Charlotte-Mecklenburg STORM WATER Services

700 North Tryon Street
Charlotte, NC 28202
Fax: 704.336.4391

August 28, 2015

Mr. Tracy Davis, Director
North Carolina Department of Environment and Natural Resources
Division of Energy, Mineral and Land Resources
Stormwater Permitting Unit
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

RE: Storm Water Management Program Assessment Report Certification
NPDES Permit NCS000395

Dear Mr. Davis:

In accordance with the National Pollutant Discharge Elimination System (NPDES) Permit Number NCS000395 issued to Mecklenburg County, Charlotte-Mecklenburg School System, Central Piedmont Community College and the Towns of Cornelius, Davidson, Huntersville, Matthews, Mint Hill and Pineville, please find attached a signed certification statement (in duplicate) in support of the attached Storm Water Management Program Assessment Report for FY2015. This year we have elected not to use the NCDENR web-based reporting gateway. Instead, we are using a reporting framework that we believe will enable us to more effectively evaluate program compliance, the appropriateness of best management practices, and progress towards achieving measurable goals; as well as assess the overall performance and effectiveness of our Storm Water Quality Management Program Plan.

Please contact me at (704) 336-5449, if you have any questions or require additional information.

Sincerely,

Rusty Rozzelle
Water Quality Program Manager

Attachments: Certification

Charlotte-Mecklenburg
STORM WATER Services

700 North Tryon Street
Charlotte, NC 28202
Fax: 704.336.4391

Phase II Storm Water Management Program Assessment Report Certification
NPDES No. NCS000395

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted 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 fines and imprisonment for knowing violations.

W Dave Canaan
W. Dave Canaan
Water & Land Resources, Director

8/27/2015
Date

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W Dave Canaan

W. Dave Canaan
Water & Land Resources, Director

8/27/2015

Date

Storm Water Management Program Assessment Report for Permit No. NCS000395

Reporting Period:
July 1, 2014 through June 30, 2015

Co-Permittees:
Mecklenburg County, Charlotte-Mecklenburg Schools, Central Piedmont Community College and the Towns of Cornelius, Davidson, Huntersville, Matthews, Mint Hill and Pineville

Report Date: August 2015

Report Prepared by:
Charlotte-Mecklenburg Storm Water Services – Mecklenburg County Water Quality Program
700 North Tryon Street
Charlotte, N.C. 28202-2236

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Section 1: Introduction

This document satisfies the annual reporting requirement specified in Part III of Storm Water Permit No. NCS000395 and the requirements contained in Part II, Section A as follows:

- Evaluate program compliance, the appropriateness of best management practices (BMPs), and progress towards achieving measurable goals; and
- Evaluate the performance and effectiveness of the Storm Water Quality Management Program Plan, herein referred to as the Storm Water Plan.

The purpose of the Storm Water Plan is to describe the actions undertaken by the Permittee to ensure compliance with Permit requirements, including all BMPs and their associated measurable goals. Implementation of the BMPs consistent with the provisions of the Storm Water Plan constitutes compliance with the standard of reducing pollutants to the maximum extent practicable as required by the Permit. Charlotte-Mecklenburg Storm Water Services', Mecklenburg County Water Quality Program (MCWQP) has developed and is maintaining the Storm Water Plan for Permit No. NCS000395. This Storm Water Plan is available on the following website: http://stormwater.charmeck.org (select "Info for Other Municipalities", select "Water Quality", select "NPDES Phase II-Mecklenburg County and Incorporated Towns," select "Phase II Storm Water Management Plan").

