76.97**	**Acres**
Sum of Nitrogen Load For All Projects Post Development	**132.44**	**N lbs/yr**
N Load per acre per year for all Projects Post Development	**1.72**	**N lbs/ac/yr**
Sum of Phosporus Load For All Projects Post Development	**14.24**	**P lbs/yr**
P Load per acre per year for all Projects Post Development	**0.19**	**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.

2015-2016 Tar-Pam Loading Summary

(The Categories Listed Below Are Automatically Calculated)

LOADING SUMMARY CALCULATIONS		
		Units
Sum of All Project Acres Post Development	**139.41**	**Acres**
Sum of Nitrogen Load For All Projects Post Development	**539.07**	**N lbs/yr**
N Load per acre per year for all Projects Post Development	**3.87**	**N lbs/ac/yr**
Sum of Phosporus Load For All Projects Post Development	**59.85**	**P lbs/yr**
P Load per acre per year for all Projects Post Development	**0.43**	**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 2014 - SEPTEMBER 2015
City / County: Greenville / Pitt County

Project ID / Catchment #	SP-2014-022	Common	SP-2014-031	SP-2014-065	Const. Plan	SP-2014-044
	Figure 8 Technologies	Northwest Commercial Park	Greenville Homeless Shelter	Ample Storage	Langston West Section 10	Cancer Center at Vidant Medical Center
Pre-Development Project Acreage (Acres)						
Transportation Impervious	0.33	0.00	0.55	0.00	0.00	1.13
Roof Impervious	0.28	0.00	0.48	0.00	0.00	0.00
Managed Pervious (lawn/landscaped)	3.27	0.00	1.24	0.00	3.08	4.54
Managed Pervious (cropland)	0.00	5.62	0.00	0.00	0.00	0.00
Managed Pervious (pasture)	0.00	0.00	0.00	5.69	0.00	0.00
Wooded Pervious	0.00	0.57	0.00	0.00	0.00	0.00
Post Development Project Acreage (Acres)						
Transportation Impervious	0.91	2.87	0.65	2.14	0.25	2.26
Roof Impervious	0.43	1.01	0.57	1.75	0.50	2.14
Managed Pervious	2.54	1.74	1.05	1.80	2.33	1.56
Wooded Pervious	0.00	0.57	0.00	0.00	0.00	0.00
Total Project Acres	3.88	6.19	2.27	5.69	3.08	5.96
Predevelopment Nutrient Export						
Nitrogen lbs/year	11.74	12.40	19.14	5.92	2.01	21.81
Nitrogen lbs/acre/year	3.02	2.00	8.43	1.04	0.65	3.85
Phosphorous lbs/year	1.96	3.57	2.34	1.80	0.40	3.45
Phosphorous lbs/acre/year	0.50	0.58	1.03	0.32	0.13	0.61
Post-development & Pre-BMP Nutrient Export						
Nitrogen lbs/year	24.88	77.29	23.27	77.63	12.25	88.65
Nitrogen lbs/acre/year	6.41	12.49	10.25	13.64	3.98	14.87
Phosphorous lbs/year	3.40	7.60	2.60	7.43	1.87	7.96
Phosphorous lbs/acre/year	0.88	1.23	1.14	1.30	0.61	1.34
BMPs Implemented						
Number of BMPs	0	1.6	0.00	2.17	0	1
Post-development & Post-BMP Nutrient Export						
Nitrogen lbs/year	24.88	52.49	23.27	56.50	12.25	56.53
Nitrogen lbs/acre/year	6.41	8.48	10.25	9.93	3.98	9.48
Phosphorous lbs/year	3.40	3.40	2.60	4.15	1.87	4.32
Phosphorous lbs/acre/year	0.88	0.55	1.14	0.73	0.61	0.73

TAR-PAMLICO STORMWATER RULE
NEW DEVELOPMENTS PROJECTS SUMMARY TABLE
OCTOBER 2014 - SEPTEMBER 2015
City / County: Greenville / Pitt County

