Environmental Advisory Commission

December 7, 2017

5:30pm City Council Chambers

Agenda

Greenville NORTH CAROLINA

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 November 2, 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. Stormwater Annual Report (Attachment B) (20 mins) – D. Norris

VIII. Old Business

a. Volkswagen Settlement Update (Attachment C) (5 mins) – D. Tyson
b. Council Presentation Review (Attachment D) (10 mins) – D. Tyson
c. 2018 Goals & Objectives Discussion (Attachment E) (10 mins) – D. Tyson
d. Solar Conference Update (10 mins) – D. Tyson
e. Chip Reader for Sanitation Update (5 mins) – D. Norris

IX. Commission Reports

a. ECU Sustainability Report (10 mins) – C. Carwein
b. SWAC Update (5 mins) – D. Brinkley

X. Other – FYI

a. UST Report (Attachment F)

XI. Proposed Agenda Items – January 4, 2017

a. Elections
b. Town Creek Culvert Update
c. Council Presentation – Finalize
d. Draft Calendar – Review
e. 2018 Goals & Objectives – Finalize
f. SWAC Update
g. Cool Cities Initiative
h. Plastic Bag Resolution

XII. 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. Diego LLerena

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

(November 2, 2017 Minutes)

Action: For your review and approval.

DRAFT OF MINUTES PROPOSED FOR ADOPTION BY THE ENVIRONMENTAL ADVISORY COMMISSION
November 2, 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
Emilie Kane	Diego LLerena
Ann Maxwell	Durk Tyson

OTHERS PRESENT:
Daryl Norris, City of Greenville
Amanda Braddy, City of Greenville

2. PLEDGE OF ALLEGIANCE

3. ADDITIONS/DELETIONS TO THE AGENDA

A motion was made by Dr. Ames to approve the agenda as presented. The motion was seconded by Mrs. Maxwell and passed unanimously.

4. APPROVAL OF OCTOBER 5, 2017 MINUTES

A motion was made by Ms. Maxwell to approve the minutes of October 5, 2017 as presented. The motion was seconded by Dr. Kane and passed unanimously.

5. ANNOUCEMENTS

Mr. Tyson stated that Dr. Ames had forwarded an email regarding a Solar Education Conference being held on November 8, 2017 from 6pm to 8pm at the County Office complex located at 403 Government Circle Drive. Mr. Tyson encouraged members to attend if possible.

6. PUBLIC COMMENT PERIOD

There were no public comments

7. NEW BUSINESS

A. EAC Membership Designations

Mr. Tyson noted that Council Member Godley, as Council Liaison, requested the Commission review membership designations. Mr. Tyson reviewed the current requirements and each current member's designation. Mr. Tyson stated he felt the membership designations should remain in place to maintain a level of expertise in their duties to advise City Council on environmental issues when requested. Mr. Norris stated that Council Member Godley has faced challenges filling specific designations when vacancies arise. Mr. Norris also stated no direction was given to change or remove designations; however, Mr. Norris added that he felt the designations should remain in place.

A motion was made by Mrs. Maxwell to keep the designations and requirements as they exist. A second was made by Dr. Kane. Mr. Norris stated if no changes were made, the motion and second was not required. Mrs. Maxwell added that she would like to have the motion and second stand as feedback to City Council that EAC members would recommend the designations and requirements remain. The motion passed unanimously.

B. 2018-2019 EAC Grant Discussion

Mr. Tyson directed attention to the 2018-2019 EAC Grant package included with the agenda. A list of potential applicants was provided as well. Mr. Tyson requested members make contact with organizations to inform them of the grant opportunity.

C. 2018 Goals & Objectives Discussion

Mrs. Maxwell questioned if EAC has been asked to review Environmental Impact Statements on projects in the past. Mr. Norris stated that he is unaware of any impact statements that have required review. Mrs. Maxwell expressed concerns that the Horizon's Plan isn't being utilized to its fullest potential regarding environmental impacts. Mr. Tyson suggested action items be added to goals and objectives for 2018. Mrs. Maxwell stated she would like to have EAC members investigate the Horizon's Plan to determine if there are feasible options for EAC to support in connection with environmental impacts to the City.

Mr. Norris suggested EAC include a goal for 2018 to encourage implementation of environmental initiatives from the City's Horizon's Plan. Mr. Tyson requested Mr. Norris to contact the Planning Department and invite them to attend the December 7, 2017 EAC meeting to ascertain if there are initiatives that EAC could assist with implementation in the Horizon's Plan. Mr. Tyson also added that this be added as an action item for Goal 1.

Mr. LLerena commented that he would like to consider the possibility of adding a goal to determine a market for recycling disposable plastic cups within the City. Mrs. Maxwell also suggested adding an action item for recycling at Vidant Medical Center.

Dr. Kane also suggested having Boards & Commission Reports be scheduled every six months versus quarterly reporting. Mr. Norris added that the intent of the reports was for information pertaining to environmental impacts that EAC could potentially advise on. Full Commission reports were not required. Additional, a new category will be added to the agenda for Commission reports.

Mr. Tyson asked members to review the 2017 goals to suggest updates for 2018 and be prepared to discuss at the December 7, 2017 meeting.

D. Council Presentation Discussion

Mr. Tyson asked members to review the Council Presentation attached in the agenda package and recommend edits prior to the December 7, 2017 meeting for inclusion. The presentation will be reviewed for final draft at that time.

8. OLD BUSINESS

A. ECU Sustainability Update

Mr. Carwein was not present to give an update; however, Mrs. Maxwell presented information as forwarded by Mr. Carwein.

ECU has requested a sustainability fee be incorporated per student per year. This fee has been voted for approval by the Student Government and will be presented to the Board of Trustees. A consultant is working with ECU to work on a Sustainability Master Plan. More information will be provided at the December 7, 2017 meeting. Mrs. Maxwell reported that Mr. Carwein is working on a community garden on Stancill Drive.

B. Cool Cities Initiative Update

No information was provided for this item.

C. Plastic Bag Resolution Update

No information was provided for this item.

D. Volkswagen Settlement Update

Mr. Tyson reported that North Carolina has not designated which department will be responsible for administering funds. A department designation and plan must be established by December 2, 2017. Mr. Tyson will provide information when it becomes available.

9. OTHER– FYI

A. UST Report

The report was not attached to the agenda package and will be added to the December 7, 2017 meeting package.

10. PROPOSED AGENDA ITEMS

The following items are proposed for the December 7, 2017 meeting:

A. 2018 Goals & Objectives Discussion
B. Council Presentation Discussion
C. Stormwater Annual Report
D. SWAC Update
E. Solar Conference Update
F. Chip Reader Update
G. Volkswagen Settlement Update
H. UST Report

11. ADJOURNMENT

There being no further business to discuss, Dr. Ames made a motion to adjourn. The motion was seconded by Mr. Brinkley and passed unanimously.

ATTACHMENT B

(Stormwater Annual Report)

Action: For your information.

Greenville
NORTH CAROLINA
PUBLIC WORKS

October 31, 2017

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 2016-2017 ANNUAL STORMWATER REPORT

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 2016 – September 2017**.

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: Robert Patterson – NC DEQ
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 2017

Reporting Period:
October 2016 – September 2017

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 twelfth annual report 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 received 5 applications for funding. 2 applications were approved for funding and contracted during the 2016-2017 budget year. 1 application was received past the cutoff date for the 2016-2017 budget year and is scheduled to be contracted for the 2017-2018 year. 2 applications did not meet the criteria to be eligible for funding. The City will continue to accept applications and rank projects and will resume this effort in 2016 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, 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. This will be a topic of discussion with the upcoming Stormwater Advisory Committee.

Stormwater Advisory Committee and Utility Rate Study:

Since the completion of the Master Plans, City Council has recognized their importance and impacts on the Stormwater Utility Fund. As a result, City Council directed the development of a stakeholders group to analyze and recommended improvements to the program and funding mechanism. The end goal being a sustainable stormwater program for the City of Greenville.

The City has contracted with a consultant to help facilitate a Stormwater Advisory Committee to complete a Stormwater Level of Service and Rate Assessment linking capital improvement needs, financing and policy. The committee of stakeholders will be:

- recommending extent and level of service;
- recommending ordinance/policy revisions;
- prioritizing capital improvements; and
- completing utility rate studies and recommending rate structures and fees.

Stakeholders will be engaged in a dialogue regarding the capital and financial needs of the stormwater system associated with alternative extents and levels of service and the corresponding cost and rate implications of each alternative.

