



**North Augusta Stormwater Management Program**  
**2013 sMS4 Annual Report**  
 September 1, 2012 – August 30, 2013

City of North Augusta - Stormwater Interns 2005-2013



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*North Augusta Stormwater Management Department*  
*Successful Intern Program*



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**City of North Augusta Stormwater Management  
Small Municipal Separate Storm Sewer System (sMS4)  
Permit #SCR030304  
Annual Report  
September 1, 2012 – August 30, 2013**

Submitted to: **South Carolina Department of Health and Environmental Control  
Bureau of Water- Water Pollution Compliance Section  
2600 Bull Street  
Columbia, SC 29201-1708**

**Ownership Update**

Permittee: CITY OF NORTH AUGUSTA

Program Name: STORMWATER MANAGEMENT DEPARTMENT

Check here if you are reporting for more than one Program:  (Prepare copies of this page as needed for each Program and attach to report.)

Permit Coverage Approval # SC                      SCR030304

Responsible Official Name: TOM ZEASER  
Title: DIRECTOR OF PUBLIC WORKS  
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Program Manager Name: DAVID CADDELL  
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Ordinance Information: Insert your website address if the ordinance is posted online. If your ordinance is not posted on line, please submit a hard copy of ordinance with this report.

Hard copy attached                       website: www.northaugusta.net

**Authorized Signature and Certification**

I certify under the penalty of law that this document and all attachments were prepared under my direction of supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Responsible Official Signature:                       Date: 10/31/13

The responsible official may authorize another person or person occupying a specific position to sign and certify this report if the authorization is made in writing and if the written authorization is submitted to the Department. Please attach a copy of the authorization with this report, if appropriate.

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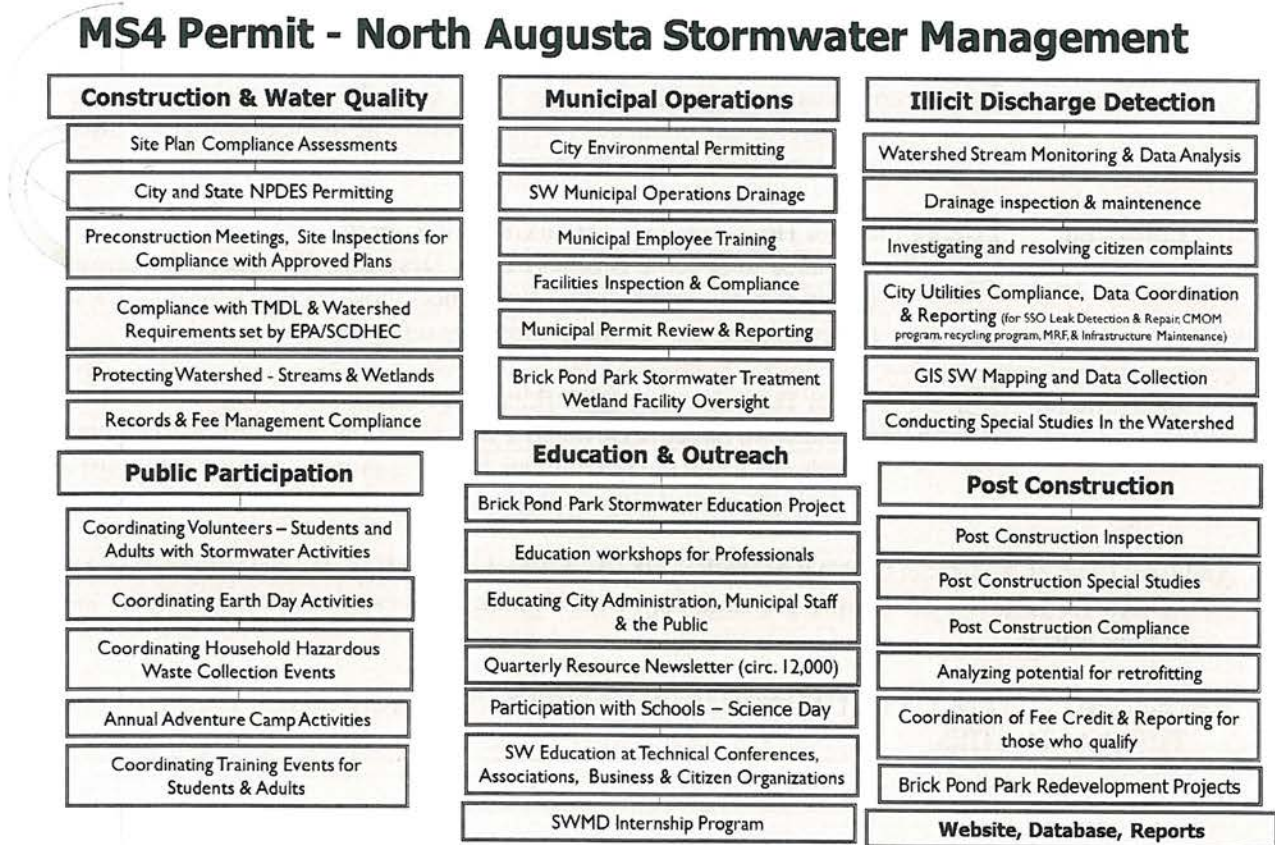
8/18/13

North Augusta

**Table 1: North Augusta Stormwater Management Department Team**

Name	Title	Role	Certifications
Tom Zeaser	Director of Engineering & Public Works	Plan Reviewer, Policy Administration	P.E., CEPSCI, CSWPR
David Caddell	Stormwater Manager & Superintendent of Streets and Drains	Program Manager, Plan Reviewer, Site Inspector	CPESC, CPSWQ, CEPSCI, CSWPR
Tanya Strickland	Environmental Coordinator	Program Coordinator, Plan Reviewer, Site Inspector	CEPSCI, CSWPR
Jeff Davis	Engineering Technician	Site Inspector, Engineering Inspections	CEPSCI
Jerome Mabry	Heavy Equipment Operator	Storm drain maintenance and construction	CDL
Kevin Whaley	GIS Analyst	Storm drain mapping and project support	GISP
Rafael Guerra	Laborer	Storm drain maintenance and construction laborer	

**Figure 1: North Augusta sMS4 “What we do”**



# Minimum Control Measures (MCMs)

## The six minimum control measures that must be included in your Storm Water Management Plan

*Note: For a complete list of activities, measurable goals, and outcomes, see comprehensive table located on pages 25-33 of this report. The Storm Sewer Outfall map is located at the end of this report as Attachment A.*

### **MCM #1 Public Education and Outreach on Storm Water Impacts (4.2.1)**

**Public Education and Outreach on Storm Water Impacts (4.2.1)** You must implement a public education program to distribute educational materials or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff. Additional information can be obtained from the SCDHEC Storm Water Education Clearinghouse Web Site, <http://www.scdhec.net/water/ms4/index.html>.

A. Report the current stage of development of your education program. Mark one or more that most accurately reflects the current status of your education program as a whole:

- Not started       Research       Development       Implementation

B. Which audiences have you targeted? Explain why that particular audience was selected. *Mark all that apply:*

- Residential:**       Improper Disposal of Household Hazardous Waste       Large Pet Population  
 Tendency for Littering       Over-Fertilizing Lawns       Septic Tank Maintenance  
 Leaking Sewer Line/Sanitary Sewer Overflow Reporting Procedures  
 Other-Describe: this year we continued to focus on Pretty Run watershed and our other priority 1 watersheds through inspection and maintenance of these system there.
- Commercial:**       Poor Outdoor Housekeeping       Parking Lot Runoff  
 Concern Related to Specific Business Type. Describe: All local businesses and also carpet cleaning companies were targeted due to the potential for discharges to the storm sewers from their activities.
- Industrial:**       Poor Outdoor Housekeeping       Parking Lot Runoff  
 Concern Related to Specific Business Type. Describe: There are very few industrial facilities in our community. We inspect those facilities for outdoor storage of materials, parking lot and stormwater infrastructure.
- Institutional:**       Poor Outdoor Housekeeping       Parking Lot Runoff  
 Concern Related to Specific Business Type. Describe: We have worked with the schools to encourage outdoor BMPs to prevent parking lot runoff and through redevelopment projects to improve or install stormwater facilities.

Additional Target Audience: CONTRACTORS, DEVELOPERS, AND ENGINEERING FIRMS DOING WORK IN THE CITY. We also are targeting carpet cleaning businesses to encourage better management of their wastes.

Why targeted? TO EDUCATE THEM ON HOW TO PREVENT STORMWATER IMPACTS FROM THEIR ACTIVITIES.



C. Which pollutant sources has your public education program targeted? *Mark all that apply:*

- Pet Waste  
  Human Septic Waste  
  Litter/Improper Disposal  
 Household Hazardous Waste  
  Parking Lot Runoff (Petroleum)  
  Oils/Grease  
  Sediment  
 Industrial Waste  
  Business/Commercial Waste/By-products  
  Other, Name: carpet cleaning businesses

D. Describe your outreach strategy. The city works year round conducting seminars, visits to schools to educate students and teachers about stormwater, numerous annual tours of the stormwater treatment wetland to educate citizens of all ages about stormwater pollution prevention and implementing programs that will recognize problems and prevent future impacts.