Project ID / Catchment #	SP-2015-002	SP-2015-005	SP-2015-017	SP-2015-022	SP-2015-020	Construction Plan
	GUC - CNG Site	Eastern AHEC Offices & Conference Center	Shoppes on Memorial	PGV Corporate Hangars	MGP Retail Grocery Store	Arbor Hills Phase 4
Pre-Development Project Acreage (Acres)						
Transportation Impervious	0.00	0.00	0.00	0.00	0.00	
Roof Impervious	0.00	0.00	0.00	0.00	0.00	
Managed Pervious (lawn/landscaped)	0.00	0.00	0.00	0.00	0.00	
Managed Pervious (cropland)	2.98	0.00	0.00	0.00	0.00	
Managed Pervious (pasture)	0.00	0.00	0.00	0.00	0.00	
Wooded Pervious	0.76	0.00	0.00	0.00	0.00	
Post Development Project Acreage (Acres)						
Transportation Impervious	1.13	0.00	0.00	0.00	0.00	
Roof Impervious	0.07	0.00	0.00	0.00	0.00	
Managed Pervious	1.79	0.00	0.00	0.00	0.00	
Wooded Pervious	0.76	0.00	0.00	0.00	0.00	
Total Project Acres	3.74	0.00	0.00	0.00	0.00	4.30
Predevelopment Nutrient Export						
Nitrogen lbs/year	6.80	0.00	0.00	0.00	0.00	
Nitrogen lbs/acre/year	1.82	0.00	0.00	0.00	0.00	
Phosphorous lbs/year	1.92	0.00	0.00	0.00	0.00	
Phosphorous lbs/acre/year	0.51	0.00	0.00	0.00	0.00	
Post-development & Pre-BMP Nutrient Export						
Nitrogen lbs/year	21.53	0.00	0.00	0.00	0.00	
Nitrogen lbs/acre/year	5.76	0.00	0.00	0.00	0.00	
Phosphorous lbs/year	2.83	0.00	0.00	0.00	0.00	
Phosphorous lbs/acre/year	0.76	0.00	0.00	0.00	0.00	
BMPs Implemented						
Number of BMPs	0.00	0	0	0	0	
Post-development & Post-BMP Nutrient Export						
Nitrogen lbs/year	21.53	0.00	0.00	0.00	0.00	27.78
Nitrogen lbs/acre/year	5.76	0.00	0.00	0.00	0.00	6.46
Phosphorous lbs/year	2.83	0.00	0.00	0.00	0.00	3.78
Phosphorous lbs/acre/year	0.76	0.00	0.00	0.00	0.00	0.88

TAR-PAMLICO STORMWATER RULE
NEW DEVELOPMENTS PROJECTS SUMMARY TABLE
OCTOBER 2014 - SEPTEMBER 2015
City / County: Greenville / Pitt County

Project ID / Catchment #	SP-2015-025 Goodwill Community Foundation	SP-2015-030 GUC-Southside Pump Station	SP-2015-014 Parkside Commons
Pre-Development Project Acreage (Acres)			
Transportation Impervious	0.00	5.38	0.00
Roof Impervious	0.00	0.16	0.00
Managed Pervious (lawn/landscaped)	0.00	5.31	4.11
Managed Pervious (cropland)	0.00	0.00	0.00
Managed Pervious (pasture)	0.00	0.00	0.00
Wooded Pervious	0.00	34.09	2.04
Post Development Project Acreage (Acres)			
Transportation Impervious	0.00	5.52	1.47
Roof Impervious	0.00	0.18	0.85
Managed Pervious	0.00	5.15	3.38
Wooded Pervious	0.00	34.09	0.45
Total Project Acres	0.00	44.94	6.15
Predevelopment Nutrient Export			
Nitrogen lbs/year	0.00	88.49	3.96
Nitrogen lbs/acre/year	0.00	1.97	0.64
Phosphorous lbs/year	0.00	11.91	0.73
Phosphorous lbs/acre/year	0.00	0.27	0.12
Post-development & Pre-BMP Nutrient Export			
Nitrogen lbs/year	0.00	89.97	42.20
Nitrogen lbs/acre/year	0.00	2.00	6.86
Phosphorous lbs/year	0.00	12.12	5.45
Phosphorous lbs/acre/year	0.00	0.27	0.89
BMPs Implemented			
Number of BMPs	0	0	0
Post-development & Post-BMP Nutrient Export			
Nitrogen lbs/year	0.00	89.97	42.20
Nitrogen lbs/acre/year	0.00	2.00	6.86
Phosphorous lbs/year	0.00	12.12	5.45
Phosphorous lbs/acre/year	0.00	0.27	0.89

TAR-PAMLICO STORMWATER RULE
NEW DEVELOPMENTS PROJECTS SUMMARY TABLE
OCTOBER 2015 - SEPTEMBER 2016
City / County: Greenville / Pitt County