II. PROGRAM ELEMENT: New Development Review/Approval

October 2016 – September 2017

Development Types	Total # Projects		Total # Acres	
	Neuse	Tar-Pam	Neuse	Tar-Pam
New development projects meeting rule criteria	9	16	114.75	285.58
New development projects requiring BMPs	5	4	28.35	64.33
New development projects requiring Peak Rate Match	9	16	114.75	251.20

Best Management Practice (BMP) Nutrient Removal Efficiencies	Number of BMPs Implemented
Wet Detention Pond	3
Stormwater Wetland	0
Sand Filter	0
Bioretention	3
Dry Detention Basin	0
Grass Swales	0
Vegetated Filter Strip With Level Spreader	0
Total Number of all BMPs Implemented	6

A summary table is provided in Appendix A for new development and redevelopment projects subject to the Rule during the 2016-2017 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	2014	2015	2016	2017
Construction projects completed and signed off	10[1]	6	3	19
Construction projects with enforcement action taken for deficient stormwater systems	0	0	0	0

Operation & Maintenance Compliance and Enforcement	2014	2015	2016	2017
Total of newly completed projects[2]	92	98	100	102
Projects submitting reports	63	83	79	53
Projects inspected by COG	92	98	100	98[5]
Projects with deficiencies	49	31	30	49
Projects w/ deficiencies corrected[3]	16	17	6	2
Projects taking steps to correct deficiencies[4]	10	10	29	49
Projects w/ enforcement action taken	23	21	1	0

[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.

[5] 4 sites experienced change of ownership and inspections have not yet been scheduled with the new owners.

Description of any compliance issues:

Construction-
There are no current construction issues or concerns.

Operation and Maintenance-
2016-2017
Out of the 102 sites inspected during this permit cycle, 49 were found to have deficiencies; of which 0 were undergoing enforcement action and 49 were still within their 90 day response period from the City of Greenville's notice of deficiency to complete the necessary corrective actions and 0 had submitted a plan of action to address the deficiency. All 49 deficiencies were due to not having submitted an annual report by their due date.

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-

2016-2017
Out of the 102 sites inspected during this permit cycle, 0 was under Notice of Violation (NOV) with 0 of those progressing to Civil Penalty.

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.
- 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.

2016-2017

SITE	VIOLATION	ACTIONS TAKEN	NOV SENT	RESPONSIBLE PARTY
1011 E 10th Street	Report of sanitary sewer discharge into ditch.	City investigated and found no discharge. The smell coming from the ditch was most likely from some organics in the ditch that had been disturbed by a resident upstream.	No	Jeff Tant
2401 S Memorial Drive	Report of the resident running a commercial carwash and discharging the wastewater into the street.	Contacted resident and made them aware that they could not discharge the wastewater for the washing of the cars into the City's storm drain system. The resident advised that they would not wash anymore cars at the residence.	No	Jan Dixon
1001 Howell Street	Forklift operator punctured a 55 gallon drum Ethenolamine.	The company hired Eastern Environmental Management to clean up the spill. The chemical did not reach the City's storm drain system.	No	Vallen Distributing Inc.
303 E 14th Street	Report of grease being poured into a catch basin.	Investigated and found no evidence to support the claim. Notified the resident that called in to call back if they suspected that any other violation occurred.	No	Crones LLC
1508 West Fourth Street	Report from our Code Enforcement Dept. that the resident was running an automotive repair service out of the residence and disposing of motor oil into the City's storm drainage system	Investigated and found some oil stains on the pavement at the residence, but found no evidence of illegal dumping. Told that if they parked a vehicle on the street that was leaking oil to place a drip pan under the vehicle.	No	Simon Jones
1301 Teakwood Drive	Concrete truck washing out in roadside ditch	Investigated and found several piles of concrete washout in the ditch near a BMP. Required violator to remove.	Yes	Caviness & Cates
1232, 1236, 1237, 1240, 1241 Teakwood Drive	Topsoil dumped into roadside ditch	Investigated and found several piles of topsoil in the ditch in front of multiple properties blocking flow in the ditch. Required violator to remove.	Yes	Caviness & Cates

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).

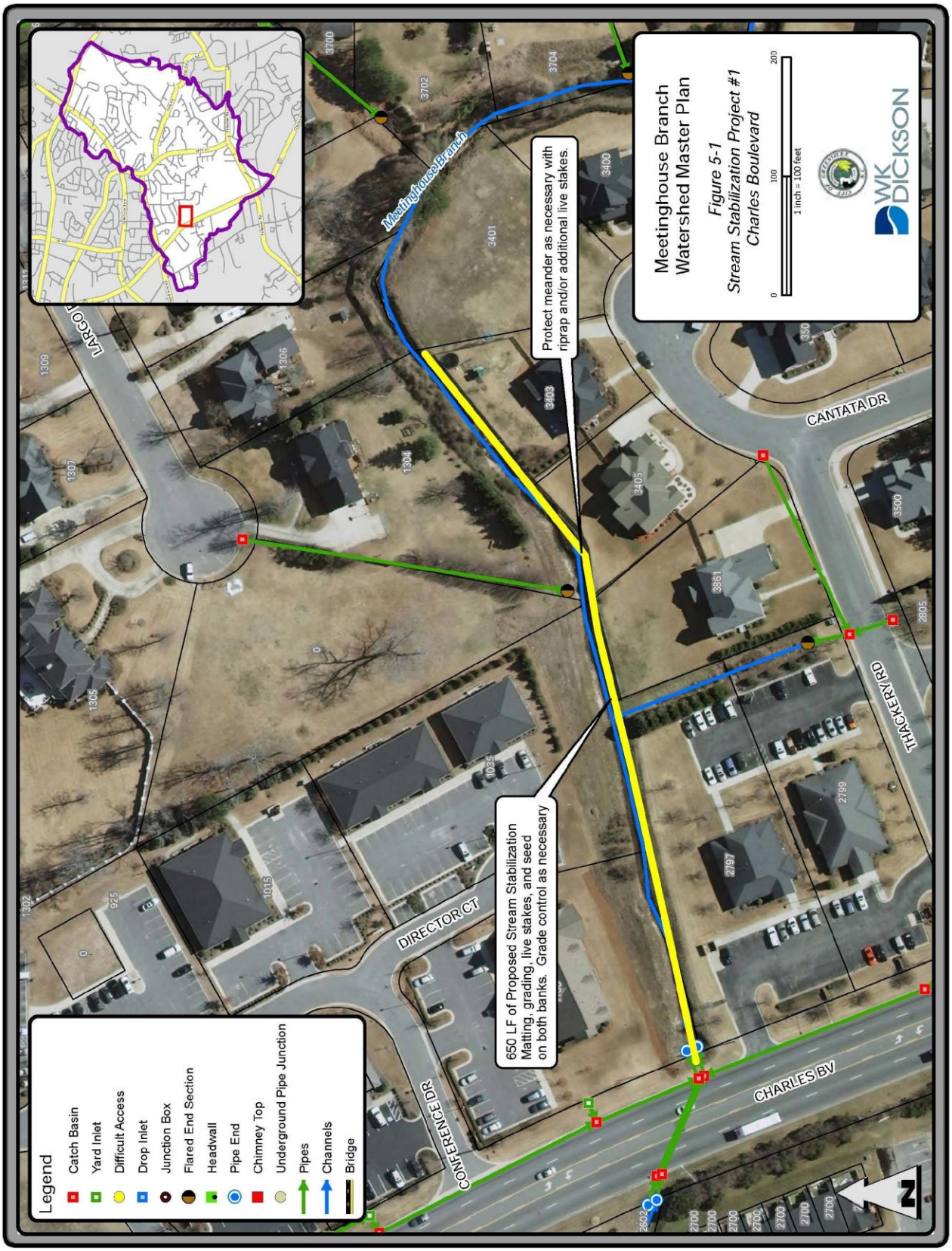
Picture 5-2. Severe bank erosion along landscaping fence

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

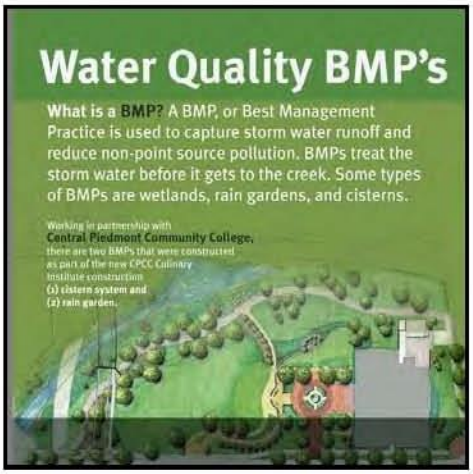
A bioretention project is proposed in the open space located between the Perkins Field parking lot and an open channel system. This area is adjacent to a ½-acre parking lot that currently drains to an existing closed system before discharging to an open channel. The proposed project location is shown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