Section 2 of this document provides background information regarding the implementation of the Storm Water Plan. Sections 3 through 12 of this document provide the following:

- Detailed description of the status of the implementation of the Storm Water Plan, including information on the development and implementation of each major component of the plan between July 1, 2014 and June 30, 2015 (FY2015). Activities and associated schedules for implementation of the Storm Water Plan during FY2015 are contained in the Permittee's FY2015 Work Plan, which is available upon request.
- Description of any proposed changes to the Storm Water Plan, including a justification for these changes and how the changes will impact the effectiveness of the Storm Water Plan.
- Summary of data accumulated through the implementation of the Storm Water Plan, including an evaluation of this data.
- Assessment of compliance with the Permit requirements, including a description of the specific BMPs implemented and whether the measurable goals for these BMPs have been satisfied. Additional detail regarding these BMPs and measurable goals is provided in Sections 3 through 9 of the Storm Water Plan provided at the above website.

Section 10 of this document provides an evaluation of overall program compliance and the effectiveness of the Storm Water Plan as well as the individual BMPs contained in the Plan. Section 11 describes the program modifications to be implemented effective July 1, 2015 to accomplish the intent of the Storm Water Plan and enhance overall Program effectiveness.

Section 2: Overview

MCWQP is responsible for developing, implementing, managing and overseeing the Storm Water Plan under the direction of Mecklenburg County's Water Quality Program Manager. The specific tasks, deadlines and assigned staff for fulfillment of the Storm Water Plan are described in an annual Work Plan. A copy of this Work Plan is available upon request to Mecklenburg County's Water Quality Program Manager. As specified in the Permit, each co-permittee is responsible for compliance with the terms and conditions of the Permit for storm water activities and watershed specific requirements within their jurisdictional area. Appropriate legal authority has been established by each jurisdiction for implementation of the Storm Water Plan through the adoption of Surface Water Pollution Control Ordinances that prohibit illicit discharges to the MS4 as well as the adoption of post-construction and erosion control ordinances. Mecklenburg County is delegated authority by each jurisdiction to enforce these ordinances. Funding for implementation of the Storm Water Plan is shared by each jurisdiction based on an adopted "Funding Strategy" that is effective for the five (5) year period from July 1, 2014 through June 30, 2019. Implementation costs for the reporting period of July 1, 2014 through June 30, 2015 are estimated at $543,107, including $469,850 in labor costs, $24,384 in laboratory costs and $48,873 in equipment costs. For the next annual reporting period from July 1, 2015 through June 30, 2016, implementation costs for the Storm Water Plan are estimated at $544,663, including $458,748 in labor costs, $35,772 in laboratory costs and $50,143 in equipment costs.

Section 3: Public Education and Outreach Program

MCWQP has developed and implemented a Public Education and Outreach Program for Mecklenburg County's Phase II jurisdictions/entities. The goals of the Public Education and Outreach Program are as follows:

1. Change public behaviors to reduce sources of water pollution and improve water quality.
2. Promote participation in activities aimed at restoring water quality conditions.

3.1 Implementation Status for FY2015

Table 1 describes the BMPs identified in the Storm Water Plan for the Public Education and Outreach Program and the specific actions completed between July 1, 2014 and June 30, 2015 (FY2015) for implementation of these BMPs as well as whether the measurable goals for the BMPs specified in the plan have been fulfilled.