Project ID / Catchment #	SP-2014-064	SP-2015-033	SP-2015-075	SP-2015-044	Construction Plan	SP-2015-054
	MacGregor Downs Pointe	Greenville Auto World	Mayne Pharma	First Bank	Sagewood	Xpress Auto Spa
Pre-Development Project Acreage (Acres)						
Transportation Impervious	0.00	0.96	0.00	0.00	0.00	0.00
Roof Impervious	0.00	0.19	0.00	0.00	0.00	0.00
Managed Pervious (lawn/landscaped)	0.00	1.52	0.49	0.00	0.00	0.00
Managed Pervious (cropland)	0.00	0.00	0.00	0.00	24.83	0.00
Managed Pervious (pasture)	0.96	0.00	0.00	0.00	0.00	1.84
Wooded Pervious	0.00	0.52	21.08	2.17	11.15	0.00
Post Development Project Acreage (Acres)						
Transportation Impervious	0.28	1.47	5.23	1.07	8.40	0.76
Roof Impervious	0.19	0.21	3.32	0.21	2.80	0.09
Managed Pervious	0.49	1.51	13.02	0.89	24.78	0.99
Wooded Pervious	0.00	0.00	0.00	0.00	0.00	0.00
Total Project Acres	0.96	3.19	21.57	2.17	35.98	1.84
Predevelopment Nutrient Export						
Nitrogen lbs/year	1.00	20.92	10.57	1.05	58.97	1.73
Nitrogen lbs/acre/year	1.04	6.56	0.49	0.48	1.64	0.94
Phosphorous lbs/year	0.30	2.66	1.58	0.15	16.37	0.52
Phosphorous lbs/acre/year	0.32	0.83	0.07	0.07	0.46	0.29
Post-development & Pre-BMP Nutrient Export						
Nitrogen lbs/year	8.91	33.81	158.76	26.19	208.88	15.30
Nitrogen lbs/acre/year	9.28	10.59	7.36	12.09	5.81	8.33
Phosphorous lbs/year	1.05	3.85	20.60	2.79	29.56	1.86
Phosphorous lbs/acre/year	1.04	1.20	0.96	1.29	0.82	1.01
BMPs Implemented						
Number of BMPs	0	0.00	1	1.00	0.00	0.00
Post-development & Post-BMP Nutrient Export						
Nitrogen lbs/year	8.91	33.81	129.33	16.27	208.88	15.30
Nitrogen lbs/acre/year	9.28	10.59	6.00	7.51	5.81	8.33
Phosphorous lbs/year	1.05	3.85	11.33	1.62	29.56	1.86
Phosphorous lbs/acre/year	1.09	1.20	0.53	0.75	0.82	1.01

TAR-PAMLICO STORMWATER RULE
NEW DEVELOPMENTS PROJECTS SUMMARY TABLE
OCTOBER 2015 - SEPTEMBER 2016
City / County: Greenville / Pitt County

Project ID / Catchment #	SP-2016-014 Carmax-Greenville, NC	SP-2015-77 Greenbrier Place Detached Multi-family	SP-2016-011 Theta Chi Fraternity House	SP-2016-008 U-Haul		SP-2016-026 Center Court	Lake Forest Elementary School
Pre-Development Project Acreage (Acres)							
Transportation Impervious	0.00	0.00	0.04	0.00		0.00	0.00
Roof Impervious	0.00	0.00	0.00	0.00		0.00	0.00
Managed Pervious (lawn/landscaped)	21.81	0.00	1.29	10.39		0.00	23.14
Managed Pervious (cropland)	0.00	21.98	0.00	0.00	3.25	0.00	0.00
Managed Pervious (pasture)	0.00	0.00	0.00	0.00		0.00	0.00
Wooded Pervious	0.00	14.65	0.00	0.00		7.44	0.00
Post Development Project Acreage (Acres)							
Transportation Impervious	12.76	6.55	0.39	5.46	1.79	2.76	4.32
Roof Impervious	4.55	5.95	0.15	2.29	0.67	0.89	2.47
Managed Pervious	4.51	24.13	0.78	2.20	0.78	3.79	16.35
Wooded Pervious	0.00	0.00	0.00	0.44	0.00	0.00	0.00
Total Project Acres	21.82	36.63	1.32	10.39	3.24	7.44	23.14
Predevelopment Nutrient Export							
Nitrogen lbs/year	15.79	54.51	1.52	11.51		3.60	16.76
Nitrogen lbs/acre/year	0.72	1.49	1.14	1.11		0.48	0.72
Phosphorous lbs/year	3.11	14.83	0.29	2.27		0.53	3.30
Phosphorous lbs/acre/year	0.14	0.40	0.22	0.22		0.07	0.14
Post-development & Pre-BMP Nutrient Export							
Nitrogen lbs/year	374.42	227.28	10.22	171.32		71.10	124.86
Nitrogen lbs/acre/year	17.17	6.21	7.71	16.49		9.56	5.40
Phosphorous lbs/year	32.36	31.28	1.31	13.11		8.37	18.03
Phosphorous lbs/acre/year	1.48	0.85	0.99	1.26		1.13	0.78
BMPs Implemented							
Number of BMPs	2	1.00	0	1.00	1.00	0.00	2
Post-development & Post-BMP Nutrient Export							
Nitrogen lbs/year	41.90	158.59	10.22	102.96		71.10	92.56
Nitrogen lbs/acre/year	9.68	4.33	7.74	9.91		9.56	4.00
Phosphorous lbs/year	3.79	21.45	1.31	8.52		8.37	9.95
Phosphorous lbs/acre/year	0.87	0.59	0.99	0.82		1.13	0.43