Enter the number distributed/reached in the spaces provided:

	Number		Number
Brochures/ Newsletters	4	Utility Bill Inserts	1
Workshop/ Seminars	6	Radio Ads	0
Posters	0	Television Ads	0
Newspaper Articles	3	Other: Education Events	19
Web site (estimated hits)	300		

E. Evaluate the success of this MCM:

*Answer each question:*

- a. Does your plan include measurable goals for this MCM?  Yes  No
- b. Did you meet the due date listed in your permit schedule for:
- |                                 |   |   |
|---------------------------------|---|---|
| Full development of this MCM?   | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No (Year 1 Reporting only) |
| Full implementation of the MCM? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No                         |
- c. Did you measure the program's success against the selected goals?  Yes  No
- d. Rank the program's success as determined by the evaluation:  Successful  Needs Improvement
- e. If your evaluation found the program needs improvement, explain why by marking all that apply:
- No goals were established
  - Goals were not established early enough in the program to provide guidance to staff
  - Unclear, immeasurable, or unrealistic goals
  - Insufficient funding
  - Insufficient staffing
  - 1<sup>st</sup> year report – program was under development
  - Other: Explain

**Table 2: MCM #01 Educational Outreach Summary 2012 – 2013**

<b>Date</b>	<b>Item/Event - Audience</b>	<b>Topic Covered/Discussed</b>	<b>Participants/Group</b>
09/06/2012	Augusta State University Biology Class Seminar	Stormwater management programs, what, when, where and why.	College biology class 22 students
11/10/2012	The Resource	Nov Edition – MS4 Program update	12,000 households
10/18/2012	North Augusta Elem 5 <sup>th</sup> Grade	BPP SW Treatment Wetlands educ.	25 adults, 120 kids
11/01/2012	Belvedere Elem 5 <sup>th</sup> Grade	BPP SW Treatment Wetlands Educ.	22 adults, 115 kids
12/7/2012	North Augusta SW Seminar	New NPDES Permit and Wetlands	64 adults (PEs, Cont.)
03/08/2013	NA Elementary Science Day	Preventing stormwater pollution	105 children
03/08/2013	Hammond Hills Elem	Recycling to prevent pollution	101 students
03/11/2013	Aiken County Retired Teachers Seminar	Brick Pond Park/Stormwater Treatment	20 adults
03/23/2013	Living History Park Event	Stormwater Management/Stormwater Model	25 adults 15 kids
04/03/2013	Leadership NA	SW & Ms4 Education – Tour park	15 adults
04/26/2013	Mossy Creek Science Day	Stormwater Education	100 children 4 adults
04/27/2013	Earth Day at BPP	Stormwater Education	250 adults 125 kids
05/03/2013	Belvedere Elem. Science Day	Stormwater Education	104 kids 5 adults
05/18/2013	Household Hazardous Waste Collection Day (May 18)	Collecting household chemicals and speaking with each participant (conduct survey of each )	120 cars (200 adults)
05/30/2013	Featured Article: <u>North Augusta Star</u> newspaper: Household Haz Waste Collection Event why it is important	North Augusta Star Newspaper	3,800
06/06/2013	SC Assn. of SW Managers – Tstrickland Panel speaker	SCASM – Presentation on Best Practices	200 adults
06/11/2013	Adventure Camp at BPP	Kids tour park and conduct activities	40 children 6 adults
06/12/2013	Fairview Presb. Youth Group	SW Education – BPP tour and activity	19 kids 3 adults
06/18/2013	Adventure Camp at BPP	SW Education BPP tour and activity	35 kids 5 adults
06/25/2013	Adventure Camp at BPP	SW Education BPP tour and activity	35 kids 5 adults
06/26/2013	Aiken Technical College class	Stormwater monitoring training	15 High School
07/02/2013	Adventure Camp	SW Education BPP tour and activity	35 kids 5 adults
<i>Approx. Total of Individuals Reached 9/1/12– 08/30/13 (1,640 personal contacts)</i>			<b>17,440</b>

**MCM #2 Public Involvement / Participation (4.2.2)**

**Public Involvement / Participation (4.2.2)** *You are required to comply with State, Tribal and local public notice requirements when implementing a public involvement/ participation program. You must document the program development process and the implementation of a storm water public education and outreach program.*

A. Indicate how the public was involved in the development and submittal of your Storm Water Management Program (SWMP). The program was developed in 2002-2003 and activities occurred at that time.

- Council Meetings     Public Hearing     Advisory Panel
- Public Comments     Public Concerns     Other: (Describe) Program development: education program (see C. below)

B. Which activities did the public participate in? *Mark all that apply:*

- Program Planning     Stenciling     Stream Cleanup     City Sweep     Monitoring
- Wetland Planting     Re-Forestation     Other: (Describe) Household Hazardous Waste Collection, Electronics Recycling Program, Workshops, Seminars, Volunteer Efforts at Constructed Wetlands for SW Treatment Project, Public Education Program, Invasive Plant removals;

C. Describe at least one activity, the participant, and the participant's demographic characteristics that took place during this reporting year. If none, explain why: During this period, we had a workshop for engineers, developers, other local government MS4s and contractors regarding the new NPDES permit issued in 2013 and working in wetlands (permitting). The workshop had 64 participants and speakers including SCDHEC and the ACOE. The workshop resulted in a path forward to educate all contractors that will be working under the program. The workshop was partially funded by a contractor that made mistakes during construction regarding wetland impacts. This was an opportunity to involve others that work in the city and other MS4 permit holders to participate with the city to learn and develop a path to meet the new requirements and learn the correct process for working in wetlands.

**Participant:**

Engineers, Contractors

**Participant Demographic:**

- Residential
- Commercial
- Industrial
- Institutional

**Activity:**

- Program Planning
- Stenciling
- Stream Cleanup
- Street Sweep
- Wetland Planting
- Monitoring
- Re-Forestation
- Other:(Describe) ONGOING PUBLIC PRIVATE STORMWATER EDUCATION PARTNERSHIP

D. Evaluate the success of this MCM:

*Answer each question:*

- a. Does your plan include measurable goals for this MCM?  Yes     No
- b. Did you meet the due date listed in your permit schedule for:
  - Full development of this MCM?     Yes     No (Year 1 Reporting Only)
  - Full implementation of the MCM?     Yes     No
- c. Did you measure the program's success against the selected goals?  Yes     No
- d. Rank the program's success as determined by the evaluation:  Successful     Needs Improvement

**Table 3: MCM #2 Summary Activities for 2012 & 2013**

<b>Date</b>	<b>Activity</b>	<b>Participants</b>
09/06/2012	Augusta State University Biology Class Seminar	22
10/18/2012	North Augusta Elem 5 <sup>th</sup> Grade	145
11/01/2012	Belvedere Elem 5 <sup>th</sup> Grade	137
12/7/2012	North Augusta SW Seminar	64
03/08/2013	NA Elementary Science Day	105
03/08/2013	Hammond Hills Elem	101
03/11/2013	Aiken County Retired Teachers Seminar	20
03/23/2013	Living History Park Event	40
04/03/2013	Leadership NA	15
04/26/2013	Mossy Creek Science Day	104
04/27/2013	Earth Day at BPP	375
05/03/2013	Belvedere Elem. Science Day	109
05/18/2013	Household Haz. Waste Collection Day	200
06/11/2013	Adventure Camp at BPP	46
06/12/2013	Fairview Presb. Youth Group	22
06/18/2013	Adventure Camp at BPP	40
06/25/2013	Adventure Camp at BPP	40
06/26/2013	Aiken Technical College class	22
07/02/2013	Adventure Camp	40
	<i>Total for period</i>	<i>1,013</i>

**MCM #3 Illicit Discharge Detection and Elimination (4.2.3)**

**Illicit Discharge Detection and Elimination (4.2.3)** *The permit requires each MS4 to develop, implement, and enforce a program to detect and eliminate illicit discharges as defined in South Carolina Water Pollution Control Permits Regulation 61-9 122.26(b)(2).*

A. Have you developed a program to detect and eliminate illicit discharge?

Yes  No If "No" what is your target date?

Have you implemented a program to detect and eliminate illicit discharge?

Yes  No If "No" what is your target date?

Have you enforced a program to detect and eliminate illicit discharge)?

Yes  No If "No" what is your target date?

B. Provide your most up-to-date storm sewer map. Hard copy attached:  Yes  No (Why) Note: *The storm sewer map is located as Appendix A at the end of this report.*

C. Do you have a mechanism that prohibits illicit discharges?  Yes  No

D. Describe your procedures for locating priority areas.

- Areas with older sanitary sewer lines. Name an area as an example: **Hammond Hills S/D**
- Business concerns. Describe a concern as an example: **Carpet cleaning businesses, landscapers etc., disposing of wastes in the stormwater pathway or drains**
- Commercial concerns. Describe a concern as an example: **Pond maintenance, we verify that ponds are operating correctly through inspection and look for trash, clogged lines, erosion or infrastructure failures.**
- Industrial concerns. Describe a concern as an example. **Our goal is to assess and ensure that facilities are maintaining parking lot stormwater infrastructure, stormwater conveyances (ditches), and prevent industrial materials from being impacted by rainwater to protect streams. We inspect facilities and work with owners to repair or maintain the systems and prevent materials from being impacted by stormwater.**
- TMDL Evaluation. Result: **We have prioritized basins by residential or commercial density, TMDL or 303d listed streams located within them, and implemented a full inspection program based on the priority list. We have inspected, cleaned or repaired 90% of Priority 1 Areas drainage system. Pretty Run stream is a TMDL stream and we have consistently targeted this basin to improve conditions from public and residential areas that could impact the basin.**
- Impaired Water Body. Name water body: *Pretty Run Creek*
- Citizen complaints. Give an example: **After heavy storms that crossed through our area in June 2013, we were alerted to many problems with storm systems that were overwhelmed by the debris the 5-6 inch storms pushed into our systems. We immediately assessed the problems that citizens alerted us to and prioritized maintenance and repair. The work commenced and all critical issues were addressed within a few weeks. The repairs continued and most of the system is operating as designed.**
- Wetlands/Critical Area, Public Beaches, Shellfish Beds, or other coastal concerns. **The city is currently continuing to develop assessments of our streams and infrastructure. Heavy rains flooded areas within the city and those areas were targeted to be re-visited. City owned stormwater ponds were repaired within days of the first torrential rainfall. The pond systems of private owners were evaluated in the areas where the most rain fell. Owners were alerted to**