Table 1: BMP Summary Table for the Public Education and Outreach Program

BMP Description	Implementation Actions	Goal Met	
		Yes	No
Distribute Biannual (twice a year) Newsletter (PE-1)	During FY2015, social media outlets were used to deliver messages on dog waste and bacteria, proper grease disposal, sediment, fertilizer use, car washing surfactants, oil sheens, and illegal dumping. Messages were posted on the Water Watchers Facebook page and Twitter, and were sent to the Phase II social media contacts so they could post the message(s) on the Towns' social media page. In addition, articles covering such topics as proper grease disposal, sediment, illicit detection, fertilizer use, and the Soil & Water Conservation Tree Sale and rain barrel purchasing program were sent to the Town contacts to use in a newsletter.	X	
Develop & Distribute Pollution Prevention Brochures & Educational Materials (PE-2)	During FY2015, educational brochures and storm water pollution prevention awareness information were made readily available to staff for distribution at special events, workshops, and other appropriate venues as well as when responding to citizen requests for service. These public awareness documents include information regarding the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollution such as participating in volunteer programs and reporting suspected pollution problems. Provided below is a list of available public awareness documents: • A Guide to Used Oil Recycling • Scoop the Poop (proper handling of animal waste) • Only Rain Goes Down The Storm Drain – The Citizen's Guide to Pollution Prevention • Volunteer Opportunities • A Brief Look at Charlotte-Mecklenburg Storm Water Services – Your Storm Water Fees at Work • Grease Free (proper disposal of grease from Charlotte-Mecklenburg Utilities) • Household Hazardous Waste – What do you do with left over chemicals • Mobile Detailer Best Management Practices Handouts • Landscapers Best Management Practices Handouts • Painters Best Management Practices Handouts • Contractors Best Management Practices Handouts • Carpet Cleaners Best Management Practices Handouts • Vehicle Service Best Management Practices Handouts • Food Service Best Management Practices Handouts • Multi-family Best Management Practices Handouts • Stone Cutting & Fabrication Industry Best Management Practices Handouts • Concrete Industry Best Management Practices Handouts	X	

BMP Description	Implementation Actions	Goal Met	
		Yes	No
	• Commercial Property Management Best Management Practices Handouts • Asphalt Sealing Best Management Practices Handouts • Swimming Pool & Spa Industry Best Management Practices Handouts • Dry Detention BMP Maintenance Handouts • Rain Garden BMP Maintenance Handout • Sand Filter BMP Maintenance Handout • SW Wetland BMP Maintenance Handout • Wet Pond BMP Maintenance Handout • Environmental Notices for Homeowners – Disposal into the storm drain is against the law (available in English, Spanish, Chinese, Vietnamese, and Korean) • Environmental Notices for Businesses – Disposal into the storm drain is against the law (available in English, Spanish, Chinese, Vietnamese, and Korean) • Water Watchers door hanger • Household Hazardous Waste slider • Dispose of Leaves Properly postcard • Water Quality Buffers postcard • When Surface Waters Turn Colors (Pollen, Tannin, Iron Bacteria)		
Promote and Maintain Informational Web Pages at http://stormwater.charmeck.org (PE-3)	During FY2015, informational pages covering a wide variety of topics were maintained on the Storm Water Services website, including current water quality conditions, storm water pollutants and ways to minimize them, reporting pollution, volunteering, municipal storm water projects/activities, etc. These web pages also provide a means to register for various volunteer initiatives. The targeted pollutants on the pollution prevention pages include: bacteria and pet waste, turbidity and sediment, phosphorus, nitrogen and organics, fertilizers, pesticides and yard waste, surfactants, hydrocarbons, pH, and toxic compounds. The targeted audiences are residential, commercial and institutional. The general messages promoted on the web pages are street to stream, only rain down the storm drain, and be a Water Watcher/Volunteer. The web pages also provide contacts for reporting pollution problems/concerns and submitting questions to staff. During FY2015, Google Analytics showed that the Storm Water Services web pages had 203,102 unique pageviews, which is an increase of 40% from FY2014 (122,757).	X	
Conduct Media Campaign (PE-5)	During FY2015, a media campaign was developed and implemented to reach the targeted audience (residential, commercial, and institutional) regarding reporting pollution, volunteering, and flood safety. The campaign included television, radio, online, and print ads as well as social media (Facebook, Twitter, and Instagram). Print ads included a CATS bus wrap (Big Sweep), 4th Street Garage banner (Big Sweep), Charlotte Observer ad (Big Sweep), and monthly Utility Bill Inserts. A total of 2,916,000 Utility Bill Inserts were mailed to customers in Charlotte-Mecklenburg. A total of 549 television ads (WSOC-TV and WCNC-TV) and 3,212 radio ads (Clear Channel Radio and Public Radio) ran throughout FY2015. The media campaign was used to promote the 311 helpline and the Water Watchers App (378 downloads in FY2015) as mechanisms for reporting suspected pollution problems. The social media campaign has proven to be successful, especially with the Water Watchers Facebook page, which had an increase of 688 page Likes during FY2015. A total of 2,846 volunteers participated in volunteer initiatives promoted through the media campaign throughout FY2015.	X	
Conduct Presentations for Schools/ Teachers (PE-6)	During FY2015, age specific educational information was developed and distributed in schools. In December 2015, 5th grade science teachers and CMS Afterschool Coordinators were emailed information on the water quality educational programs being offered. As a result, the following presentations were given to schools by MCWQP staff in the Phase II jurisdiction: • 2/5/15: Bailey Middle School BSEP – 22 attendees (1 class) - Enviroscape • 3/27/15: Matthews Elementary – 150 attendees (6 classes) - Enviroscape &	X	