TAR-PAMLICO STORMWATER RULE
NEW DEVELOPMENTS PROJECTS SUMMARY TABLE
OCTOBER 2015 - SEPTEMBER 2016
City / County: Greenville / Pitt County

Project ID / Catchment #	Youngs Physical Therapy	FP Dickenson, LLC	ALDI #57	Mayne Pharma Building 5440	Med-Moore Lot 6	North State Steel	Bedford West Phase 3	Glen Castle at Irish Creek	Parkside Bluffs Phase I	Christ's Church	Indigreen Shell Building
Pre-Development Project Acreage (Acres)											
Transportation Impervious	0.00	0.44	0.00	1.07	0.00	8.24	0.00	0.00	0.00	1.80	0.00
Roof Impervious	0.00	0.00	0.00	1.17	0.00	0.73	0.00	0.00	0.00	0.53	0.00
Managed Pervious (lawn/landscaped)	0.00	2.31	0.32	4.08	0.00	0.00	0.00	9.75	0.00	9.23	0.00
Managed Pervious (cropland)	0.00	0.00	0.00	0.00	0.76	3.74	0.75	0.00	3.17	0.00	0.00
Managed Pervious (pasture)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wooded Pervious	1.50	0.00	2.21	8.68	0.00	0.32	0.82	0.00	29.67	0.50	16.76
Post Development Project Acreage (Acres)											
Transportation Impervious	0.55	1.17	1.13	1.35	0.23	10.61	0.20	1.40	1.11	2.73	0.84
Roof Impervious	0.21	0.26	0.44	1.51	0.13	0.82	0.33	1.27	0.00	0.53	1.20
Managed Pervious	0.74	1.31	0.96	12.14	0.40	1.61	1.04	7.08	3.05	8.29	2.96
Wooded Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.68	0.50	11.76
Total Project Acres	1.50	2.74	2.53	15.00	0.76	13.04	1.57	9.75	32.84	12.05	16.76
Predevelopment Nutrient Export											
Nitrogen lbs/year	0.73	8.63	1.30	35.71	1.63	264.13	2.02	7.06	21.21	43.76	8.12
Nitrogen lbs/acre/year	0.48	3.15	0.52	2.38	2.16	20.27	1.28	0.72	0.65	3.63	0.48
Phosphorous lbs/year	0.11	1.43	0.20	5.03	0.47	42.65	0.53	1.39	4.11	6.93	1.20
Phosphorous lbs/acre/year	0.07	0.52	0.08	0.34	0.63	3.27	0.34	0.14	0.13	0.57	0.07
Post-development & Pre-BMP Nutrient Export											
Nitrogen lbs/year	14.80	28.45	31.71	53.19	6.87	266.89	9.41	48.54	27.94	60.60	32.00
Nitrogen lbs/acre/year	9.87	10.38	12.54	3.55	9.07	20.48	5.99	4.98	0.85	5.03	1.91
Phosphorous lbs/year	1.71	3.25	3.27	8.58	0.82	21.68	1.30	7.17	4.15	8.83	4.48
Phosphorous lbs/acre/year	1.14	1.19	1.29	0.57	1.08	1.66	0.83	0.74	0.13	0.73	0.27
BMPs Implemented											
Number of BMPs	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Post-development & Post-BMP Nutrient Export											
Nitrogen lbs/year	14.80	28.45	25.20	53.19	6.87	266.89	9.41	48.54	27.94	60.60	32.00
Nitrogen lbs/acre/year	9.87	10.38	9.96	3.55	9.07	20.48	5.99	4.98	0.85	5.03	1.91
Phosphorous lbs/year	1.71	3.25	1.72	8.58	0.82	21.68	1.30	7.17	4.15	8.83	4.48
Phosphorous lbs/acre/year	1.14	1.19	0.68	0.57	1.08	1.66	0.83	0.74	0.13	0.73	0.27