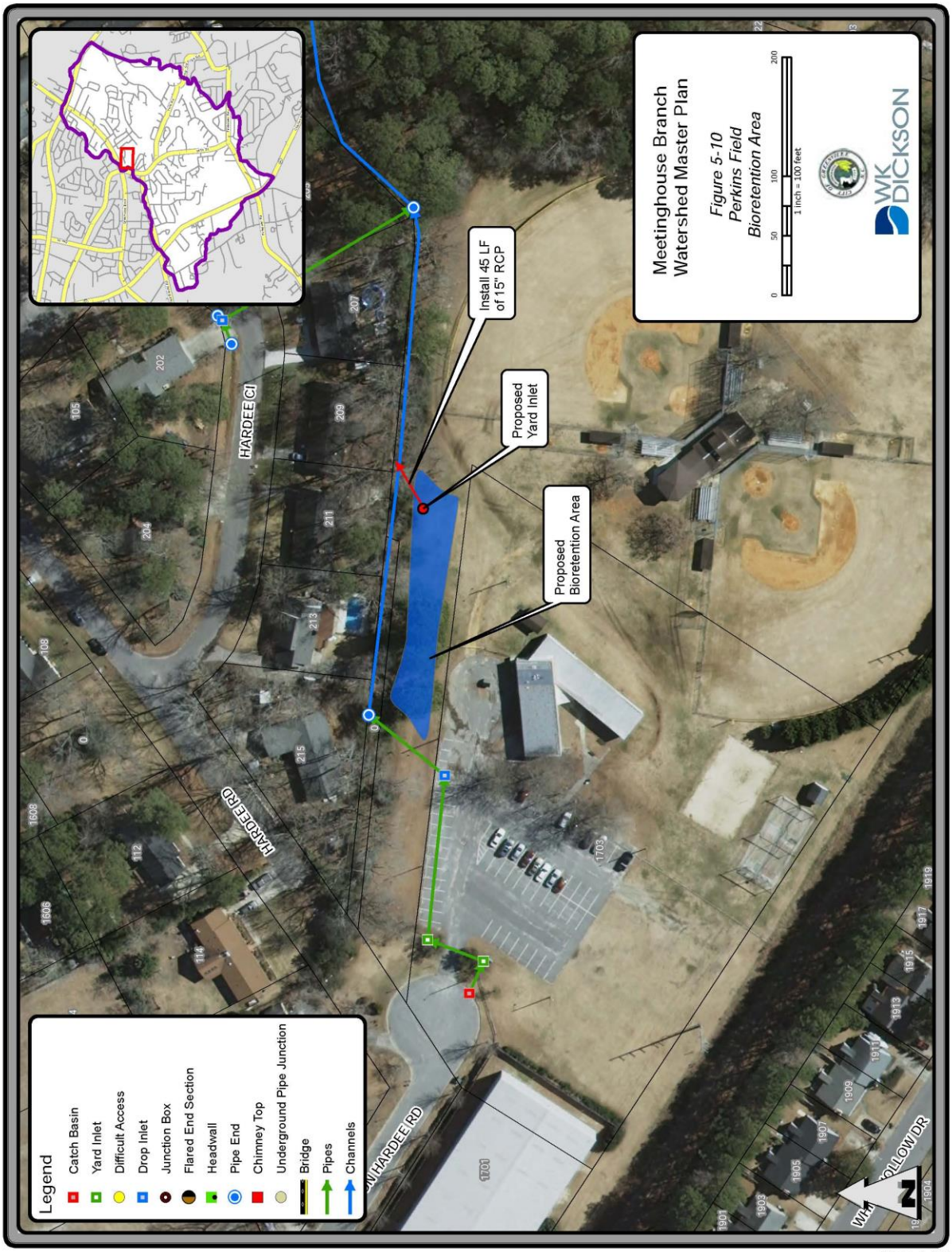
Bioretention Area - Perkins Field

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*



Page 5-25

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.

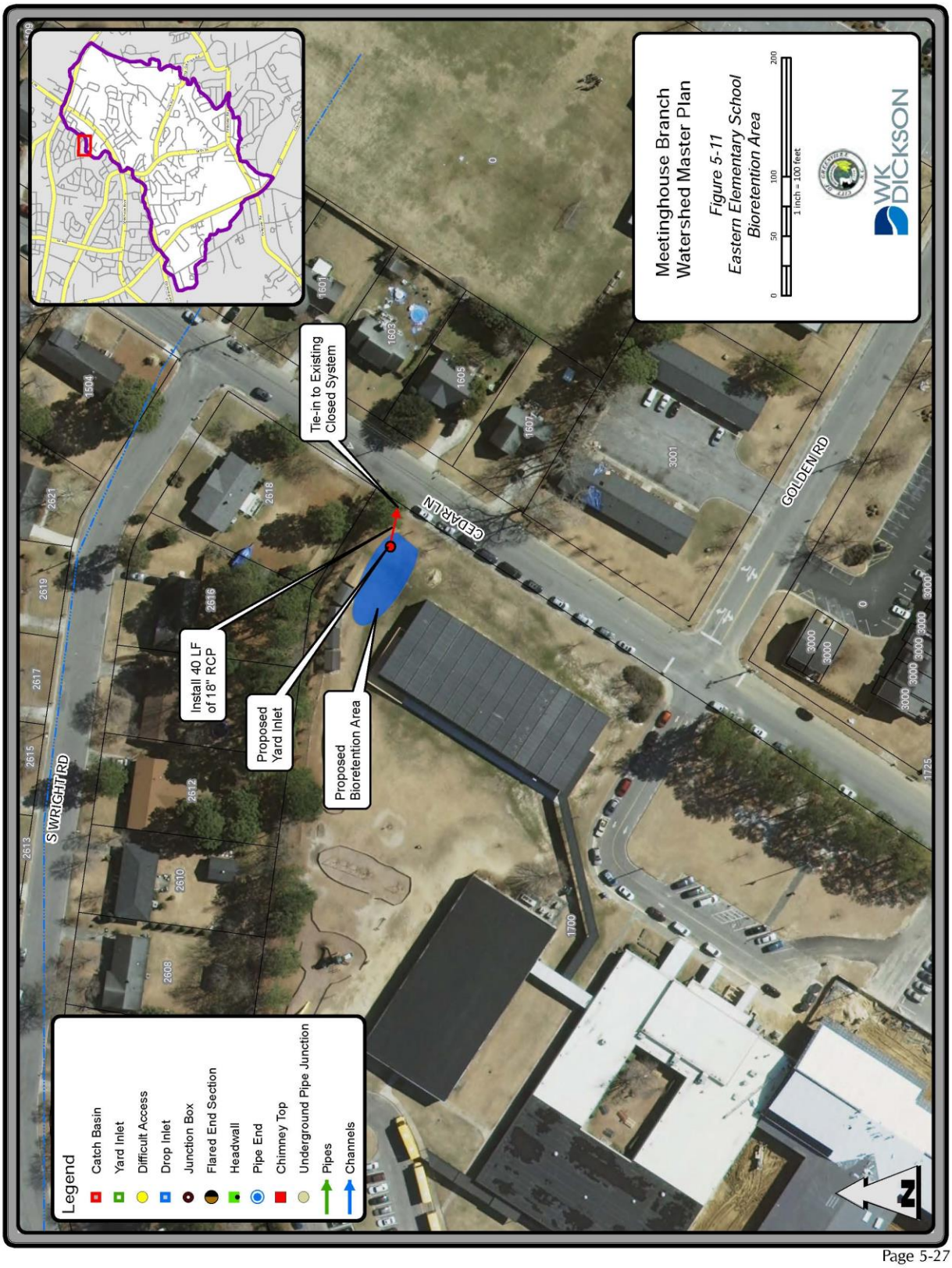
Bioretention Area - Eastern Elementary School

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*



Page 5-27

VI. PROGRAM ELEMENT: Public Education

	ACTIVITY	Point Value	# Complete 2016-2017	Actual Points	Actual Costs	# Planned 2017-2018	Est. Points	Est. Costs
1	Demonstration Sites (BMPs)	4 /EA	Y/1	4	$0.00	Y	4	$500.00
2	Newspaper Ads.	2 /EA	N	0	$0.00	N	0	$0.00
3	Technical Workshops	4 /EA	Y/4	16	$6000.00	Y/3	12	$1,000.00
4	Environmental Contest	4 /EA	N	0	$0.00	N	0	$0.00
5	Presentations for Civic Organizations*	1 /EA	Y/18	18	$100.00	Y/21	21	$300.00
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	$100.00	Y	4	$100.00
12	Adopt-A-Stream	4 /YR	N	0	$0.00	N	0	$0.00
13	SW Education Grant Program	1 /YR	Y	1	$2500.00	Y	1	$2,500.00
14	Hotline	3 /YR	Y	3	$0.00	Y	3	$0.00
15	Direct Mail	3 /YR	Y	3	$100.00	N	0	$0.00
16	Booths & Events	2/YR	Y/1	2	$5000.00	Y	6	$5000.00
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
			’16-’17 TOTAL	**66**	**$14,400**	**’17-’18 TOTAL**	**66**	**$11,050**

*See Appendix C for supporting documentation.