BMP Description	Implementation Actions	Goal Met	
		Yes	No
	Pollution Prevention video • 4/17/15: Homeschool Group – 8 attendees (1 class) – General WQ, macro invertebrates, fish, and monitoring • 4/20/15: Cornelius Elementary ASEP – 30 attendees (1 class) Freddie the Fish • 4/23/15: Pineville Elementary – 150 attendees (6 classes) - Enviroscape & Pollution Prevention video • 5/6/15: Woodlawn School – 30 attendees (1 class) - General Water Quality • 5/27/15: Grand Oaks Elementary ASEP – 50 attendees (2 classes) Enviroscape & Common Water		
Conduct Outreach Program for Commercial / Industrial Facilities (PE-7)	During FY2015, an educational campaign was conducted to inform commercial/ industrial facilities of the sources of pollutants and actions they can take to improve water quality. BMP sheets and Environmental Notices containing pollution prevention information targeted at commercial and industrial activities were made available to staff for distribution when responding to service requests, conducting inspections, etc. Companies that perform swimming pool work were targeted this year. A mailing that included best management practices for swimming pool maintenance work along with an informational letter was mailed to 90 companies. The best management practice sheets created for all types of businesses were maintained at the Business License Office for distribution. In addition, a letter and BMP sheet were sent to 258 landscaping companies in Charlotte-Mecklenburg, including the six (6) Towns. Staff attended the Landscaper's Breakfast on September 17, 2014 and manned an informational booth for water quality. MCWQP had a two page spread in the Airwaves newsletter sent to 207 air quality permitted facilities on February 28, 2015. The articles covered reporting pollution, flood risks and flood maps, volunteering, street to stream, and fertilizer and herbicide usage.	X	
Evaluate Effectiveness of Public Education and Outreach Program (PE-9)	BMPs for the Public Education and Outreach Program are evaluated annually to ensure they are effective at meeting the program's measureable goals. If needed, revisions to BMPs are included in the upcoming fiscal year's work plan. In April 2015 (FY2015) an evaluation was also conducted on the effectiveness of the BMP improvements that were identified in June 2014 (FY2014). Table 2 in Section 3.2 lists those BMP improvements identified in June 2014 for implementation during FY2015 as well as the implementation status of those improvements as evaluated in April 2015. In addition, as part of the April 2015 evaluation of the Public Education and Outreach Program recommendations were made for improving the effectiveness of BMPs in FY16. Those recommendations can also be found in Section 3.2 below. In general, this evaluation revealed that the Public Education and Outreach Program was highly successful. All the measurable goals assigned to the BMPs have been satisfactorily fulfilled and properly documented in Cityworks Server and/or the Volunteer Database. • Raising Awareness – Storm Water Public Opinion Surveys are conducted annually of the general public to measure their awareness of water quality issues as well as their level of concern/interest. The measure of success for the Public Education and Outreach Program is a minimum of 50% of survey respondents indicating an awareness of water quality issues based on an average of the responses to all the questions related to storm water awareness. FY2015 survey results indicate a 45%, awareness rate, which is less than the 55% reported in FY2014 and 5% below the 50% target. Prior to conducting the FY2015 Public Opinion Survey, several revisions were made to the questionnaire such as revising sentence structure and wording as well as rearranging the order in which questions are placed within the survey. Due to advancements in technology and other factors, several of the questions had become outdated. In addition to mail and telephone methods, the 2015 survey used the internet as an additional outreach method. These changes may be responsible for the drop in the percentage of awareness.	X	