**immediate repair needs and the sites were revisited to make sure the emergency repairs were accomplished. Ongoing maintenance is continuing.**

- Other. Describe and/or give example:

**E. Describe your procedures for tracing the source of illicit discharges.**

- |  |   |  |  |
|--|---|--|--|
| <input checked="" type="checkbox"/> Areas with sanitary sewer lines:     | <input type="checkbox"/> Dry weather outfall screenings | <input checked="" type="checkbox"/> Site visit | <input type="checkbox"/> Questionnaire |
| <input checked="" type="checkbox"/> Areas with septic tanks:             | <input type="checkbox"/> Dry weather outfall screenings | <input checked="" type="checkbox"/> Site visit | <input type="checkbox"/> Questionnaire |
| <input checked="" type="checkbox"/> Business concerns:                   | <input type="checkbox"/> Dry weather outfall screenings | <input checked="" type="checkbox"/> Site visit | <input type="checkbox"/> Questionnaire |
| <input checked="" type="checkbox"/> Commercial concerns:                 | <input type="checkbox"/> Dry weather outfall screenings | <input checked="" type="checkbox"/> Site visit | <input type="checkbox"/> Questionnaire |
| <input checked="" type="checkbox"/> Industrial concerns:                 | <input type="checkbox"/> Dry weather outfall screenings | <input checked="" type="checkbox"/> Site visit | <input type="checkbox"/> Questionnaire |
| <input checked="" type="checkbox"/> Citizen complaints: Give an example: |   |  |  |

**The Savannah River Keeper alerted the city to a construction site that was lacking BMPs along the riverfront section of the city during the heavy rains that we experienced. The site was inspected along with any others that bordered the river the same day. The site in question was discovered to be a pool installation. The construction program does not regulated pool installation. We met with the contractors and explained the need for BMPs along the riverfront. Mud had left the site. We followed-up with another inspection to determine if the site BMPs were installed. We also contacted our building standards staff to alert them to the need to contact our department when any major construction activity is occurring along the riverfront or next to a water body that may fall outside of our permitting program. This was a good example of the Savannah Riverkeeper organization working with the city to identify and notify us of a problem that we may have missed. Brochures will be developed to be handed out to contractors that apply for pool construction, deck installation, or room additions permits from the city building standards department. The permits when issued will include a brochure to alert them to the need to install perimeter BMPS. Inspectors will be sent to the site to verify they are installed.**

- Other: Describe and/or give example: **The city continues to conduct CMOM activities. Many lines have been tested throughout the city for leaks. All problems found are repaired.**

**F. Describe your enforcement procedures for removing the source of the illicit discharge. *Mark all that apply:***

- Site inspections
- Record of Findings
- Notice of Findings to Responsible Party
- Notice to Eliminate Discharge
- Notice to Eliminate Pollutant Source
- Written Due Date for Elimination
- Stop Work Order
- Follow-up Site Visit
- Notice to Appear Before Judicial Authority
- Fees/Penalties Maximum Amount: \$500.00 per day of violation
- Corrective Action/Charge to Responsible Party
- Other: Describe. **An Enforceent Repsonse Plan is completed.**

**G. What method have you used to inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste? *Mark all that apply***

**Public Employees**

- Training Class

**Businesses**

- Direct Mail

**General Public**

- Direct Mail

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Paystub Inserts                | <input checked="" type="checkbox"/> Bill Inserts                       | <input checked="" type="checkbox"/> Bill Inserts    |
| <input checked="" type="checkbox"/> Staff Meeting       | <input checked="" type="checkbox"/> Site Visits                        | <input checked="" type="checkbox"/> Public Meetings |
| <input checked="" type="checkbox"/> On the Job Training | <input checked="" type="checkbox"/> Phone Calls                        | <input type="checkbox"/> Radio                      |
| <input checked="" type="checkbox"/> Other: Describe     | <input checked="" type="checkbox"/> Seminars                           | <input type="checkbox"/> TV                         |
| mandatory training                                      | <input checked="" type="checkbox"/> Other: Describe Newspaper articles | <input type="checkbox"/> Other: Describe            |

**H. Evaluate the success of this MCM:**

*Answer each question:*

- a. Does your plan include measurable goals for this MCM?  Yes  No
- b. Did you meet the due date listed in your permit schedule for:
- |                                 |   |                             |
|---------------------------------|---|-----------------------------|
| Full development of this MCM?   | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Full implementation of the MCM? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Enforcement of the MCM?         | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
- c. Did you measure the program's success against the selected goals?  Yes  No
- d. Rank the program's success as determined by the evaluation:  Successful  Needs Improvement
- e. If your evaluation found the program needs improvement, explain why by marking all that apply:
- No goals were established
  - Goals were not established early enough in the program to provide guidance to staff
  - Unclear, immeasurable, or unrealistic goals
  - Insufficient funding
  - Insufficient staffing
  - 1<sup>st</sup> year reporting – program under development
  - Insufficient regulatory mechanism (ordinance)

**Table 4: MCM #3 Total Wastes Removed from Community**

**Storm Drain Cleaning**

Year	Item	Number of Drains Cleaned	Pollutants Removed (tons estimated)
2012 (Sept – Dec)	Storm drains cleaned	123	2.77
2013 (Jan – Aug)	Storm drains cleaned	245	5.52

**Litter Pick-up Program**

Year	Item	Pollutants Removed (tons)
2012 (Sept – Dec)	Litter pickup roadsides	5.97
2013 (Jan – Aug)	Litter pickup roadsides	3.76

### Street Sweeping

Year	Street Sweeping	Actual Pollutants Removed (tons)
2012 (Sept – Dec)	Street Sweeping (672 miles)	160.93
2013 (Jan – Aug)	Street Sweeping (2,080 miles)	343.22

### Household Hazardous Waste Collections

Year	Types of items collected	Potential Pollutants Removed (not landfilled, tons)
2013	Paint, oils, gasoline, pesticides, herbicides	3.329 (see table next page)

### E-Waste Recycling

Year	Types of items collected	Waste Removed (not landfilled, tons)
2012 (Sept – Dec)	Computers, monitors, electronics etc.	7.07
2013 (Jan – Aug)	Computers, monitors, electronics etc.	26.90

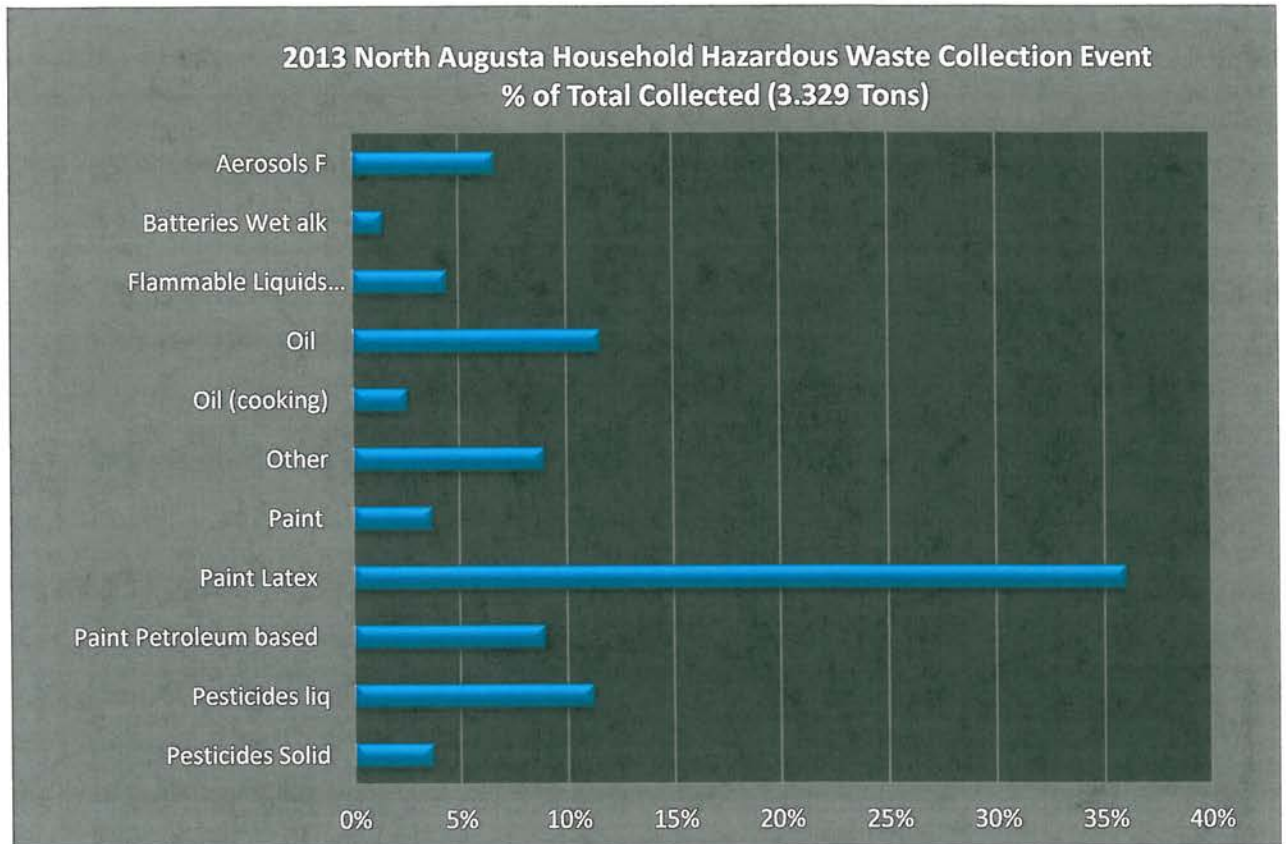
### Storm Pipe Repairs

Year	Item	(linear ft.)
2012 (Sept – Dec)	Storm Pipes repaired or installed	0
2012 (Jan – Aug)	Storm Pipes repaired or installed	290