APPENDIX A

(New Development Projects – Summary Table)

2016-2017 Tar-Pam Loading Summary

(The Categories Listed Below Are Automatically Calculated)

LOADING SUMMARY CALCULATIONS		
		Units
Sum of All Project Acres Post Development	285.58	Acres
Sum of Nitrogen Load For All Projects Post Development	1301.07	N lbs/yr
N Load per acre per year for all Projects Post Development	4.56	N lbs/ac/yr
Sum of Phosporus Load For All Projects Post Development	225.07	P lbs/yr
P Load per acre per year for all Projects Post Development	0.79	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 2016 - SEPTEMBER 2017
City / County: Greenville / Pitt County

Project ID / Catchment #	Mill Creek Subdivision Phases 2 & 3	Blackwood Ridge Subdivision	Elmhurst Elementary	Healing Transitions	Verizon at Parkside Bluffs	*** Arbor Hills South - Phase 5	*** Arbor Hills South - Phase 6	Dollar General Davenport Farm Rd	College View Appartments
Pre-Development Project Acreage (A	**25.41**	**43.31**	**16.8**	**6.75**	**1.19**	**48.71**	**48.71**	**1.59**	**10.91**
Transportation Impervious	0.00	0.00	1.34	0.00	0.05	0.00	0.00	0.00	1.20
Roof Impervious	0.00	0.00	1.06	0.00	0.00	0.00	0.00	0.00	0.80
Managed Pervious (lawn/landscaped)	0.00	0.00	10.23	2.93	1.14	34.93	34.93	1.59	4.17
Managed Pervious (cropland)	0.00	32.33	0.00	0.00	0.00	0.00	0.00	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
Wooded Pervious	25.41	43.31	4.17	3.82	0.00	13.78	13.78	0.00	4.74
Post Development Project Acreage (Acres)									
Transportation Impervious	3.73	5.06	1.38	1.66	0.38	9.87	9.87	0.79	4.28
Roof Impervious	4.30	5.29	1.18	1.44	0.07	3.80	3.80	0.21	1.30
Managed Pervious	17.38	23.10	14.24	3.29	0.74	25.86	25.86	0.59	3.15
Wooded Pervious	0.00	9.86	0.00	0.36	0.00	9.18	9.18	0.00	2.18
Total Project Acres	25.41	43.31	16.80	6.75	1.19	48.71	48.71	1.59	10.91
Predevelopment Nutrient Export									
Nitrogen lbs/year	12.31	175.96	43.42	3.95	1.56	31.97	31.97	1.15	32.88
Nitrogen lbs/acre/year	0.48	4.06	2.59	0.59	1.31	0.66	0.66	0.72	3.01
Phosphorous lbs/year	1.81	25.21	6.90	1.55	0.29	5.97	5.97	0.23	4.67
Phosphorous lbs/acre/year	0.07	0.58	0.41	0.23	0.25	0.12	0.12	0.14	0.43
Post-development & Pre-BMP Nutrient Export									
Nitrogen lbs/year	144.73	175.96	49.49	63.78	8.59	240.27	240.27	20.58	104.30
Nitrogen lbs/acre/year	5.70	4.06	2.95	9.45	7.22	4.93	4.93	12.94	9.56
Phosphorous lbs/year	20.47	25.21	8.30	5.92	1.13	33.15	33.15	2.11	11.07
Phosphorous lbs/acre/year	0.81	0.58	0.49	0.88	0.95	0.68	0.68	1.33	1.01
BMPs Implemented									
Number of BMPs	0.00	0.00	0.00	0.00	1.00	0.00	0	1.00	0.00
Post-development & Post-BMP Nutrient Export									
Nitrogen lbs/year	144.84	175.84	49.56	63.78	6.85	240.14	240.14	13.18	104.30
Nitrogen lbs/acre/year	5.70	4.06	2.95	9.45	5.76	4.93	4.93	8.29	9.56
Phosphorous lbs/year	20.58	25.12	8.23	5.92	0.45	33.12	33.12	1.05	11.02
Phosphorous lbs/acre/year	0.81	0.58	0.49	0.88	0.38	0.68	0.68	0.66	1.01
Other Site Information *(expect some variations due to auto calculations and rounding)*									
Peak Flow Match Required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Redevelopment?	No	No	Yes	No	No	No	No	No	Yes
Tar-Pam or Neuse River Basin	Neuse	Neuse	Tar-Pam	Tar-Pam	Tar-Pam	Tar-Pam	Tar-Pam	Neuse	Tar-Pam
Type of BMP Implemented	N/A	N/A	N/A	N/A	Bioretention	N/A	N/A	N/A	N/A
Buydown?	Yes	Yes	Yes	Yes	Yes	Previous	Partial Previous	Yes	Yes
Nitrogen buydown lbs	1295.83	77.96	0.00	1101.60	62.83	0.00	0.00	204.60	2439.37
Phosphorus buydown lbs	0.00	0.00	47.40	97.20	0.00	0.00	52.13	0.00	189.83
Nitrogen lbs/year Final	101.64	173.24	67.20	27.00	4.76	194.84	0.00	6.36	22.99
Nitrogen lbs/acre/year Final	4.00	4.00	4.00	4.00	4.00	4.00	9.76	4.00	2.11
Nitrogen lbs over 30 years	3049.20	5197.20	2016.00	810.00	142.80	5845.20	0.00	190.80	689.62
Phosphorus lbs/year Final	0.00	0.00	6.89	2.70	0.48	19.48	19.48	0.00	4.69
Phosphorus lbs/acre/year Final	0.00	0.00	0.41	0.40	0.40	0.40	0.40	0.00	0.43
Phosphorous lbs over 30 years	0.00	0.00	206.64	81.00	14.28	584.52	584.52	0.00	140.74

*** Arbor Hills South had a previous error in buy down calculations for phases 1-4. This resulted in credit for phase 5 and 6.

Project ID / Catchment #	Proximity at 10th	Physicians East	Error Overpaid Children's World	Ronald McDonald House	Greenville Nissan	<Impervious Audi Greenville	North State Steel Revisions	Charleston Village Section 7	Dollar General 10th St
Pre-Development Project Acreage (A	**4.05**	**14.4**	**2.20**	**2.58**	**14.17**	**1.17**	**12.57**	**13.64**	**0.93**
Transportation Impervious	1.66	7.32	1.40	0.57	6.88	0.72	8.33	0.00	0.14
Roof Impervious	0.60	2.04	0.00	0.22	0.36	0.28	0.72	0.00	0.00
Managed Pervious (lawn/landscaped)	1.79	5.04	0.00	1.79	0.00	0.17	0.00	0.00	0.79
Managed Pervious (cropland)	0.00	0.00	2.06	0.00	5.24	0.00	3.20	13.64	0.00
Managed Pervious (pasture)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wooded Pervious	0.00	0.00	0.00	0.00	1.70	0.00	0.32	0.00	0.00
Post Development Project Acreage (									
Transportation Impervious	1.31	7.51	0.61	0.83	9.22	0.72	10.52	3.54	0.44
Roof Impervious	1.99	2.42	0.50	0.35	0.36	0.21	1.05	1.16	0.21
Managed Pervious	0.75	4.47	1.09	1.40	4.60	0.25	1.01	8.94	0.28
Wooded Pervious	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Project Acres	4.05	14.40	2.20	2.58	14.18	1.18	12.58	13.64	0.93
Predevelopment Nutrient Export									
Nitrogen lbs/year	44.86	193.81	9.84	14.56	218.50	22.08	260.56	29.43	2.79
Nitrogen lbs/acre/year	11.08	13.46	4.48	5.65	15.41	18.87	20.73	2.16	3.00
Phosphorous lbs/year	4.93	19.44	2.78	2.08	41.41	1.79	39.86	8.56	0.47
Phosphorous lbs/acre/year	1.22	1.35	1.26	0.81	2.92	1.53	3.17	0.63	0.50
Post-development & Pre-BMP Nutrie									
Nitrogen lbs/year	66.18	207.63	20.94	22.53	207.67	20.19	273.75	88.08	13.40
Nitrogen lbs/acre/year	16.34	14.42	9.54	8.75	14.65	17.25	21.77	6.46	14.41
Phosphorous lbs/year	5.37	19.98	2.43	2.74	20.49	1.76	21.28	12.04	1.27
Phosphorous lbs/acre/year	1.33	1.39	1.10	1.07	1.45	1.50	1.69	0.88	1.37
BMPs Implemented									
Number of BMPs	0.00	0.00	0.00	0	0.00	0.00	0.00	1.00	1.00
Post-development & Post-BMP Nutri									
Nitrogen lbs/year	66.18	207.65	20.99	23.17	207.74	20.36	273.87	67.11	7.78
Nitrogen lbs/acre/year	16.34	14.42	9.54	8.98	14.65	17.25	21.77	4.92	8.37
Phosphorous lbs/year	5.39	20.02	2.42	2.61	20.56	1.77	21.26	6.96	0.76
Phosphorous lbs/acre/year	1.33	1.39	1.10	1.01	1.45	1.50	1.69	0.51	0.82
Other Site Information *(expect some*									
Peak Flow Match Required?	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Redevelopment?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Tar-Pam or Neuse River Basin	Tar-Pam	Tar-Pam	Neuse	Tar-Pam	Tar-Pam	Tar-Pam	Tar-Pam	Neuse	Tar-Pam
Type of BMP Implemented	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Wet Pond	Bioretention
Buydown?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Nitrogen buydown lbs	1042.96	2159.14	939.23	388.51	1642.75	0.00	2737.75	376.46	121.92
Phosphorus buydown lbs	13.37	17.28	0.00	15.85	0.00	0.00	0.00	0.00	11.72
Nitrogen lbs/year Final	31.41	135.68	6.90	10.20	152.96	15.59	182.55	54.56	3.72
Nitrogen lbs/acre/year Final	7.76	9.42	3.14	3.96	10.79	13.21	14.51	4.00	4.00
Nitrogen lbs over 30 years	942.35	4070.30	206.98	306.12	4588.79	467.60	5476.45	1636.80	111.60
Phosphorus lbs/year Final	4.94	19.44	0.00	2.09	41.41	1.81	39.88	0.00	0.37
Phosphorus lbs/acre/year Final	1.22	1.35	0.00	0.81	2.92	1.53	3.17	0.00	0.40
Phosphorous lbs over 30 years	148.23	583.20	0.00	62.69	1242.17	54.16	1196.36	0.00	11.16

Children's World was discovered to have overpaid and will be pursuing a correction.