BMP Description	Implementation Actions	Goal Met	
		Yes	No
	• Number of Contacts and Distribution Estimates – Distribution estimates for the media campaign indicate that it reached 96.6% of the Mecklenburg County population with a frequency of 39 times compared to FY2014 when 90.3% of the population was reached 33.2 times. • Number of Volunteer Events – Completion of a minimum of 110 volunteer events is the desired target for a successful Public Education and Outreach Program. During FY2015, the number of volunteer events totaled 148, which exceeds the target by 38 events or 34.5%. An evaluation was completed to determine the continued relevance of the Public Education and Outreach table in the Storm Water Plan and the effectiveness of the targeted audience. No changes to the target audience were proposed as a result of the evaluation. Moving forward into FY16 the media campaign will focus more on how to reach specific demographics within the targeted audience more effectively through different campaign tactics.		

3.2 Status of Improvements Identified for Implementation in FY2015

Table 2 provides the status of improvements in the Public Education and Outreach Program that were identified in FY2014 for implementation in FY2015.

Table 2: Status of Improvements Identified for FY2015 Implementation

#	Improvements Identified for Implementation	Implementation Status
1	Hold meetings with each of the sections within the Water Quality Program to identify those brochures that are the most effective and most commonly used as well as to identify any needs for new brochures.	Meetings were held with staff but no additional brochures were identified. Storm Water Services has a large inventory of brochures, handouts, booklets, mailers, etc. that encompass general water quality information, pollutants citizens might see, how to report pollution, and volunteer opportunities.
2	Continue to work with the web team on the upgrade process.	MCWQP staff worked with the web team on the upgrade process by providing input and reviewing content. Web pages are updated with current information as needed by staff and the web team.
3	Once the upgrade is complete, brainstorm with the web team to incorporate videos and interactive maps into the web site.	The MCWQP website upgrade is still in progress. The Adopt-A-Stream interactive map has proven to be highly successful making the program more efficient for citizens to find stream segments to adopt.
4	Continue to build brand awareness.	The media campaign plan was revised throughout FY2015 to fit with the goals of the new members of the Umbrella Team. Revisions included additional monthly news segments with WCNC and new negotiated media outlet contracts. An emphasis on brand awareness has been an important element of the media campaign. MCWQP staff attended 13 public events and gave 11 public presentations in FY2015 to help build brand awareness with the public.
5	Continue to build social media presence.	Social media presence gained momentum in FY2015 with the addition of an Instagram account as well as adding an additional 688 Likes on the Water Watchers Facebook page. This is compared