APPENDIX B

(Illicit Discharge/Connection Violations)

City of Greenville
Engineering Division

WATER QUALITY COMPLAINT / INSPECTION RECORD

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

Complainant's Description of Problem and Location:

Description: Oil Dumped in catch basin

Location:

Complaint from:	***Complaint Date and Source:***	***First Callback:***	***Investigation:***
Name: Citizen	Call date: 10-15-16	Date: 10-15-16	Date: 10-15-16
Address:	Time: 9:30	Time: 10:00	Time: 10.00
	☐ Hotline ☐ Eng. Staff		Duration: 30 min
Home Phone #:	☐ Walk-In ☐ Emerg. Mgt.	***Results Callback:***	***Team (initials of staff):***
Work Phone #:	☒ Call In ☐ Health Dept.	Date: 10-15-16	☐ DB ☐ KQ
Other:	☐ DWQ ☐ Erosion Ctrl.	☒ Phone	☐ LS ☐ CJ
(pager, e-mail, etc.)	☐ Other City employee	☐ Letter	☐ TC ☒ VL
	☐ Other	☐ In Person	☐ other

Field Observations *(if different):*

Investigator's Description: Oil dumped in storm drain

Street Address (Nearest): Topaz Drive

Property Type:	**Observations:**	**Drainage Basin:**
☒ Public ☐ Commercial	☒ Sheen ..... Oil	Crk
☐ Residential ☐ Industrial	☐ Odor	Sub-Basin
☐ Unimproved	☐ Floatables ..	☒ Flow reached storm drain?
	☐ Other	☐ 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:

Someone in neighborhood dumping oil in stormdrain. There is no way to determine which resident is dumping so we will mail a letter to the entire block. The letter will inform residents of the proper disposal of motor oil

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

City of Greenville
Engineering Division

WATER QUALITY COMPLAINT / INSPECTION RECORD

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

Complainant's Description of Problem and Location:
Description: WASH Restaurant equipment over A drop Inlet
Location: 1400 Charles Blvd Suite 123

Complaint from:
Name: Elizabeth Kaufman
Address: _____
Home Phone #: 412-1889
Work Phone #: _____
Other: _____ *(pager, e-mail, etc.)*

Complaint Date and Source:
Call date: 3-18-15
Time: 12:00
☐ Hotline ☐ Eng. Staff
☐ Walk-In ☐ Emerg. Mgt.
☒ Call In ☐ Health Dept.
☐ DWQ ☐ Erosion Ctrl.
☒ Other City employee
☐ Other _____

First Callback:
Date: 3-18-15
Time: 12:10

Results Callback:
Date: _____
☐ Phone
☐ Letter
☒ In Person

Investigation:
Date: 3-18-15
Time: 12:10
Duration: 30mins

Team (initials of staff):
☐ DB ☐ KQ
☐ LS ☐ CJ
☐ TC ☒ VL
☐ other _____

Field Observations *(if different):*
Investigator's Description: Employee WASHing fryer vents over drop inlet
Street Address (Nearest): 1400 Charles Blvd

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:
A China King Employee WAS WASHing the exhaust vents, covered with grease, over A drop inlet. There is A washout Area on site And I requested that they use that Area in the future for cleaning there equipment. Also requested that they make sure that All new hires ARE familar with proper cleaning procedures.