Project ID / Catchment #	Ignite Church Phase 1	New River Mulch	Greenville Car Wash	Koinonia Christian Center	Sunbelt Rentals	FedEx Freight	Grady White Boats Mold Storage Addition	Vested Oxford Park Lot 2
Pre-Development Project Acreage (A	**12**	**1.51**	**1.12**	**39.08**	**7.19**	**23.13**	**34.38**	**1.603**
Transportation Impervious	0.00	0.24	0.00	5.50	0.13	0.00	6.52	
Roof Impervious	0.00	0.06	0.00	0.80	0.00	0.00	8.63	
Managed Pervious (lawn/landscaped)	10.76	1.21	0.00	11.68	0.12	23.13	17.15	
Managed Pervious (cropland)	0.00	0.00	0.00	0.00	6.20	0.00	0.00	
Managed Pervious (pasture)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Wooded Pervious	1.24	0.00	1.12	21.10	0.73	0.00	2.08	
Post Development Project Acreage (								
Transportation Impervious	5.12	0.54	0.54	5.68	3.33	10.57	6.85	
Roof Impervious	1.03	0.00	0.19	1.23	0.21	0.60	9.10	
Managed Pervious	4.82	0.97	0.39	32.17	3.07	11.96	16.35	
Wooded Pervious	1.03	0.00	0.00	0.00	0.59	0.00	2.08	
Total Project Acres	12.00	1.51	1.12	39.08	7.20	23.13	34.38	
Predevelopment Nutrient Export								
Nitrogen lbs/year	8.39	5.70	0.54	103.77	18.67	16.75	271.70	
Nitrogen lbs/acre/year	0.70	3.78	0.48	2.66	2.60	0.72	7.90	
Phosphorous lbs/year	1.62	0.91	0.08	14.55	5.30	3.30	32.91	
Phosphorous lbs/acre/year	0.14	0.60	0.07	0.37	0.74	0.14	0.96	
Post-development & Pre-BMP Nutrie								
Nitrogen lbs/year	119.68	10.47	15.00	133.18	69.51	223.82	287.35	
Nitrogen lbs/acre/year	9.97	6.93	13.39	3.41	9.66	9.68	8.36	
Phosphorous lbs/year	13.35	1.41	1.50	21.66	7.95	26.60	33.93	
Phosphorous lbs/acre/year	1.11	0.93	1.34	0.55	1.11	1.15	0.99	
BMPs Implemented								
Number of BMPs	1.00	0.00	1.00	2.00	0.00	1.00	0.00	
Post-development & Post-BMP Nutri								
Nitrogen lbs/year	47.76	10.46	10.72	111.38	69.55	182.73	287.42	
Nitrogen lbs/acre/year	3.98	6.93	9.57	2.85	9.66	7.90	8.36	
Phosphorous lbs/year	5.04	1.40	1.20	12.90	7.99	13.42	34.04	
Phosphorous lbs/acre/year	0.42	0.93	1.07	0.33	1.11	0.58	0.99	
Other Site Information *(expect some*								
Peak Flow Match Required?	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Redevelopment?	Yes	Yes	No	Yes	Yes	No	Yes	No
Tar-Pam or Neuse River Basin	Neuse	Neuse	Neuse	Tar-Pam	Tar-Pam	Tar-Pam	Tar-Pam	Tar-Pam
Type of BMP Implemented	Wet Pond	N/A	Bioretention	Wet Pond	N/A	Wet Pond	N/A	N/A
Buydown?	No	Yes	Yes	No	Yes	Yes	Yes	No
Nitrogen buydown lbs	0.00	132.73	187.15	0.00	1220.86	2706.21	2875.54	0.00
Phosphorus buydown lbs	0.00	0.00	0.00	0.00	79.81	124.90	30.94	0.00
Nitrogen lbs/year Final	48.00	6.04	4.48	156.32	28.80	92.52	190.12	0.00
Nitrogen lbs/acre/year Final	4.00	4.00	4.00	4.00	4.00	4.00	5.53	0.00
Nitrogen lbs over 30 years	1440.00	181.20	134.40	4689.60	864.00	2775.60	5703.64	0.00
Phosphorus lbs/year Final	0.00	0.00	0.00	15.63	5.33	9.25	33.00	0.00
Phosphorus lbs/acre/year Final	0.00	0.00	0.00	0.40	0.74	0.40	0.96	0.00
Phosphorous lbs over 30 years	0.00	0.00	0.00	468.96	159.84	277.56	990.14	0.00

Project ID / Catchment #		Vested
	Taberna Phase 4	State Employees Credit Union
Pre-Development Project Acreage (A	**13.93**	**5.47**
Transportation Impervious	0.00	
Roof Impervious	0.00	
Managed Pervious (lawn/landscaped)	0.00	
Managed Pervious (cropland)	13.96	
Managed Pervious (pasture)	0.00	
Wooded Pervious	0.00	
Post Development Project Acreage (		
Transportation Impervious	1.73	
Roof Impervious	2.40	
Managed Pervious	9.84	
Wooded Pervious	0.00	
Total Project Acres	13.97	
Predevelopment Nutrient Export		
Nitrogen lbs/year	30.12	
Nitrogen lbs/acre/year	2.16	
Phosphorous lbs/year	8.76	
Phosphorous lbs/acre/year	0.63	
Post-development & Pre-BMP Nutrie		
Nitrogen lbs/year	74.09	
Nitrogen lbs/acre/year	5.30	
Phosphorous lbs/year	10.71	
Phosphorous lbs/acre/year	0.77	
BMPs Implemented		
Number of BMPs	0.00	
Post-development & Post-BMP Nutri		
Nitrogen lbs/year	74.04	
Nitrogen lbs/acre/year	5.30	
Phosphorous lbs/year	10.76	
Phosphorous lbs/acre/year	0.77	
Other Site Information *(expect some*		
Peak Flow Match Required?	Yes	No
Redevelopment?	No	Yes
Tar-Pam or Neuse River Basin	Neuse	Tar-Pam
Type of BMP Implemented	N/A	N/A
Buydown?	Yes	No
Nitrogen buydown lbs	544.58	0.00
Phosphorus buydown lbs	0.00	0.00
Nitrogen lbs/year Final	55.88	0.00
Nitrogen lbs/acre/year Final	4.00	0.00
Nitrogen lbs over 30 years	1676.40	0.00
Phosphorus lbs/year Final	0.00	0.00
Phosphorus lbs/acre/year Final	0.00	0.00
Phosphorous lbs over 30 years	0.00	0.00

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: Sanitary Sewer discharge
Location: 1011 E 10th Street

Complaint from:	***Complaint Date and Source:***	***First Callback:***	***Investigation:***
Name: Mike	Call date: ____	Date: April 23	Date: April 23
Address: ____	Time: ____	Time: 10:09Am	Time: 10:1Am
____	☐ Hotline ☐ Eng. Staff	***Results Callback:***	Duration: 30min
Home Phone #: 916-2608	☐ 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 Public Staff		☐ other ____

Field Observations *(if different):*
Investigator's Description: ____
Street Address (Nearest): 1011 E 10th Street

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:

City Investigated & found no discharge. The smell was coming from organics distrubed by A resident up stream.