#	Improvements Identified for Implementation	Implementation Status
		to 390 Likes from the time the page was created in 2010 through July 1, 2014. Posts/tweets have expanded to include all types of storm water-related activities, not just storm water pollution issues and reporting. In addition, MCWQP staff coordinates with staff from The Agency and Town contacts to post, share and retweet information from Water Watchers/MCWQP. Social media replaced the traditional newsletters in all of the towns, except for Pineville.
6	Continue work toward offering teacher trainings.	Additional MCWQP staff were trained to minimize burnout from one WQ educator doing all presentations. MCWQP staff conducted a presentation on water quality and monitoring information to 15 Charlotte-Mecklenburg Earth & Environmental Science High School Teachers to prepare them prior to teaching the subject matter as part of their curriculum.
7	Create survey so teachers can rate our services and provide feedback on programs.	A teacher survey was created and utilized in FY2015.
8	Continue to work on getting messages out to the business sector.	An informational cover letter and BMP sheet on the specified industry were mailed to 90 pool maintenance companies and 258 landscape companies. Storm water-related information was included in two pages of the February 2015 Airwaves newsletter. This newsletter is mailed out to 207 air quality permitted facilities. MCWQP staff presented storm water-related information to the business sector in FY2015. In addition, MCWQP staff attended public events that targeted the business sector.
9	Use vehicle wraps to promote our message.	The first of three vehicle wraps was completed on June 3, 2015. This vehicle wrap represents the street to stream concept (see Attachment 1). The final two vehicle wraps will be completed in FY16.
10	Investigate the use of an educational kiosk in partnership with the Air Quality Program to share environmental data and information with the general public in high traffic areas.	Staff from MCWQP and Air Quality formed a committee in FY2015. Sub-committees were also formed to discuss location, design, and equipment/installation. Group members met with potential partners, such as UNC-Charlotte, to discuss kiosk design.

3.3 Improvements Identified for Implementation in FY2016

The following improvements in the Public Education and Outreach Program have been identified for implementation in FY2016:

1. Continue to build social media presence.
2. Research and utilize other government agency newsletters (ex: Airwaves, The Recycler) to post storm water-related items and volunteer opportunities.
3. Update frequently used educational materials/handouts after moving to the new facility.
4. A new brochure/handout should be created for Volunteer Opportunities.

5. Work with media buyer to promote MCWQP through public event opportunities.
6. Continue working on creating short videos for the Water Watchers Facebook page.
7. Create training videos on MCWQP presentations for teachers (i.e. “Train the Trainer”)
8. Continue to work on getting messages out to the business sector.
9. Complete last two of three vehicle wraps.
10. Work with the media buyer to finalize the types of pollution and volunteer TV commercials.

Section 4: Public Involvement and Participation Program

MCWQP has developed and implemented a Public Involvement and Participation Program for Mecklenburg County's Phase II jurisdictions/entities. The goal of the Public Involvement and Participation Program is to create opportunities for the public to participate in Phase II program development and implementation, as well as to get involved in activities aimed at protecting and restoring water quality conditions.

4.1 Implementation Status for FY2015

Table 3 describes the BMPs identified in the Storm Water Plan for the Public Involvement and Participation Program and the specific actions completed between July 1, 2014 and June 30, 2015 for implementation of these BMPs as well as whether the measurable goals for the BMPs specified in the plan have been fulfilled.

Table 3: BMP Summary Table for the Public Involvement and Participation Program

BMP Description	Implementation Actions	Goal Met	
		Yes	No
Conduct Phase II Public Meeting (PI-1)	On February 19, 2015, a PowerPoint presentation was made to the Storm Water Advisory Committee (SWAC) regarding the activities performed for compliance with Phase II Permit as described in the Storm Water Plan. SWAC expressed their support of the Plan and did not have any suggested changes. On March 31, 2015, a one (1) day workshop was held in cooperation with UNCC entitled Storm Water 101. The purpose of the workshop was to inform elected officials in the City of Charlotte and Mecklenburg County regarding storm water and water quality issues in our community. The workshop was very well received.	X	
Implement Adopt-A-Stream Program (PI-2)	During FY2015, the Phase II jurisdiction had 27 completed stream cleanups under the Adopt-A-Stream Program. A total of 258 volunteers dedicated 575 hours to pick-up trash and report pollution problems in creeks located in the Phase II Jurisdiction. Volunteers removed approximately 1.35 tons of trash and debris from creeks.	X	
Implement Storm Drain Marking Program (PI-3)	During FY2015, 78 storm drains were marked in the Phase II jurisdiction with all documentation being turned into MCWQP. A total of seven (7) volunteers contributed eight (8) hours to the Storm Drain Marking Program.	X	
Conduct Annual Surface Water Clean Up PI-4)	Two annual stream cleanup events were conducted in FY2015 in conjunction with NC Big Sweep: <u>Canoes for a Cause – September 6, 2014</u> Number of Sites: 1 Total Number Volunteers: 29 Total Miles of Shoreline Cleaned: 2 Total Number of trash bags: 40 Total Number of Recycling Bags: 0 (all items were too dirty/muddy and water-logged to keep as recycling) Total Pounds of Trash Collected: 800 lbs. Interesting Items Collected: box fan, cushions, mostly general household trash <u>Big Sweep – September 27, 2014</u> Number of Sites: 7 Total Number Volunteers: 518 Total Miles of Shoreline Cleaned: 26.9 Total Number of trash bags: 635 Total Number of Recycling Bags: 66	X	