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

City of Greenville
Engineering Division

WATER QUALITY COMPLAINT / INSPECTION RECORD

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

Complainant's Description of Problem and Location:
Description: Sewage leaking into Drop Inlet
Location: 2615 Jefferson Drive

Complaint from:
Name: Code Enforcement
Address:
Home Phone #:
Work Phone #:
Other: *(pager, e-mail, etc.)*

Complaint Date and Source:
Call date: 3-25-15
Time: 8:15
☐ Hotline ☐ Eng. Staff
☐ Walk-In ☐ Emerg. Mgt.
☐ Call In ☐ Health Dept.
☐ DWQ ☐ Erosion Ctrl.
☒ Other City employee
☐ Other

First Callback:
Date: 3-25-15
Time: 8:30

Results Callback:
Date: 3-25-15
☐ Phone
☐ Letter
☒ In Person

Investigation:
Date: 3-25-15
Time: 8:30
Duration: 1 hrs

Team (initials of staff):
☐ DB ☐ KQ
☐ LS ☐ CJ
☐ TC ☒ VL
☒ other David Fields

Field Observations *(if different):*
Investigator's Description: Trench dug in yard allowing sewage to Run to Drop Inlet
Street Address (Nearest): 2615 Jefferson Drive

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:

The resident dug A trench Allowing water to run from under the house to A drop inlet in their front yard. The water WAS determined to be raw sewage. The owner of the property repaired the leak. He Also filled in the trench & treated the affected Area with Bio Ax.

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

Greenville
NORTH CAROLINA

PUBLIC WORKS

May 22, 2015
Michelle Vera
317 St. Andrews drive
Greenville, NC 27834

RE: Pool Discharge

Dear Ms. Vera:

During a field investigation of the ditch on your property, City staff became aware you had a drain hose running from your swimming pool discharging into a ditch along your rear property line. This letter is to inform you drainage from your swimming pool to the ditch located at 317 St. Andrews Drive 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, wash water from commercial vehicle washing or steam cleaning, and waste water from septic systems."

Filter backwash and water draining from swimming pools must be de-chlorinated prior to release into any stormwater conveyance. If the water you are draining has been de-chlorinated this drain hose may not be in violation. However, if you are using this line to backwash your pool this would be in violation of the Stormwater Management and Control Ordinance of the Greenville City Code.

Please contact Mr. Victor Long at (252) 329-4888 or myself at (252) 329-4350 upon receipt of this letter to discuss this issue further. Your attention and assistance regarding this matter are greatly appreciated.

Sincerely,

Amanda C Boone

Amanda C. Boone, P.E., Civil Engineer II
Stormwater Management Section

cc: Lisa A. Kirby, P.E., Senior Engineer

City of Greenville
Engineering Division

WATER QUALITY COMPLAINT / INSPECTION RECORD

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

Complainant's Description of Problem and Location:
Description: Grease spill in Alley
Location: 420 Cotanche St

Complaint from:	***Complaint Date and Source:***	***First Callback:***	***Investigation:***
Name: AJ Baslie	Call date: 4-28-16	Date: 4-29-16	Date: 4-29-16
Address:	Time: 1:48	Time: 4:40	Time: 4:40
Home Phone #:	☐ Hotline ☐ Eng. Staff	***Results Callback:***	Duration: 20 mins
Work Phone #:	☐ Walk-In ☐ Emerg. Mgt.	Date: 4-29-16	***Team (initials of staff):***
Other:	☐ Call In ☐ Health Dept.	☐ Phone	☐ DB ☐ KQ
(pager, e-mail, etc.)	☐ DWQ ☐ Erosion Ctrl.	☐ Letter	☐ LS ☐ CJ
	☒ Other City employee	☒ In Person	☐ TC ☐ VL
	☐ Other		☒ other DF

Field Observations *(if different):*
Investigator's Description: Someone overfilled the grease recipticle
Street Address (Nearest): 420 Cotanche St

Property Type:	**Observations:**	**Drainage Basin:**
☐ Public ☒ Commercial	☒ Sheen ..... Grease	Crk
☐ Residential ☐ Industrial	☒ Odor	Sub-Basin
☐ Unimproved	☐ Floatables ..	☐ Flow reached storm drain?
	☐ Other	☐ 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:

Someone overfilled the recycle container for grease behind the Blacken Kracken. We met with the owner and they are cleaning up the site. The completion of the clean up will be tracked through the City's online complaint system

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

City of Greenville
Engineering Division

WATER QUALITY COMPLAINT / INSPECTION RECORD

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

Complainant's Description of Problem and Location:

Description: _____

Location: 2420 Emerald Place sewer is leaking from CO at 2446 Emerald

Complaint from:	***Complaint Date and Source:***	***First Callback:***	***Investigation:***
Name: Earp Dental	Call date: 6/15/16	Date: _____	Date: 6/15/16
Address: _____	Time: _____	Time: _____	Time: 2:00pm
_____	☐ Hotline ☐ Eng. Staff	***Results Callback:***	Duration: 30 min
Home Phone #: _____	☐ Walk-In ☐ Emerg. Mgt.	Date: _____	***Team (initials of staff):***
Work Phone #: _____	☑ Call In ☐ Health Dept.	☐ Phone	☐ DB ☐ KQ
Other: _____	☐ DWQ ☐ Erosion Ctrl.	☐ Letter	☐ LS ☐ CJ
(pager, e-mail, etc.)	☐ Other City employee	☐ In Person	☐ TC ☑ VL
	☐ Other _____		☑ Other DE

Field Observations ***(if different):***

Investigator's Description: _____

Street Address (Nearest): 2420 Emerald Place

Property Type:	**Observations:**	**Drainage Basin:**
☑ Public ☐ Commercial	☐ Sheen	Crk _____
☐ Residential ☐ Industrial	☐ Odor	Sub-Basin _____
☐ Unimproved	☑ Floatables . . _____	☑ Flow reached storm drain?
	☐ Other	☐ 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:

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

City of Greenville
Engineering Division

WATER QUALITY COMPLAINT / INSPECTION RECORD

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

Complainant's Description of Problem and Location:
Description: Sediment & Turbid water Discharging to street & Drain
Location: Dickenson Ave near 10th st

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

Complaint Date and Source:
Call date: _____
Time: _____
☐ 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: 6/7/16
Time: 11:00
Duration: .5 hr

Team (initials of staff):
☐ DB ☐ KQ
☐ LS ☐ CJ
☐ TC ☐ VL
☑ other DN

Field Observations *(if different):*
Investigator's Description: Boring Operations for Century link hit water main - Discharge from Break
Street Address (Nearest): Dickenson Ave & 10th st connector

Property Type:
☑ Public ☐ Commercial
☐ Residential ☐ Industrial
☐ Unimproved

Observations:
☐ Sheen . . . . . _____
☐ Odor . . . . . _____
☐ Floatables . . _____
☑ Other . . . . . Lots of Sediment

Drainage Basin:
Crk Town Creek
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:

GUC & CSX on scene assisting with repairs and clean up

Sediment in street, gutter, basins, and pipes along Dickenson.

[redacted]

Continue on back, if necessary

☑ **Need NOV?** Date Sent 6/8/16
NOV Sent to (usu. Prpty Owner): PTH Undergrand LLC
Mailing Address: 2488 old Poole Rd
Kinston NC 28501

Departments copied on NOV:
☐ Health Dept. ☐ Land Qual
☐ GUC ☐ DOT
☐ Pitt Co. ☑ Other: CenturyLink

NOV
~~Photo~~ File Name: 1030401

Respond to Complainant By:
(date) 3 days
☑ Phone ☐ Letter ☐ In Person

APPENDIX C

(Public Education)

Environmental Advisory Commission Grants

The grant cycles for 2014-2016 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. Please see the attached fact sheet for additional information.

The grant of $2,500 for stormwater management education for 2015 was awarded to Love A Sea Turtle to help with their Upstream Downstream Connection Camp. The mission of the Upstream Downstream Connection Camp, run by Love A Sea Turtle, is to give as many underprivileged youth from the area a chance to experience science, nature, and new outdoor activities for no cost. During this summer alone, Love A Sea Turtle served over sixteen hundred unique students from more than a dozen local organizations. Thirty-seven student volunteers from nearby public and private high schools or universities served as camp counselors. The Upstream Downstream Connection Camp offers a unique opportunity for students to learn about conservation, nature and its ecosystems, as well as how to enjoy new outdoor activities. This camp also offers an amazing and unique opportunity for the students to help collect data about the aquatic ecosystems in the Greenville area.

The goal of the Upstream Downstream Connection camp is to give each student an understanding of storm water and the possible effects runoff can have not only on the habitats surrounding it, but also on the oceans downstream. The other goal is to break down the barriers of fear and ignorance in students who would not normally have the opportunity, resources, or support to get outside and learn new skills. These activities also help to foster in the students a deeper respect and care for the environment through experiencing the fun that nature, especially bodies of water, can offer. The mission of the camp is to teach students about the importance of keeping their planet and bodies healthy. It is through the free opportunity for these underprivileged youth to kayak, go on scavenger hunts, bike ride, and fish that the camp mission is brought to a deeper meaning and hopefully gains a place in the students' hearts. If the students learn how much they enjoy being outside and how great it is to be able to kayak and fish in a clean lake or river, they will be more likely to make positive changes in their lives in order to keep such places healthy. They will also be more likely to want to share their experiences and new knowledge with others at school or at home. On top of gaining a deeper respect and love of nature, they are also provided with the knowledge of how to make a positive difference in their environment and communities.