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: Waste water from car wash being discharged
Location: 2401 S Memorial Dr

Complaint from:	***Complaint Date and Source:***	***First Callback:***	***Investigation:***
Name: Resident	Call date: _____	Date: 4-24-17	Date: 4-24-17
Address: _____	Time: _____	Time: 10:00Am	Time: 10:14m
_____	☐ Hotline ☐ Eng. Staff		Duration: 40 mins
Home Phone #: _____	☐ Walk-In ☐ Emerg. Mgt.	***Results Callback:***	***Team (initials of staff):***
Work Phone #: _____	☐ Call In ☐ Health Dept.	Date: 4-24-17	☐ DB ☐ KQ
Other: _____	☐ DWQ ☐ Erosion Ctrl.	☐ Phone	☐ LS ☐ CJ
(pager, e-mail, etc.)	☐ Other City employee	☐ Letter	☐ TC ☒ VL
	☒ Other Public Stuff	☒ In Person	☐ other _____

Field Observations *(if different):*
Investigator's Description: _____
Street Address (Nearest): _____

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:
No activity was found at this time of the investigation. Advised resident that they could not discharge wastewater from washing the cars into the storm drain 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: Chemical Spill
Location: 1001 Howell Street

Complaint from:	**Complaint Date and Source:**	**First Callback:**	**Investigation:**
Name:	Call date: 6-8-17	Date: 6-8-17	Date: 6-8-17
Address:	Time: 10:00	Time: 10:15	Time: 3 hrs
Home Phone #:	☐ Hotline ☐ Eng. Staff	**Results Callback:**	Duration: 10:15
Work Phone #:	☐ Walk-In ☐ Emerg. Mgt.	Date: 6-8-17	**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

Field Observations *(if different):*
Investigator's Description: fork lift punctured A 55 gallon drum of Ethenolamine
Street Address (Nearest):

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:

55 gallon drum spilled but was contained in the storm drain system on site.

The company called Eastern Environmental to clean up the spill.

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

Eastern Environmental Management, LLC
P.O. Box 4030
Rocky Mount, NC 27803
Office (252) 443-2224 (24 Hrs.)
Fax (252) 972-9940
www.eastern-environmental.com

Certificate of Disposal

Generator: Vallen Distributing Inc.
1001 Howell St.
Greenville, NC 27834
(E-09033)

Material Accepted:	Disposal Method:
3-DM (S)- (750 –lbs) – Non-hazardous Non-regulated- Ethenolamine 99% dried in Oildry	Solidification
20-Gallons – Non-hazardous Non-regulated Ethenolamine in Water (PH 9.5-10)	Solidification

Eastern Environmental Management LLC. Accepted the above materials on 06/08/17

Eastern Environmental Management LLC has accepted custody of the above referenced non-hazardous material. This material has been determined to be non-hazardous by a material profile, generator knowledge, and/or analytical data provided to Eastern Environmental Management, LLC.

Carl Smith

Carl Smith CFO/Partner

Eastern Environmental Management

P.O. Box 4030 • Rocky Mount, NC 27803
Office (252) 443-2224 (24 Hrs.) • Fax (252) 972-9940
www.eastern-environmental.com

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NCCESQG
Manifest Document No.: E-09033
2. Page 1 of

3. Generator's Name and Mailing Address
Vallen Distribution Inc.
1001 Howell St. / Greenville, NC. 27834

Contact: Terry Batson

4. Generator's Phone (252) 439-6517

5. Transporter 1 Company Name: EASTERN ENVIRONMENTAL MANAGEMENT
6. US EPA ID Number: NCR000146456
A. State Transporter's ID: 600308640
B. Transporter 1 Phone: 252-443-2224

7. Transporter 2 Company Name
8. US EPA ID Number
C. State Transporter's ID
D. Transporter 2 Phone

9. Designated Facility Name and Site Address
Eastern Environmental Mgmt.
518 S. Pearl St./ Rocky Mount, NC. 27804
10. US EPA ID Number: NCR000146456
E. State Facility's ID: NCTF0000006
F. Facility's Phone: 252-443-2224

GENERATOR

11. WASTE DESCRIPTION	12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
a. Non-haz / Non-reg Ethenolamine 99% dried in oildry media	3	DM	750	P
b. Non-haz / Non-reg Ethenolamine in Water (PH 9.5 - 10)	1	TT	20	G
c.				
d.				
e.				
f.				

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name: Carl Smith agent for Vallen
Signature: Carl Smith
Date: Month 06 Day 08 Year 17

TRANSPORTER

17. Transporter 1 Acknowledgment of Receipt of Material
Printed/Typed Name: Carl Smith
Signature: Carl Smith
Date: Month 06 Day 08 Year 17

18. Transporter 2 Acknowledgment of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name: Billy Rawls
Signature: Billy Rawls
Date: Month 06 Day 08 Year 17

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 being dumped into storm drain
Location: 303 E 14th Street

Complaint from:	*Complaint Date and Source:*	*First Callback:*	*Investigation:*
Name: Resident	Call date: ____	Date: 6-29-17	Date: 6-29-17
Address: ____	Time: ____	Time: 0:32	Time: 3:00
____	☐ Hotline ☐ Eng. Staff	*Results Callback:*	Duration: 15mins
Home Phone #: ____	☐ Walk-In ☐ Emerg. Mgt.	Date: 6-29-17	*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 Public Staff		☐ other ____

Field Observations *(if different):*
Investigator's Description: ____
Street Address (Nearest): ____

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:

No sign of dumping found.

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: Disposing of oil in storm drain
Location: 1508 W 4th Street

Complaint from:	*Complaint Date and Source:*	*First Callback:*	*Investigation:*
Name: TaWanda Cage	Call date: 9-18-17	Date: 9-18-17	Date: 9-18-17
Address:	Time: 10:53	Time: 2:00	Time: 2:00
Home Phone #:	☐ Hotline ☐ Eng. Staff	*Results Callback:*	Duration: 10 mins
Work Phone #: 329-4856	☐ Walk-In ☐ Emerg. Mgt.	Date: 9-18-17	*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

Field Observations *(if different):*
Investigator's Description:
Street Address (Nearest):

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:

City investigated & found no grease in drains surrounding the property

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: Concrete trucks washing out in roadside ditch adjacent to BMP
Location: 1301 Teakwood Drive

Complaint from:	***Complaint Date and Source:***	***First Callback:***	***Investigation:***
Name:	Call date: N/A	Date:	Date: 3/6/17
Address:	Time: 14:45	Time:	Time: 14:45
Home Phone #:	☐ Hotline ☑ Eng. Staff	***Results Callback:***	Duration: 20 min
Work Phone #:	☐ Walk-In ☐ Emerg. Mgt.	Date:	***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 DE + JPH

Field Observations *(if different):*
Investigator's Description: Contractor is allowing concrete trucks to wash out in roadside ditch
Street Address (Nearest): 1301 Teakwood Drive

Property Type:		**Observations:**	**Drainage Basin:**
☐ Public	☐ Commercial	☐ Sheen	Crk
☑ Residential	☐ Industrial	☐ Odor	Sub-Basin
	☐ Unimproved	☐ Floatables . .	☑ Flow reached storm drain?
		☑ Other . . . . . Concrete	☐ 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:
Several piles of concrete in roadside ditch adjacent to BMP where concrete trucks have been washing out. Also some piles further up in ditch on same property not shown in photo.

Continue on back, if necessary

☑ **Need NOV?** Date Sent 3/7/17
NOV Sent to (usu. Prpty Owner): Caviness + Cates
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

CERTIFIED LETTER
#7016 0750 0001 0934 6656

NOTICE OF VIOLATION OF THE
STORMWATER MANAGEMENT AND CONTROL ORDINANCE

March 7, 2017

Caviness & Cates
Attn: Pamela Geddie
639 Executive Place
Suite 400
Fayetteville, NC 28305

RE: ILLICIT DISCHARGE OF CONCRETE WASHOUT INTO THE STORMWATER CONVEYANCE AT 1301 TEAKWOOD DRIVE (PIN #83201)

Dear Ms. Geddie:

This letter is to inform you that 1301 Teakwood Drive (PIN #83201) was found to be in violation of the City of Greenville Stormwater Management and Control Ordinance of the Greenville City Code. This violation occurred on March 6, 2017 when city staff observed the reminants from the washing out of concrete trucks being discharged to the City's stormwater conveyance (roadside ditch). 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 one thousand dollars ($1000.00) 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 10 days of receipt of this notice, you must provide the City with a wastewater management plan that clearly specifies how all of the containments will be collected and disposed of in a legal manner. Upon review and approval of this plan, the**

252-329-4522 1500 Beatty St., Greenville, NC 27834 greenvillenc.gov

ONWNER/BUSINESS'S **continued adherence to the plan requirements will be required 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 David Fields at (252) 329-4681 or myself at (252) 329-4350. Your immediate attention in this matter is appreciated.

Sincerely,

Daryl Norris, PE, CFM, CPSWQ
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

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: Several truckloads of topsoil dumped into roadside ditch.