**Table 5: Detailed Account of Household Hazardous Waste collected 05/18/2013**

2013 HHAZ Full DETAIL SHEET	Pounds	Tons	
Flammable Liquids Gasoline	300	0.15	5%
Aerosol Paint	250	0.125	4%
Aerosols F	450	0.225	7%
Aerosols F	4	0.002	0%
Pesticides Liquid	750	0.375	12%
Pesticides Solid	250	0.125	4%
Corrosive Liquid	40	0.02	1%
Caustic	40	0.02	1%
Antifreeze	75	0.0375	1%
Batteries NICD	1	0.0005	0%
Batteries Dry	40	0.02	1%
Batteries Wet alkaline	100	0.05	2%
Batteries Lithium	1	0.0005	0%
Oil (cooking)	175	0.0875	3%
Fluorescent Bulbs	3	0.0015	0%
Fluorescent Bulbs	3	0.0015	0%
Sodium Hydroxide	50	0.025	1%
Bulbs Mercury Vapor	1	0.0005	0%
Mercury	3	0.0015	0%
Zinc Phosphate	1	0.025	1%
Peroxide	1	0.025	1%
Aluminum paint	54	0.027	1%
DECK SOD HYP CLOROX SOFT SCRUB	1	0.0005	0%
Hyd Perox and Bleach	1	0.0005	0%
Carbon dioxide (paintball cylinder)	1	0.0005	0%
Cylinders	9		
Cylinders	2		
HELIUM CYL	2		
Paint materials (Aluminum paint)	50	0.025	1%
Oxidizer liquid	60	0.03	1%
Oxidizer liquid	15	0.0075	0%
Sharps	2	0.0010	0%
Carbon dioxide	10	0.005	0%
Propane	12	0.006	0%
Propane	40	0.02	1%
Helium	2	0.001	0%
Oil	775	0.3875	4%
Paint Petroleum based	600	0.3	10%
Paint Latex	<u>2400</u>	<u>1.2</u>	39%
<b>Totals</b>	<b>5978</b>	<b>3.329</b>	<b>100%</b>



**Figure 2: Household Hazardous- Percentage of Each Type Collected (other=sum of 1% or less of total)**

### **MCM #4 Construction Site Storm Water Runoff Control (4.2.4)**

**Construction Site Storm Water Runoff Control (4.2.4)** *The permit requires each MS4 to develop, implement, and enforce a program to reduce pollutants in any storm water runoff to your regulated SMS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of pollutants in storm water discharges from construction activity disturbing less than one acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more.*

A. Does your plan include the following elements? *Mark all that apply:*

- Ordinance or other mechanism to regulate construction site runoff
- Sediment and erosion control Best Management Practices (BMP) requirements
- Record keeping for rainfall and inspections
- Waste controls for discarded building materials
- Waste controls for concrete truck washout
- Waste controls for chemicals
- Waste controls for litter
- Waste controls for sanitary waste
- Procedures for site plan review
- Verification plan includes consideration of potential water quality impacts
- Quantitative & qualitative assessment for Pollutant of Concern for projects >25 acres at 303D waters

Procedures for receipt and consideration of information submitted by the public

B. Does your regulatory mechanism have sanctions to ensure compliance, including an enforcement component?

Yes  No If "Yes", which of the following does your MS4 use? *Mark all that apply:*

- Verbal warnings
- Written warnings
- Stop-work orders
- Fines/Penalties Maximum amount \$500 per day of violation
- Performance bonds/forfeiture procedures
- Withholding Certificate of Occupancy
- Permit Denial
- Fee, Explain:
- Other: Magistrates Court, City repair of problem at owners expense, performance guarantees/letter of credit.

C. Does your plan include a procedure that describes when specific sanctions listed in Question "B" above are to be used to ensure compliance?  Yes  No

D. Describe your procedures for site inspections. *Mark all that apply:*

- Prioritize sites for inspection
- Give notice upon arrival at site
- Verify correct paperwork is on site
- Examine construction entrance
- Check perimeter controls
- Verify temporary vegetation established by due date
- Look for eroded areas
- Verify sediment and erosion control devices installed per plan
- Inspect ponds
- Look for sediment leaving site
- Look for sediment in waters of the state
- Verify land disturbance ends at permit boundaries

E. Describe your plan for prioritizing sites for inspection. Mark all that apply by ranking them according to your prioritization plan. *(Click to the left of N/A and Press F1 for help.)*

- 1 TMDL consistency
- 1 Impaired waters concern
- 1 Water quality concern
- 2 Roads/drainage adoption
- 1 Citizen complaints
- 1 Geographical location
- 2 Size of project
- 1 Past performance of Responsible Party
- 2 Project Closeout
- 2 Request from Responsible Party

F. Evaluate the success of this MCM.

*Answer each question:*

a. Does your plan include measurable goals for this MCM?  Yes  No

- b. Did you meet the due date listed in your permit schedule for:
- Full development of this MCM?  Yes  No (1<sup>st</sup> Year Reporting)
  - Full implementation of the MCM?  Yes  No (1<sup>st</sup> Year Reporting)
  - Enforcement of the MCM?  Yes  No (1<sup>st</sup> Year Reporting)
- c. Did you measure the program's success against the selected goals?  Yes  No
- d. Rank the program's success as determined by the evaluation:  Successful  Needs Improvement
- e. If your evaluation found the program needs improvement, explain why by prioritizing all that applies:  
(Click to the left of N/A and Press F1 for help.)
- N/A No goals were established
  - N/A Goals were not established early enough in the program to provide guidance to staff
  - N/A Unclear, immeasurable, or unrealistic goals
  - N/A Insufficient funding
  - N/A Insufficient staffing
  - N/A No construction projects took place in the MS4 area to provide an opportunity to evaluate success
  - N/A Insufficient regulatory mechanism (ordinance)
  - N/A Other: Explain

**MCM#4 Details for North Augusta SWMD Activities**

**Permit Approval Records Below include *Partial Details*** (total size of project, impervious area, notes, basin, and other details are recorded but not presented here due to space limitations)

**Table 6: Permits Issued and Fees Collected 9/1/12 – 12/31/12**

date application submitted	Permit #	Project Name	Size acres disturbed	Date Approved by SW Dept.	DHEC Fee Collected	Sent to DHEC
10/23/12	n/a	Jackson Square Parking	0.38	11/16/12	n/a	-
11/02/12	n/a	Halocarbon parking	0.30	11/07/12	n/a	-
11/02/12	n/a	House of the Potter Church	0.20	11/02/12	n/a	-
11/13/12	n/a	Aiken County – Audubon Drainage Improvements	0.90	11/30/12	n/a	-
<b>Total fees to DHEC (this period)</b>					<b>\$0.00</b>	

**Table 7: Permits Issued and Fees Collected 1/1/13 – 08/31/13**

date application submitted	Permit #	Project Name	Size acres disturbed	Date Approved by SW Dept.	DHEC Fee Collected	Sent to DHEC
6/19/2012	pending	Wando Woodland Ph 3&4	25.7	pending		
3/15/2013	exempt	Jackson Square Parking II	0.3	3/15/2013	-	
4/23/2013	13070213	Waffle House I-20	0.9	7/02/2013	\$125.00	7/2/2013
5/7/2013	pending	Village at Bergen Ph II	9.4	pending	\$125.00	pending
5/23/2013	13062601	Zaxby's I-20 (former Hardees)	0.9	6/26/2013	-	
5/29/2013	13061401	Aiken County NAHS Parking	0.3	6/14/2013	-	
6/4/2013	13090601	Georgetown Village	0.9	9/6/2013	\$125.00	9/6/2013
7/24/2013	13093001	City North Augusta WTP	3.9	9/30/2013	\$125.00	9/30/2013
8/21/2013	13100901	Sweetwater Square (Wal-Mart)	57.6	10/09/2013	\$125.00	10/9/2013
8/21/2013	pending	Snelling Properties (Bojangles)	0.7	pending	-	
8/20/2013	13092401	Aiken County NAHS Addition	12.3	9/24/2013	\$125.00	9/4/2013