At the completion of the grant cycle, representatives from the camp, including students, presented the project report to the City's EAC during the June 2016 meetings. Attached please find the final report presented to the EAC.

No applications were received for the 2016 EAC Grant. Funds were instead redirected to promotional items for the other educational booths and events

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's Sanitation Division implemented a composting demonstration site consisting of multiple types of homemade and commercial compost bins. Public Works continues to offer free workshops and training on the use of compost bins. These workshops discuss the benefits of composting and after successful completion citizens are eligible to receive free bins for their residences. The Stormwater Management Program supports this initiative and as a result those citizens living along eroded streams and ditches take precedence when registering for the workshop. The resulting mulch from the bins can be used to aid in re-establishing the riparian buffer along the eroded stream banks.

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

2014-2015

DATE	TOPIC	DESCRIPTION	ATTENDEES
29-Oct-14	Public Meeting	Citizens located in the Westhaven Neighborhood were educated on the impacts of the Flood Risk Map Revisions	30
3-Nov-14	WSMP Meeting	Swift Creek	10-20
4-Nov-14	WSMP Meeting	Hardee Creek	10-20
4-Nov-14	WSMP Meeting	Fork Swamp	10-20
5-Nov-14	WSMP Meeting	Greens Mill Run	10-20
5-Nov-14	WSMP Meeting	Greens Mill Run	10-20
12-Nov-14	WSMP Meeting	Harris Mill/Schoolhouse	10-20
12-Nov-14	WSMP Meeting	Johnson Mill/Parkers Creek	10-20
8-Jan-15	Fact Sheet-EAC Grant	New fact sheet promoted the Environmental Advisory Commission (EAC) 2015-2016 grant cycle	100+
18 Occurrences	Enviroscape Presentations	Hands on presentation of stormwater pollution using the enviroscape model	350+
4-Feb-15	Notes to Council	Notes provided to Council advising them of the BMP inspection program	10+
20-Apr-15	River Park North Symposium	Table presenter for student	350+
11/14-10/15	WSMP Questionnaires	Survey of citizens knowledge of flooding, erosion and water quality problems. Included questions on willingness to participate in BMP retrofits.	250+
11-Apr-15	PirateFest	River table game to educate kids on putting trash in its place	1000+
14-Apr-15	GUC Breakfast	Display boards on illicit discharges, illicit connections, and storm sewer conflicts	175
24-Jul-15	Urban Watersheds in the East	Presentation on TCC highlighting LID and urban retrofits.	55
24-Sep-15	Town Creek Culvert Cooridor Meeting	Discussed property impacts, BMP locations, BMP maintenance, and construction schedule.	10

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

2015-2016

DATE	TOPIC	DESCRIPTION	ATTENDEES
6-Oct-15	Town Creek Culvert (TCC) Public Meeting	Discussed property impacts, BMP locations, BMP maintenance, and construction schedule.	50+
22-Oct-15	TCC-Uptown Greenville Board of Directors	Discussed property impacts, BMP locations, BMP maintenance, and construction schedule.	25
24-Oct-15	"Make a Difference" Day - L.A.S.T. Stenciling	Storm drain stenciling from 5th Street to the Tar River. Also provided fact sheets to students about pollution prevention.	
24-Oct-15	United Way Fall Festival	Distribution of information on pollution prevention to the general public.	100+
18 Occurrences	Enviroscape Presentations	Hands on presentation of stormwater pollution using the enviroscape model	350+
17-Nov-15	WSMP (all watersheds)-Public Meeting	Open house on flood control projects, water quality projects and stream stabilization projects.	30+
19-Nov-15	NCPE	Presentation on TCC highlighting LID and urban retrofits.	15+
9-Apr-16	PirateFest	River table game to educate kids on putting trash in its place	1000+
12-Apr-16	GUC Breakfast	Display boards on illicit discharges, illicit connections, and storm sewer conflicts	175
18-Apr-16	River Park North Symposium (Earth Week)	Table presenter for student	350+
15-Jun-16	APWA State Conference	TCC Green Infrastructure Retrofit Modeling	50+
12-Sep-16	APWA SW Conference	WSMP Modeling	40+

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