Location: 1232, 1236, 1237, 1240 + 1241 Teakwood Drive

Complaint from:	***Complaint Date and Source:***	***First Callback:***	***Investigation:***
Name:	Call date:	Date:	Date: 7/6/17
Address:	Time:	Time:	Time: 3:30 pm
Home Phone #:	☐ Hotline ☑ Eng. Staff	***Results Callback:***	Duration: 20 min.
Work Phone #:	☐ Walk-In ☐ Emerg. Mgt.	Date:	***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 DE + JPH

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

Investigator's Description: Topsoil dumped into roadside ditch on several lots

Street Address (Nearest): 1232 - 1241 Teakwood Drive

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

Several truckloads of topsoil dumped into roadside ditch in front of several properties, blocking flow

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

CERTIFIED LETTER
#7016 0750 0001 0934 6434

NOTICE OF VIOLATION OF THE
STORMWATER MANAGEMENT AND CONTROL ORDINANCE

March 7, 2017

Caviness & Cates
Attn: Pamela Geddie
639 Executive Place
Suite 400
Fayetteville, NC 28305

RE: ILLICIT DISCHARGE OF TOPSOIL DUMPED INTO THE STORMWATER CONVEYANCE AT 1232, 1236, 1237, 1240 & 1241 TEAKWOOD DRIVE (PINS 83216, 83217, 83198, 83218 & 83199)

Dear Ms. Geddie:

This letter is to inform you that lots 1232, 1236, 1237, 1240 & 1241 Teakwood Drive (PIN #83216, 83217, 83198, 83218 & 83199) were found to be in violation of the City of Greenville Stormwater Management and Control Ordinance of the Greenville City Code. This violation occurred on March 6, 2017 when city staff observed several truckloads of topsoil had been dumped directly into the City's stormwater conveyance (roadside ditch). 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 one thousand dollars ($1000.00) 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 10 days of receipt of this notice, you must provide the City with a wastewater**

252-329-4522 1500 Beatty St., Greenville, NC 27834 greenvillenc.gov

management plan that clearly specifies how all of the containments will be collected and disposed of in a legal manner. Upon review and approval of this plan, the ***ONWNER/BUSINESS'S* continued adherence to the plan requirements will be required 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 David Fields at (252) 329-4681 or myself at (252) 329-4350. Your immediate attention in this matter is appreciated.

Sincerely,

Daryl Norris, PE, CFM, CPSWQ
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

APPENDIX C

(Public Education)

Environmental Advisory Commission Grant

The grant cycle for 2016-2017 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.

The grant of $2,500 for stormwater management education for 2015 was awarded to Love A Sea Turtle (LAST) to support and expand the Paint the Drain initiative.

Since last spring, LAST have planned to paint every storm drain in Greenville over the next five years. A mobile platform for the video, a simplified sign-up, easy to access supplies, and ready availability of maps detailing where to paint are some of their goals. All of this combined with public service announcements airing year round and modern posters in schools, clubs and community volunteer agencies are part of the planning process to educate the public and complete this project. During their summer camp program, Upstream Downstream Connection Camp, they introduce water quality concepts, current storm-water concerns, and paint drains when and where it is appropriate and weather permitting.

Stenciling storm drains throughout Greenville will bring continued awareness to the public about what goes into storm drains does not go through a water treatment center, but flows directly into our rivers and streams and ultimately our oceans.

Love A Sea Turtle will serve as project coordinator and liaison to the effort. City of Greenville Storm Water Management staff will provide project support with stencil kit materials. City of Greenville Videographer, Kelvin Thomas, will work with LAST students for a new storm drain stencil project video.

Love A Sea Turtle's "Turtle Team" of student volunteers will lead and participate in the storm drain stenciling project, promote the project through awareness initiatives and table and poster displays, and take active roles as mentors for other youth in the community.

ECU Center for Leadership and Civic Engagement, student groups, and community members will be invited to join the effort on national event days and throughout the year. The goal is to make the program available, accessible and easy for small, medium and large scale groups and organizations to make an impact. We will rely on the city to provide supplies, maps, and an interactive link to the city web page providing updates on project progress, downloadable flyer, and video.

Pitt County Youth SCUBA Club members and Rum Runner Dive Shop will be engaged in the project. LAST and its summer campers, including Boys & Girls Clubs and other youth member organizations, will perform daily testing of the lake, upload results to EarthEcho Water Challenge, and make data available upon request to park manager and city water quality officials at the end of summer.

At the completion of the grant cycle, representatives from the LAST will present the project report to the City's EAC during the June 2018 meeting.

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

2016-2017

DATE	TOPIC	DESCRIPTION	ATTENDEES
14-Nov-16	North of the River Community Meeting	Neighborhood presentation on flood control projects, water quality projects and stream stabilization projects.	50+
12 Occurrences	Enviroscape Presentations	Hands on presentation of stormwater pollution using the enviroscape model	350+
17-Nov-16	WSMP Presentation –Neighborhood Advisory Board	Neighborhood presentation on flood control projects, water quality projects and stream stabilization projects.	15
21-Nov-16	WSMP Presentation -Tar River & University Neighborhood Association (TRUNA)	Neighborhood presentation on flood control projects, water quality projects and stream stabilization projects.	15
11-Apr-17	GUC Breakfast	Brochures on illicit discharges, illicit connections, and storm sewer conflicts	175
18-May-17	Metro Mayors Coalition	Bus tour presentation about stormwater and flooding issues	40+
20-July-17	Stormwater SMART Board Meeting	Presentation of Town Creek Culvert Project. Discussed property impacts, BMP locations, BMP maintenance, and construction schedule.	15

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

Technical Workshops

2016-2017

DATE	TOPIC	DESCRIPTION	ATTENDEES
18-Nov-16	BMP Workshop	Discussion of local BMP inspection & maintenance	40+
16-May-17	IECA Stormwater Conference	Presentation of Town Creek Culvert Project. Discussed property impacts, BMP locations, BMP maintenance, and construction schedule.	50+
28-Aug-17	APWA PWX Orlando	Presentation of Town Creek Culvert Project. Discussed property impacts, BMP locations, BMP maintenance, and construction schedule.	200+
18-Sep-17	APWA SW Conference	Paint the Drain Educational Presentation	40+

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

Other Educational Efforts

2016-2017

DATE	TOPIC	DESCRIPTION	ATTENDEES
22-Oct-16	"Make a Difference" Day - L.A.S.T. Stenciling	Storm drain stenciling across the city. Also provided fact sheets to students about pollution prevention.	65
6 Occurrences	Paint the Drain – L.A.S.T. Stenciling	Storm drain stenciling in multiple locations across the city.	400+
8-Apr-17	PirateFest	River table game to educate kids on putting trash in its place	1000+

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

ATTACHMENT C

(Volkswagen Settlement Update)

Action: For your information.

Amanda Braddy

From: Durk Tyson <durktyson@gmail.com>
Sent: Wednesday, November 22, 2017 11:40 AM
To: Amanda Braddy; Daryl Norris; Drake Brinkley; Ann Maxwell; David Ames; Nathaniel Hamilton; Diego Llerena; Emilie Kane
Cc: Chad Carwein
Subject: Volkswagen Settlement

FYI - The Department of Environmental Quality, Division of Air Quality (DAQ) requests public input regarding what the state should include for potential funding in its mitigation plan. Individuals and groups are welcome to submit comments until **December 31, 2017**. The settlement includes ten categories for states to use when selecting eligible projects, which are outlined in the request for information.

The plan DEQ develops to use the settlement will specifically describe:

- Funding priorities to guide the planning, solicitation, and project selection processes;
- Categories of eligible projects to achieve the goals and how much funding should be allocated to each type;
- The potential benefit of these projects on air quality in areas that experience greater air pollution;
- Anticipated ranges of emission benefits for eligible projects identified in the plan; and
- Explanation of processes used to obtain public input on the plan.

The funding is the result of an investigation launched in 2015 by then-Attorney General Cooper and other state attorneys general into Volkswagen for making and installing illegal software devices to help some vehicles defeat emission tests. The U.S. Environmental Protection Agency discovered that certain diesel-powered automobiles manufactured by Volkswagen AG and its Audi and Porsche affiliates circumvented federal air emission standards and violated the Clean Air Act by allowing some vehicles to emit 40 times the allowable levels of nitrogen oxide (NOx). The car makers installed defeat devices in 2.0-liter 4-cylinder and 3.0-liter 6-cylinder diesel engines produced between 2009 and 2015.

To resolve the case, Volkswagen will pay $2.9 billion into an environmental mitigation trust fund to be shared among states and tribes. North Carolina expects to receive about $92 million from the trust between next year and 2027. Under the court-approved settlement, the money must go to reduce NOx emissions to offset the excess emissions caused by Volkswagen's deceptive actions.

The DAQ has created a VW Settlement web page with information regarding the VW Settlement, https://deq.nc.gov/about/divisions/air-quality/motor-vehicles-and-air-quality/volkswagen-settlement.

ATTACHMENT D

(Council Presentation Review)

Action: For your information.

City Council Meeting

January 9, 2018

Greenville
NORTH CAROLINA
Find yourself in good company®

Item ?