Totals Fees to DHEC to 10/10/2013

\$ 625.00

**City of North Augusta Construction BMP Compliance**

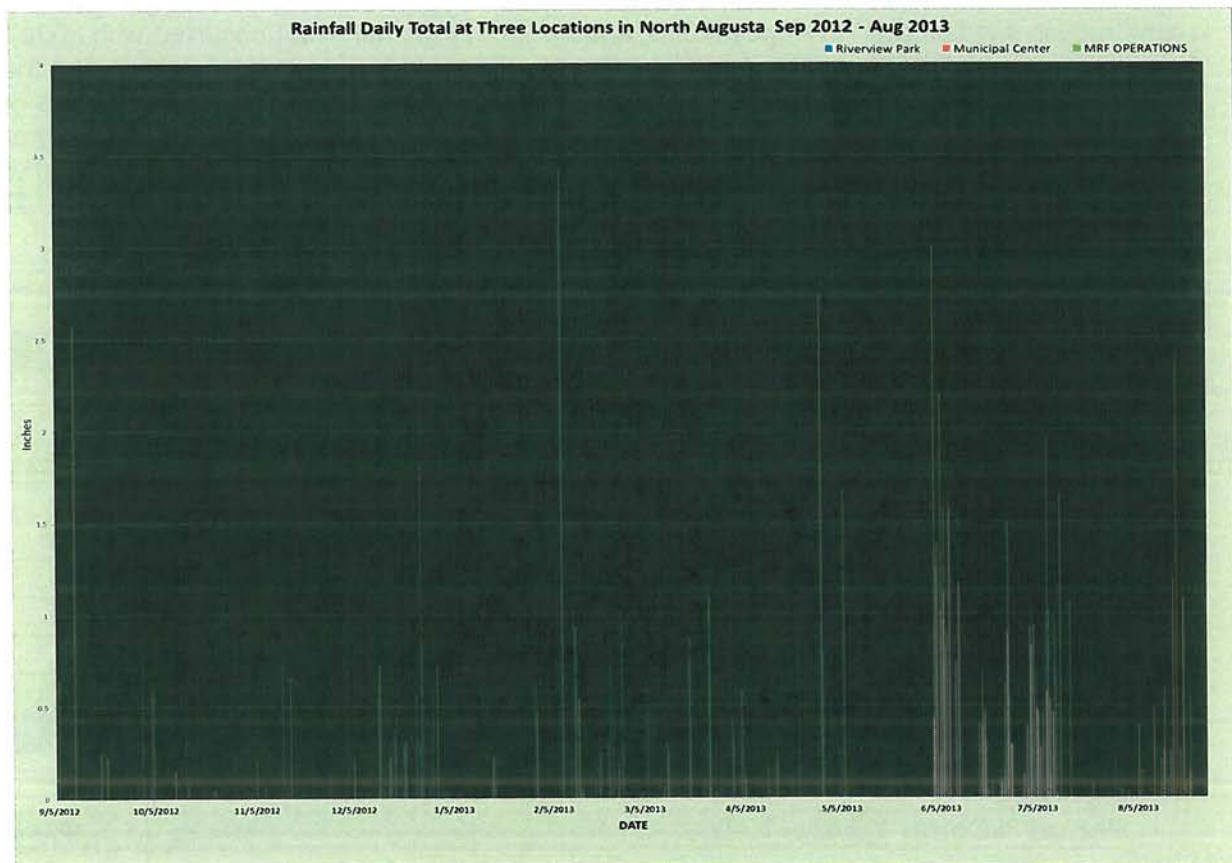
In analyzing the compliance rates for this reporting period, our inspection and oversight efforts have continued to be effective. Higher average rainfall in June with some rain events greater than the 100 year storm, (June 3 & 4<sup>th</sup>, 2013 up to 9.5" rain reported) occurred within the upper reaches of the city watershed. Rain continued over the next few weeks resulting in some construction site failures. In August 2013, another heavy rainfall event occurred with up to 2.4" of rain falling. Site plans are designed for most storm events but we had several storms that exceeded the best designs. Still, during the reporting period the overall results indicate a good overall compliance rating at 90% of the sites inspected being in compliance with their city and NPDES permit. Only 10% of the total inspections for the reporting year (284 inspections) were below satisfactory or marginal resulting in an unsatisfactory rating or a stop work order. The construction sites were notified of the issues and were promptly repaired.

**Table 8: 2011 INSPECTION DETAILS 9/1/12 – 12/31/12**

Months	SAT	UNSAT	MARG	C&D	Total Insp.	COMP	NONCOMP
September	18	2	1	1	22	19	3
Total 3rd Qtr.	58	10	3	4	75		
Percent	77%	13%	4%	5%		81%	19%
October	23	3	0	0	26	23	3
November	19	0	0	0	19	19	0
December	21	2	0	0	23	21	2
Total 4th Qtr.	63	5	0	0	68		
Percent	93%	7%	0%	0%		93%	7%
<b>Partial Total</b> (Sept – Dec)	81	7	1	1	90		
<b>Period %Comp</b>	90%	8%	1%	1%		91%	9%

**Table 9: 2012 Inspection Details 01/01/2013 – 08/31/2013**

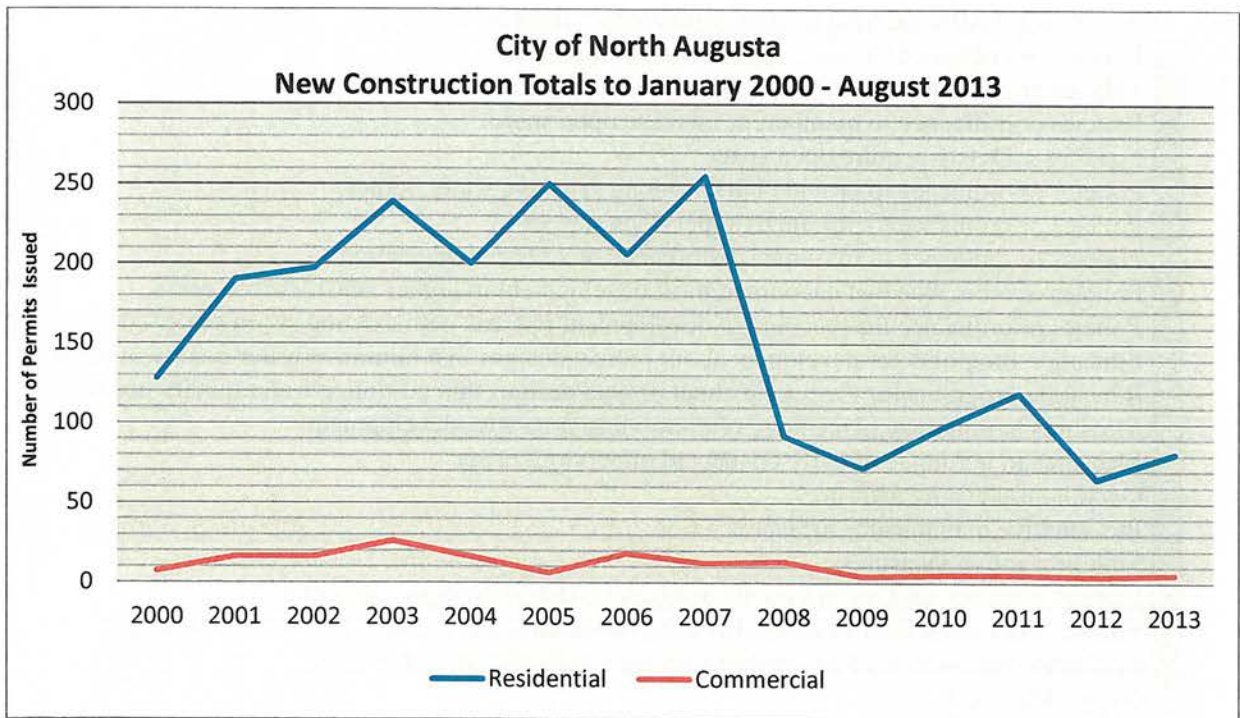
Months	SAT	UNSAT	MARG	C&D	Total Insp.	COMP	NONCOMP
January	23	0	1	0	24	24	0
February	22	4	0	0	26	22	4
March	21	1	1	0	23	22	1
Total 1st Qtr.	66	5	2	0	73		
<b>Percent</b>	<b>90%</b>	<b>7%</b>	<b>3%</b>	<b>0%</b>		<b>93%</b>	<b>7%</b>
April	19	0	0	0	19	19	0
May	25	0	0	0	25	25	0
June	22	8	0	0	30	22	8
Total 2nd Qtr.	66	8	0	0	74		
<b>Percent</b>	<b>89%</b>	<b>11%</b>	<b>0%</b>	<b>0%</b>		<b>89%</b>	<b>11%</b>
July	22	2	1	0	25	23	2
August	17	4	1	0	22	18	4
September	22	1	0	0	23	22	1
Total 3rd Qtr.	61	7	2	0	70		
<b>Percent</b>	<b>87%</b>	<b>10%</b>	<b>3%</b>	<b>0%</b>		<b>90%</b>	<b>10%</b>
<b>Total Inspections (Jan-Aug)</b>	<b>171</b>	<b>19</b>	<b>4</b>	<b>0</b>	<b>194</b>		
<b>Period %Comp</b>	<b>88%</b>	<b>10%</b>	<b>2%</b>	<b>0</b>		<b>90%</b>	<b>10%</b>



North Augusta continues to see low development rates at the present time (see 2000-2013 Summary below). Active construction projects in the city have picked up over 2012-2013 time-frame for residential building only. Commercial projects remain very low and have centered on re-development of existing facilities or small footprint (less than one acre) buildings being developed. Late in 2013, several projects came into the office for review that involved large commercial projects.

This year the plan review process was revamped due to the release of the new NPDES permit. The forms for all construction permitting were updated. The new permit requires that existing permit holders are to meet some of the new requirements. The city worked with the development community to help educate site plan design engineers, developers and project managers learn the new requirements and answer their questions. We have updated our website to provide all information available for this purpose. We held meetings both on site and off site to explain or provide information. In December 2012, we held a training session at the city Municipal Center where DHEC and ACOE provided information.

**Figure 3: Annual New Construction - Total New Permits Issued**



**MCM #5 Post-Construction Storm Water Management in New Development and Re-development (4.2.5)**

**Post-Construction Storm Water Management in New Development and Re-development (4.2.5)** *Within 18 months from the effective date of this permit, you must develop, implement, and enforce a program to address storm water run-off from new development and redevelopment projects within your jurisdiction that disturb one acre or greater, including projects less than one acre that are part of a larger common plan of development or sale that discharge into your small MS4. Your program must ensure that controls are in place that would prevent or reduce water quality impacts. You must also select and implement a program of appropriate BMPs and measurable goals for this minimum control measure.*

**A.** Is there an ordinance or other regulatory mechanism in place to control post construction runoff from new development or redevelopment? Yes No If "No", target date for passage:

**B.** Is your program designed to address the needs of your local community? *Answer all questions:*

- Yes No Does your program address runoff from new Development?
- Yes No Does your program address runoff from Redevelopment?
- Yes No Does your plan include any specific priority areas for this program?
- Yes No Does your plan describe how your program is specifically tailored for your local community?
- Yes No Does your program minimize water quality impacts?
- Yes No Does your program attempt to maintain pre-development runoff conditions?

**C.** Which BMPs are used in your community? *Mark all that apply:*

- Policies or ordinance to direct growth to identified areas.
- Policies or ordinance to protect wetlands and riparian areas.
- Policies or ordinance to maintain or increase open space.
- Funding source to acquire open space.
- Policies or ordinance to provide buffers along sensitive water bodies.
- Policies or ordinance to minimize impervious surfaces.
- Policies or ordinance to minimize disturbance of soils and vegetation.
- Policies or ordinance that encourage infill development in higher density urban areas.
- Policies or ordinance that encourage development in areas with existing storm sewer systems.
- Education programs for developers about project designs that minimize water quality impacts.
- Education programs for the public about project designs that minimize water quality impacts.
- Measures to minimize percentage of impervious area after development.
- Measures to minimize directly connected impervious areas.
- Good housekeeping measures.
- Preventative maintenance measures.
- Spill prevention measures.
- Storage practices such as wet ponds or extended detention outlet structures.
- Filtration practices such as grassed swales, bio-retention cells, sand filters, or filter strips.
- Infiltration practices such as infiltration basins and infiltration trenches.
- Other: Describe

**D.** Describe your plan to ensure long-term operation and maintenance of post construction BMPs. *Mark all that apply:*

- Maintenance agreement between structure owner and MS4 governmental entity (commercial development stormwater ponds only, pond maintenance agreement provided at time of NOI submittal if other than the developer)
- Maintenance agreement between (new) structure owner and developer.
- MS4 enforces agreements between (new) structure owner and developer.



- MS4 assumes maintenance (for all residential subdivision ponds and water quality devices that are dedicated to the city as part of the city storm sewer system).
- MS4 assumes maintenance and bills owner.
- MS4 conducts maintenance and bills owner only if owner fails to maintain through our illicit discharge ordinance.
- Other: Describe: **City annually inspects post-construction structures and notifies owner if a problem exists. City conducts follow-up inspection and further contact with owner when necessary.**

**Table 10: City Owned Ponds Cleaned/Repaired**

Year	Item	Number of Ponds	Pollutants Removed (tons)
2012 (Sept – Dec)	Stormwater ponds, devices (forebays, proprietary units) (avg. 65 lbs. each device)	23	0.745
2013 (Jan – Aug)	Stormwater ponds (avg. 65 lbs. each pond)	7	0.225

**E. Evaluate the success of this MCM.**

*Answer each question:*

- a. Does your plan include measurable goals for this MCM?  Yes  No
- b. Did you meet the due date listed in your permit schedule for:
  - Full development of this MCM?  Yes  No (1st Year Report)
  - For full implementation of the MCM?  Yes  No (1<sup>st</sup> Year Report)
  - Enforcement of the MCM?  Yes  No (1<sup>st</sup> Year Report)
- c. Did you measure the program’s success against the selected goals?  Yes  No
- d. Rank the program’s success as determined by the evaluation:  Successful  Needs Improvement
- e. If your evaluation found the program needs improvement, explain why by prioritizing all that apply:
  - No goals were established
  - Goals were not established early enough in the program to provide guidance to staff
  - Unclear, immeasurable, or unrealistic goals
  - Insufficient funding
  - Insufficient staffing
  - No redevelopment projects took place in the MS4 area to provide an opportunity to evaluate success
  - No new development projects took place in MS4 area to provide an opportunity to evaluate success
  - Insufficient regulatory mechanism (ordinance)
  - Other: Explain

**MCM #6 Pollution Prevention / Good Housekeeping for Municipal Operations (4.2.6)**

**Pollution Prevention / Good Housekeeping for Municipal Operations (4.2.6)** *The permit requires each MS4 to develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. Your program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water maintenance.*

A. Do you have an operation and maintenance program currently in place?

No If "No" what is your target date?

Yes If "Yes" name the municipal operations that are included in this O&M program. *Mark all that apply:*

- Parks and recreation area maintenance
- Fleet maintenance
- Building maintenance
- New construction/land disturbance (municipal projects)
- Storm water system maintenance
- Other: Describe: Sewer system maintenance

B. Do you have procedures/controls to reduce floatables and other pollutants to your storm sewer system?

*Mark all that apply:*

- Maintenance activities
- Maintenance schedules
- Long-term inspection plans
- Street, road, highway maintenance
- Waste transfer station maintenance
- Fleet or maintenance area controls
- Salt/sand storage area maintenance
- Snow disposal area maintenance
- Proper disposal of waste removed from the storm sewer system: dredge spoil, sediments, and debris
- Water quality assessments for new flood management projects
- Assessment of existing flood management projects to determine additional needed controls

C. Does your plan contain an employee-training component? *Answer each question.*

Yes  No City employee training designed to reduce polluted runoff from municipal operations.

Yes  No Employee training record retention.

D. Does your governmental entity own any industrial facilities that discharge to your storm sewer system?

Yes  No If "Yes" give the name of the facility and list its SCDHEC NPDES permit number, or include a copy of the Notice of Intent (NOI).

Facility Name	Permit Number	Notice of Intent Attached
North Augusta Material Recovery Facility	<u>SCR001252</u>	No
North Augusta Clay Pit	<u>SCG730169</u>	No

E. Evaluate the success of this MCM.

*Answer each question:*

- a. Does your plan include measurable goals for this MCM?  Yes  No
- b. Did you meet the due date listed in your permit schedule for:  
 Full development of this MCM?  Yes  No (Year 1 Report Only)  
 Full implementation of the MCM?  Yes  No
- c. Did you measure the program's success against the selected goals?  Yes  No
- d. Rank the program's success as determined by the evaluation:  Successful  Needs Improvement
- e. If your evaluation found the program needs improvement, explain why by marking all that apply:
- No goals were established
  - Goals were not established early enough in the program to provide guidance to staff
  - Unclear, immeasurable, unrealistic goals
  - Insufficient funding
  - Insufficient staffing
  - 1<sup>st</sup> year reporting – program under development
  - Other, explain

**MCM#6 Activity Examples**

In 2012-2013, departments that have the potential to impact water quality with their activities were given specific training during a monthly safety meeting on how those activities can harm the environment and ways they can minimize or eliminate impacts. Training records are located at the SWMD and on the Information system "Alchemy".

- **In 2013, the city Operations Facility stormwater department employees worked to clean and replace filters on inlet protection devices located at the facility (quarterly).**
- **There are several initiatives underway to improve water quality from city operations. One is the maintenance, upkeep and improvement of city owned detention facilities. All city owned stormwater treatment ponds have been visited, cleaned, and evaluated to determine if there is a potential for improvement of water quality by adding additional BMPs like forebays, filter rings, or other devices at ponds built prior to 2003 (prior to the requirement for the treatment of the first 1" of rainfall). City stormwater staff clean and continually visually monitor stormwater ponds and other devices to help prevent pollutants from entering the system and impacting local waterways.**
- **The city continues to improve its processes at the most heavily used facilities, for example the Operations Facility, the Material Recovery Facility, and the city Parks & Recreation Department by adding filter systems that remove pollutants from the system or designing new stormwater routing to eliminate the potential for offsite impacts.**

## Special Conditions

### 1. Discharges to Impaired Water Bodies

Section 3.1 of the permit requires that you describe how implementation of your Storm Water Management Program will provide Reasonable Assurance that discharges will not cause or contribute to violations of water quality standards in Impaired Water Bodies. Answer each question below.

Yes  No Have you determined whether your storm sewer system discharges to an Impaired Water Body? If "No", what is your target date for completing the determination?

Yes  No If the determination has been done: does your storm sewer discharge to an Impaired Water Body?

If yes, list the name(s) of the Impaired Water Bodies and the pollutant of concern for each Water Body.

**Pretty Run Creek - Fecal coliform**

If yes: Provide a brief summary of the measures and BMPs that provide Reasonable Assurance that your discharges will not cause or contribute to violations of water quality standards in Impaired Water Bodies.

**Target outreach to the community regarding animal wastes and septic tank repair and upkeep. Evaluate additional construction within the waterbody area more stringent review for potential impacts to the stream. Working with residents to stabilize banks and minimize impacts in residential neighborhoods.**

### 2. Consistency with Total Maximum Daily Load Allocations (TMDL)

Section 3.1 of the permit requires that you incorporate any limitations, conditions and requirements contained in the TMDL applicable to your discharges, if any, including monitoring frequency and reporting required, in order to be eligible for permit coverage. Answer each question.

Yes  No Have you determined whether your storm sewer system discharges to a water body with an established TMDL?

If No, what is your target date for completing the determination?

Yes  No If the determination has been done: Does your storm sewer discharge to a water body with an established TMDL?

a. If Yes, list the name(s) of the Water Body and the pollutant of concern listed in the TMDL for each Water Body.

Pretty Run Creek - Fecal coliform

b. If Yes, list applicable limitations, conditions, and requirements contained in the TMDL implementation plan attributed specifically to your MS4. **TMDL: reduction of FC loads by 31%**

c. If Yes, explain how your plan incorporates those limitations, conditions, and requirements.

**All new developments proposed in the City of North Augusta are required to treat the first one inch of rainfall prior to it being discharged from the site. Projects proposed in this watershed are scrutinized closely to prevent further impacts to the stream. The ability to reduce pollutants from all current and future construction within the watershed will protect Pretty Run Creek. We also visually monitor for pollutant inputs through our targeted Priority 1 stormsewer cleaning program. Our Public Utilities department continues to monitor the City sanitary sewer system for any problems and problems are found, they are quickly addressed to protect the streams.**

### 3. Pollutant Reduction Success Assessment

Section 5.3.2 of the permit requires that you submit the results of monitoring data, if you conducted monitoring. If you conducted monitoring, the results must be submitted on a Discharge Monitoring Report (DMR). Attach any DMRs for Year 1 to this Questionnaire.