Presentations by Boards and Commissions:
Environmental Advisory Commission

Greenville
NORTH CAROLINA
Find yourself in good company®

Current EAC Members

- Durk Tyson, 2017 Chair
- Emilie Kane, 2017 Vice-Chair
- David Ames
- Drake Brinkley
- Nathaniel Hamilton
- Diego LLerena
- Ann Maxwell

Greenville
NORTH CAROLINA
Find yourself in good company®

Support to EAC

- McLean Godley – Council Member
- Kevin Mulligan – Public Works Director
- Daryl Norris – Civil Engineer II
- Lisa Kirby – Senior Engineer
- Amanda Braddy – Administrative Assistant
- Chad Carwein – Sustainability Manager, ECU

Greenville NORTH CAROLINA
Find yourself in good company®

EAC Goals

1. 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 Plans.
b) Continue to administer and champion the EAC Grant Program.
c) Participate in 2017 Earth Week Events.
d) Develop educational segments for GTV9 that highlight EAC's mission and current initiatives.
e) Increase recycling initiatives.

Greenville NORTH CAROLINA
Find yourself in good company®

EAC Goals cont'd.

2. Continue to increase deliberate and intentional engagement with Council and other Boards and Commissions.

Actions:

a) Assign commission members (liaisons) to follow Boards and Commissions that may consider and/or advise on environmental issues. The liaisons will provide quarterly updates to EAC on topics that have potential for partnering or collaboration.

STATUS: The following Boards and Commissions have been identified as having the potential to make decisions impacting the environment:
Redevelopment Commission – Durk Tyson
Greenville Utilities Commission – Durk Tyson
Greenville Bike & Pedestrian Commission – Emilie Kane
Recreation and 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

Greenville NORTH CAROLINA
Find yourself in good company®

EAC Goals cont'd.

3. Identify and suggest ways to reduce volume of our waste.

Actions: Toured East Carolina Vocational Center

Greenville NORTH CAROLINA
Find yourself in good company®

EAC Goals cont'd.

4. Seek ways to conserve and protect our water resources.

Actions:

a) Provide guidance and recommendations to City Council on the utilization of the Watershed Master Plans. This includes water quality monitoring results completed as part of the master planning process.

STATUS: The Watershed Master Plans were finalized and presented to City Council in August 2016. A Stormwater Advisory Committee (SWAC) was established to work with staff to select the stormwater capital projects previously prioritized within the Watershed Master Plan. The Committee will review current development regulations and recommend a sustainable level of service for the stormwater program.

These recommendations will be presented to Council via a workshop and, if approved, would result in changes to the stormwater ordinance and design and inspection requirements as well as stormwater utility rates.

Greenville NORTH CAROLINA
Find yourself in good company®

EAC Goals cont'd.

6. Identify and suggest ways to increase energy and renewable energy production.

Status: In partnership with Sierra Club, EAC will continue collaboration in presenting a Clean Energy Discussion to highlight best management practices that may be utilized within the City of Greenville.

Actions:

a) Facilitate Commission and/or Council presentation on renewable energy options for City activities.
b) Develop resolution focusing on adoption of renewable energy initiatives.
c) Explore feasibility of Sustainability Coordinator for the City of Greenville.

Greenville NORTH CAROLINA
Find yourself in good company®

ATTACHMENT E

(2018 Goals & Objectives Discussion)

Action: For your information.

2017 EAC Goals

1. **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 Plans.
   b) Continue to administer and champion the EAC Grant Program.
   c) Develop educational segments for GTV that highlight EAC's mission and current initiatives.
   d) Increase recycling initiatives
   e) Encourage implementation of environmental initiatives from the City's Horizon's Plan

2. **Continue to increase deliberate and intentional engagement with Council and other Boards and Commissions.**

   Actions:
   a) Assign commission members (liaisons) to follow other Boards and Commissions that may consider and/or advise on environmental issues. The liaisons will provide quarterly updates to EAC on topics that have potential for partnering or collaboration.

      STATUS: The following Boards & Commissions have been identified as having the potential to making decisions impacting the environment.

      Redevelopment Commission – Durk Tyson
      Greenville Utilities Commission – Durk Tyson
      Greenville Bike & Pedestrian Commission – Emilie Kane
      Recreation and 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

   b) Meet with individual Council Members to discuss the importance of environmental issues relevant to Greenville.

3. **Identify and suggest ways to reduce volume of our waste.**

4. **Seek ways to conserve and protect our water resources.**

   Actions:
   a) Provide guidance and recommendations to City Council on the utilization of the Watershed Master Plans. This includes water quality monitoring results completed as part of the master planning process.

      STATUS: The Watershed Master Plans will not be finalized until August 2016. It is envisioned after staff presents the plans to City Council EAC will review the water quality recommendations and provide guidance to City Council.

   b) Receive updates on Stormwater Advisory Committee actions

5. **Identify and suggest ways to reduce greenhouse gases and air pollution generated by municipal operations.**

Actions:
a) Revisit the Cool Cities Initiative and assess the need for a subcommittee that can focus on municipal operations and make recommendations for improvements (Greenville Climate Protection Partnership).
b) Prepare resolution focusing on recommendations made by subcommittee if applicable.

6. Identify and suggest ways to increase energy conservation and renewable energy production.

Actions:
a) Facilitate Commission and/or Council presentation on renewable energy options for City activities.

STATUS: In partnership with Sierra Club, EAC will continue collaboration in presenting a Clean Energy Discussion to highlight best management practices that may be utilized within the City of Greenville.

b) Develop resolution focusing on adoption of renewable energy initiatives.

c) Explore feasibility of Sustainability Coordinator for the City of Greenville.

ATTACHMENT F

(UST Report)

Action: For your information.

Date Occurred	Incident Name	Address	Close Out	Contamination	COMMENT
9/11/2017	ECU JENKINS FINE ARTS ELEVATOR - A	610 TRUSTEES WAY		GW	25 - 30 GALLONS OF HYD OIL RELEASED DURING ELEVATOR SERVICE CALL ELEVATOR PIT PUMP IN CONTACT WITH GROUND AND GW. SPILL RESP COND BY EASTERN ENVIRONMENTAL MGNT..CONT AND CONTROLL, CLOSE OF HYD OIL LINES AND VAC UP THE GW\HYD OIL. SOUTHERN ELEVATOR CO IS SCHEDULED TO TEST FURTHER, REPAIR, REPL, REMOVE THEN EEM TO RTN TO PULL\VAC GW AND SOIL..FRI OCT 6 IS CYL REPAIR AND COMPL ON OCT 11 2017. PHASE II BEGINS ON DEC 18 THRU CHRISTMAS BREAK COMPL JAN 8, 2018. SEE FILE FOR FURTHER DETAIL
7/5/2017	PANTRY #901	2600 S CHARLES BLVD		GW	3 6K GAS UTS REMOVED. 18 SOIL SAMPLES, ALL BELOW GRO ACTION LEVEL. ONE MW INSTALLED, GW ABOVE 2L
7/3/2017	YOUNG PROPERTY (JANE)	919 SE GREENVILLE BLVD	9/5/2017	GW	24 HR RELEASE RPT - RELEASE CONFIRMED VISUALLY AND ODOR IN SOIL BENEATH 530 GALLON HOME HEATING OIL TANK. ABANDONDED IN PLACE 7-3-17. NRP REQUESTED FOR SOIL AND GW. Location verified by SNH 9/11/17.
3/22/2017	SMITH PROPERTY (LILLIE)	401 HAW DRIVE	5/5/2017	GW	280 GALLON HEATING OIL REMOVED. HOLES PRESENT. GROUNDWATER ENCOUNTERED. CONTAMINATION APPARENT. NO SAMPLES. NRP FOR GW AND SOIL.
3/22/2017	TEEL PROPERTY (EUNICE)	403 HAW DRIVE	5/5/2017	GW	280 GALLON HEATING OIL REMOVED. HOLES PRESENT. GROUNDWATER ENCOUNTERED. CONTAMINATION APPARENT. NO SAMPLES. NRP FOR GW AND SOIL.

Date Occurred	Incident Name	Address	Close Out	Contamination	COMMENT
3/15/2017	EASTERN REGIONAL OFFICE	401 WEST BELVOIR RD		SL	1000 GALLON HEATING OIL, NON COMMERICAL NON REGULATED. RELEASE APPARENT AT CLOSURE. SOIL SAMPLE AT 7,000 MG/KG. NRP request for soil and gw.
3/1/2017	FORMER SMITH CONVENIENCE STORE	560 BRILEY ROAD		GW	
10/14/2016	PROPOSED GUC OPERATIONS CENTER	3339 NC HWY 43 N		GW	HEATING OIL TANK REMOVED. FUTURE SITE OF NEW GUC OPERATION CENTER. SOIL EXCAVATED AND BELOW RESIDENTIAL. TEMPORARY MONITORING WELL INSTALLED AND ABOVE 2L. PERMANENT MW PROPOSED. SAMPLE ON 9-12 MONTH SCHEDULE TILL BELOW 2L.
10/6/2016	SPEEDWAY 8672	3000 S MEMORIAL DR	5/3/2017	GW	WATER REPORTED in 12,000 GALLON GASOLINE TANK. CLOSED IN PLACE. 18 SOIL SAMPLES TAKEN AND 1 MW INSTALLED. // GW above 2l, Soil below Residential. LUR for GW and soil exists onsite from incident 10741. NFA issued 5/3/17