Yes  No Did you conduct any monitoring during the reporting year?  
If no, do not answer the question below. No stormwater outfall sampling has been conducted.

Yes  No Have you attached your DMRs to this report?



BMP	2012	2013	2014	Measurable Goal	2011-2012 Measure/Assessment	Met?
<b>1. Public Participation/Involvement</b>						
Volunteer Storm Drain Stenciling/markings	X	x	continue	90% of Drains were marked in the first 5 years of the program. The program is ongoing and replacement markers are now being installed.	The city has marked 90% of drains in pedestrian areas through the SWMD internship program. All new storm drain lids have permanent markings.	yes
City-School Partnership Program	X	x	completed	By May 2003, meet with representatives from all public and private schools within the City.	Team has developed 5th grade environmental education initiative at the Brick Pond Park stormwater treatment wetland. Hundreds of students from several schools have participated. The city also continues to participate with all elementary Science Days invited to.	yes
Meet with school representatives	X	x	completed	By 2004, meet with each local school representatives to encourage participation with city SW program.	Meeting to discuss environmental education program for 5th graders across the city. Team School Board Member, School Principal, SWMD, and local educators.	yes
Evaluate School Environmental program	X	x	continue	Meet with school representatives yearly to assess and encourage implementation of environmental learning activities.	We have exceeded these goals.	Yes
Household Hazardous Waste Materials Collection Day	X	x	continue	Hold this event yearly and survey participants to quantify volume and type of HHAZ collected annually.	Events held all years,	Yes
Boy Scout Participation with SWMD	X	x	continue	Work with the Boy Scouts of America to educate members and involve them in the stormwater management activities and goals.	Work with the Scouts on a project within Pretty Run Basin.	Yes



BMP	2012	2013	2014	Measurable Goal	2011-2012 Measure/Assessment	Met?
<b>2. Education and Outreach</b>						
City-School Partnership	x	x	completed	By May 2003 meet with representatives from all public and private schools within the City. Created partnership in 2008, started program in 2009. Fourth year of operation of program.	Brick Pond Park outdoor education program. (see details in education/outreach Table 2)	yes
Establish Internship program with Universities.	X	x	2014 not budgeted	Provide educational opportunities to local college students through an internship program in the SWMD.	This program has been very successful to date 12 interns (see cover) have worked within the department. In 2014, the budget for interns has been temporarily taken out. This will not be a goal for the 2014 reporting period. The program will be brought back in 2015.	yes
Water Quality Brochures	X	x	continue	Develop WQ brochures and education materials for public and professional use.	In 2013, two new brochures were developed. One for all commercial entities large and small within the city limits. Also, we developed one for the specific industry of carpet cleaning. In 2014, we will focus on the food industry in the city.	yes
Stormwater Fact Sheets	X	x	continue	Create stormwater fact sheets to give out at meetings, seminars, and mailings.	Stormwater Brochures and fact sheets are available at city offices, city events, and through the city website.	yes
Water Quality Poster Series	X	x	continue	Display posters in public buildings and offer copies to businesses. (begin 2003)	The posters with strong stormwater pollution prevention messages were distributed to schools and are still being displayed for students in 2013.	yes
Pollution Prevention Guides for Businesses	X	x	continue	Develop an automotive shop stormwater pollution prevention guide for dissemination to all shops within the City in 2003.	Pollution prevention guides are available and distributed during inspections.	yes



BMP	2012	2013	2014	Measurable Goal	2011-2012 Measure/Assessment	Met?
Stormwater Internet Web Pages	X	x	continue	Comprehensive stormwater management internet pages are located on the city website.	All data at the stormwater management pages was updated in 2011-2012 timeframe. The city has contracted with a firm to redevelop the entire site in 2014. The stormwater pages will be redeveloped so that interaction with the public is a capability.	yes
Storm Drain Stenciling/Curb Marking	X	x	continue	Install markers on 90% of the storm drains exposed to pedestrian traffic and within residential and commercial areas.	Storm drain marking program ongoing. All new storm drains have permanent marking on the lid.	yes
Water Quality Seminars	X	-	completed	Low impact development seminar (2004 & 2006)	Item completed. Ongoing outreach efforts.	yes
Pollution Reduction Documentation	X	x	continue	Identify and estimate the percentage reduction attained in the area of floatables discharged into local waterways and document findings.	Documentation on street sweeping, drain cleaning, and street vacuuming are being collected. The data is presented in this report.	yes
North Augusta Forward Newsletter	X	Newsletter is going digital in 2014	continue	Include SW educational information in NA Forward newsletter. (quantify number of copies delivered to residents)	This newsletter is going to become an electronic publication in 2014. In 2013, the publication was terminated to save money. The pub will resume once the new city website is unveiled in 2014.	hold
The Resource (stormwater Newsletter)	X	Newsletter is going digital in 2014	continue	City Stormwater Newsletter	In 2013, the city stormwater newsletter was only published for one issue. It was sent to all households with utility services. The publication will resume is quarterly publication electronically in 2014 once the new city website is unveiled.	yes
Household Hazardous Waste Materials Collection Day	X	x	continue	This will be a yearly event. The initial event will be held by fall 2003.	This event has been held every year as an annual event. Participation has been exceptional. Data included in this report.	yes





BMP	2012	2013	2014	Measurable Goal	2011-2012 Measure/Assessment	Met?
Kids Earth Day	X	x	continue	Participate in Kids Earth Day annually. Determine number of kids participating in stormwater model demonstration.	2012 Event was held at the Brick Pond Park Stormwater Treatment Wetlands. Over 300 participants attended.	yes
<b>3. Discharge Detection and Elimination</b>						
Initial Identification of Illicit Discharge Sources	X	x	continue	Number and type of illicit discharges will be documented for each year.	Documentation is kept on CATS information management system.	yes
Implement an Information management System for Tracking	x	x	continue	Maintain ongoing information management tracking system.	In 2013, all databases are in full use and all information can be pulled from the IS systems in place.	yes
Household Hazardous Materials Collection Day	X	x	continue	This will be a yearly event. The initial event will be held by fall 2003.	This event has been held every year as an annual event. Participation has been exceptional. Data included in this report.	yes
Storm Sewer System Map	X	x	continue	The City will submit a topographical map listing primary outfalls and watersheds to SCDHEC with the NPDES permit NOI. A complete map, meeting all permit requirements, will be submitted in the fall of 2003.	In 2013 we continued our QA/QC of the current map. Certain equipment problems have prevented full scale editing of the current map for this year. Equipment has been budgeted for the 2014 budget. (map Figure 3: Appendix A)	yes
Water Resources Ordinance	X	x	Completed and ongoing	The Water Resources Ordinance will be placed in effect in 2004.	The 2008 Development Code was adopted by City Council and includes comprehensive strategies to protect water quality and preserve sensitive space in the city through codes, planning, permitting, and enforcement. The SWMD continues to work to protect water quality.	yes



BMP	2012	2013	2014	Measurable Goal	2011-2012 Measure/Assessment	Met?
Used Oil Collection	X	x	continue	Yearly notices will be sent to City residents via utility bills to remind them of this service.	Used oil is collected at the MRF in North Augusta and during the Household Hazardous waste collection event.	yes
Sanitary Sewer System Inflow and Infiltration Detection/Repair	X	x	continue	By summer 2003 the Stormwater Management Department (SWMD) will, in conjunction with the Public Utilities Department develop an information sharing system.	This program is ongoing and all information is available via monthly reports posted on line.	yes
Storm Drain Curb Markers	X	x	continue	City's effort to mark 90% of all storm drains exposed to pedestrian traffic within the first five-year permit term.	Storm drain marking program ongoing. Completed 90% of marking in residential and commercial areas in the city.	yes
Stormwater Management Guide for Businesses	X	X	completed	Create a guide for businesses to help them understand stormwater management.	Fully implemented.	yes
Water quality monitoring	X	x	continue	The list of outfalls of concern will be dynamic and will not be represented as permanent quarterly screening points on the storm sewer map. Secondary outfalls will be screened yearly.	In 2013, more data was collected on ambient stream water quality. Data is being compiled to determine next steps.	yes
<b>4. Pollution Prevention/Good Housekeeping</b>						
Develop Pollution Prevention Plan	X	x	Completed and ongoing	Complete this plan in 2003.	Completed and routinely updated and kept in the SWMD Department files and on Information System Alchemy	yes

BMP	2012	2013	2014	Measurable Goal	2011-2012 Measure/Assessment	Met?
Employee Training Materials	X	x	continue	Maintenance Schedules (City equipment and infrastructure maintenance policies and schedules)	Follow-up training occurs on a department level basis during monthly safety meetings. Staff signed documentation at the end of the meeting.	yes
Recycling	X	x	continue	Recycling Efforts (City recycling policies and procedures)	Recycling data is compiled and recorded in monthly reports and is reported here in Table 4.	yes
Information Management System	X	x	continue	Waste Disposal Guidelines (Addresses disposal of wastes such as vehicle service wastes, sediment removed from catch basins, landscaping debris, etc... from City operations). Areas of concern prioritized for correction. In 2014, conduct a survey of departments to find out what systems they use, and consolidate the information.	Alchemy and TrakIt are in use in the city to maintain all records of activities in the SWMD. Streets & Drains department maintains waste -disposal from catch basins, Parks & Rec maintains landscaping records, and the Maintenance Shop maintains service records for waste generated in that department.	yes
Maintenance Schedule	X	x	continue	Document and analyze program effectiveness	Storm box cleaning, street sweeping, storm pipe maintenance, and other SW infrastructure within the city are ongoing. Information regarding location of problems and repair schedules are logged. (see Table 4) The basins were prioritized and a process to focus on each priority area was developed.	yes
Pollution Reduction	X	x	continue	Yard waste composting seminar (2003, 2005, & 2007)	Street sweeping, litter pickup, and conducting education and outreach is ongoing.	yes
Street Sweeping	X	x	continue	Quantity of trash collected per unit effort under the Adopt a Stream program for each year. Document volume of waste removed from streets annually.	Street sweeping data is being collected and is presented in this report (Table 4)	yes
Storm sewer Maintenance	X	x	continue	By 2007, purchase equipment and hire staff to begin a storm sewer maintenance program. Document number of drains cleaned and volume of waste removed from storm drains annually.	Equipment was purchased (street vacuum and Jetter Vacuum truck). Storm drain box cleaning is being conducted and the data is being presented in this report (Table 4)	yes



BMP	2012	2013	2014	Measurable Goal	2011-2012 Measure/Assessment	Met?
Acquire leaf vacuum machine and train two operators.	X	x	completed	May 2008 machine purchased and a training event was held on May 22, 2008. Two employees (1 S&D, 1 SWMD)	Machine has been acquired (2008) and staff are trained on its operation. The machine is being used routinely on city streets.	Yes
<b>5. Construction Site Runoff Control</b>						
Perennial Stream Habitat/Ecological Assessment	X	x	continue	Stream habitat/ ecosystem assessments will be conducted for the primary stream in each watershed at a point close to the City perimeter during 2003. Follow-up assessments will be conducted yearly over the next four years for comparison.	Assessments are ongoing. A water quality report describing the assessments to date was completed in 2007. The data is available on our public website at <a href="http://www.northaugusta.net">www.northaugusta.net</a> . A second report is currently being completed with results from most recent data for comparison to baseline assessments, expected completion date December 2013.	yes
Information Management System	X	x	continue	An IS system is installed and being utilized by SWMD on the city's network.	Data management system is Alchemy and Permit Tracking through Trak-it software. All citizen complaints are maintained in the citywide action tracking system (CATs)	yes
Constr. Site Erosion and Sediment Control Ordinance	X	completed	completed	This system will be put into place in 2003.	completed	yes
Construction Site Inspection Program	X	x	continue	Data will be collected on permitted construction site compliance will be evaluated yearly.	The compliance rate to date for 2012-2013 averages to 90%.	yes

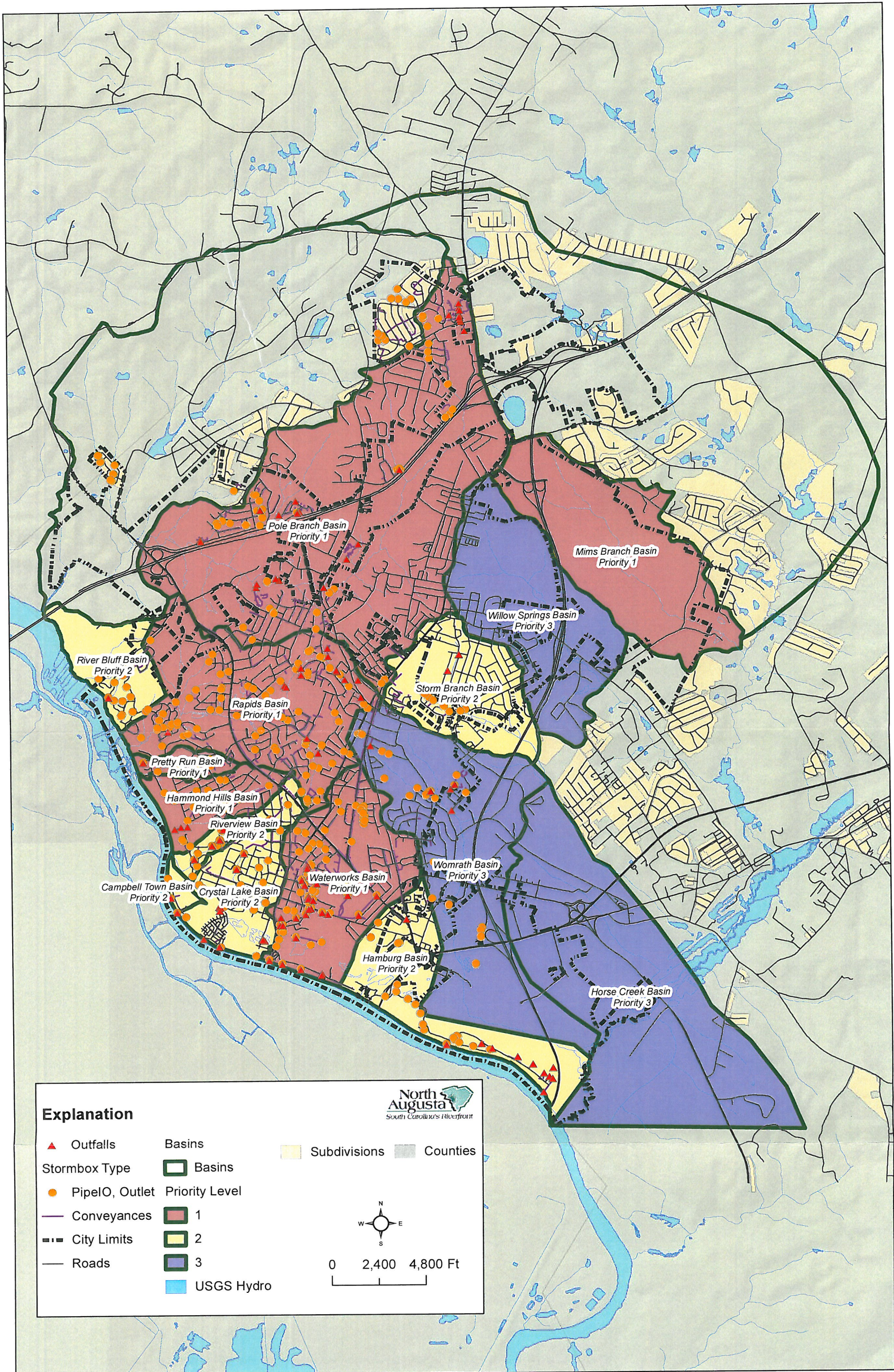


BMP	2012	2013	2014	Measurable Goal	2011-2012 Measure/Assessment	Met?
Ambient Water Quality Monitoring	X	x	continue	Streams that discharge to Savannah River will be sampled at the lowest point in the sub-basin they represent. Primary outfalls will be designated as such on the storm sewer map. Outfalls of concern are non-primary outfalls that based on initial screening, historical information that the Stormwater Management Department feels that frequent screening is warranted. The list of outfalls of concern will be dynamic and will not be represented as permanent quarterly screening points on the storm sewer map.	Updated water quality report to be completed in December 2013.	yes
Constr. Site Runoff Pollution Control Seminar		x	completed	Construction site runoff pollution control seminar	Occurred in December 2012.	yes
Stormwater Management Manual	X	x	update	The Stormwater Management Manual will be completed in 2003. The manual will be updated periodically to document progress made in achieving each goal.	Complete and updated to 2013.	yes
Sediment & Erosion Control Manual	X	x	update	The Sediment & Erosion Control Manual will be completed in 2004. The manual will be updated periodically to document progress made in achieving each goal.	Complete and available on line and/or is available in hard copy format. Undergoing updates at this time include new requirements based on both the reissuance of the NPDES permit and the MS4 permit (tbd). Will be completed by December 2014.	yes
Water Quality Manual	X	x	update	The Water Quality Manual will be completed in 2005. The manual will be updated periodically to document progress made in achieving each goal.	Complete and available on line and/or is available in hard copy format. Undergoing edits to add new information. Will be completed by December 2014.	yes
Water Quality Design Seminar	-	x	Pending new MS4 permit for scheduling	Conduct WQ design seminar bi-annually.	This BMP will be changed once the final MS4 permit is issued in 2013-2014.	hold
Residential Lot BMP Guidance Pamphlet	X	x	completed	Create pamphlet for all builders working in the city.	Completed and distributed to all contractors within the city at time they pull permits	yes
Conduct Constr. Site Pollution control seminars.		X	continue	Conduct one training event in 2004 and one in 2006 geared towards contractors, developers and engineers.	Completed and ongoing on as needed basis. Engineering seminar 12/07/2012.	yes

BMPs	2012	2013	2014	Measureable Goals	2011-2012 Measure/Assessment	Met?
<b>6. Post-Construction Runoff Control</b>						
Identif. of Developed Property WQ BMPs	X	x	continue	Include BMPs in the City Stormwater Management Manual that will be completed in 2003.	All developed property BMPs are compiled within a report in the SWMD. The report is used for yearly evaluations of the systems.	yes
Implement Development WQ BMPs Ordinance	X	X	completed	The Water Quality BMP Ordinance will be placed in effect in 2004.	completed	yes
Water Quality Incentives Program		x	completed	Track number of customers utilizing the credit program to determine outreach efforts.	completed	yes
Stormwater Management Facility Inspection Program	X	x	continue	Conduct yearly inspections of Stormwater Management facilities to ensure compliance with the SWM Ordinance and any written agreement between city and customer.	Post construction BMPs are inspected annually. Reports of maintenance needs are sent to owners.	yes
Storm sewer Maintenance (jet/vac trailer and operator)	X	x	completed	By 2007, purchase equipment and hire staff to begin a storm sewer maintenance program. Document number of drains cleaned and volume of waste removed from storm drains annually.	Completed goal, data available in this report.	yes

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Appendix A**

Figure 4: CNA Storm Sewer & Outfall Map with Priority Designations





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Appendix B**

**Figure 5: CNA Stormwater Management Activity Organization Chart**

**Figure 5:  
2013 City of North Augusta (CNA)  
Comprehensive Organization Chart for  
Stormwater Activities, Training and  
Reporting**

2013 City of North Augusta SWMD Annual Report