BMP Description	Implementation Actions	Goal Met	
		Yes	No
	Total Pounds of Trash Collected: 20,020 lbs. = 10.01 tons Interesting Items Collected: washing machine, hand gun, mattresses, kids golf tee set, typewriter, car parts, baby seats, infant bounce seat, carpets, bounce house, water hoses, & bicycle frames.		
Conduct Annual Volunteer Appreciation Event (PI-5)	Volunteers from the Adopt-A-Stream, Big Sweep, Creek ReLeaf, Storm Drain Marking, and Volunteer Monitoring programs attended the May 19, 2015 Board of County Commissioners (BOCC) meeting. Staff spoke briefly about the volunteer programs and introduced the groups that were present. After the BOCC thanked the volunteers, the group moved to a reception room where volunteers were served light refreshments and given a gift. Approximately 56 volunteers attended the event.	X	
Internship Program (PI-8)	During FY2015, two volunteers/interns (a UNC-Charlotte student and part-time employee with Mecklenburg County Park & Recreation) contributed a combined total of 286 hours toward collecting data on trees planted through the County's Creek ReLeaf program. In addition, County Storm Water Services received an intern (Ardrey Kell High School) through the Mayor's Youth Employment Program. This is a paid internship that started on June 22, 2015 and will end on August 14, 2015. This intern is required to work 20 hours per week and will be assisting MCWQP staff with activities related to the Public Education and Public Involvement Program. Throughout FY2015, several local students and citizens shadowed MCWQP staff for one (1) or two (2) day timeframes on various water quality monitoring activities.	X	

4.2 Status of Improvements Identified for Implementation in FY2015

Table 4 provides the status of improvements in the Public Involvement and Participation Program that were identified in FY2014 for implementation in FY2015.

Table 4: Status of Improvements Identified for FY2015 Implementation

#	Improvements Identified for Implementation	Implementation Status
1	Create email lists for business groups.	Volunteer contact information, including emails, is kept within the Volunteer Database or the volunteer spreadsheet. During public events MCWQP staff provides a Volunteer Signup sheet for citizens interested in the various volunteer activities that are offered. After the event, MCWQP staff contacts and provides those citizens with information on the volunteer activity(s) they are interested in. Citizen contact information and emails are put into the volunteer spreadsheet. The Volunteer Database and volunteer spreadsheet are both used for individuals and business groups. Citizens are sent an email prior to upcoming events such as Big Sweep and Creek ReLeaf.
2	Include current and past volunteers in the email list.	All current and past volunteer contact information is maintained in the Volunteer Database and volunteer spreadsheet.

4.3 Improvements Identified for Implementation in FY2016

1. Continue to build the volunteer email list for individuals and business groups.

Section 5: Illicit Discharge Detection and Elimination Program

MCWQP has developed, implemented and enforced an Illicit Discharge Detection and Elimination (IDDE) Program in Mecklenburg County's Phase II jurisdictions/entities. The goal of the IDDE Program is to detect and eliminate illicit discharges into the MS4, which are defined in 40 CFR 122.26(b)(2) as discharges that are not composed entirely of storm water except discharges pursuant to a NPDES Permit (other than the NPDES Permit for discharges from the municipal separate storm sewer) and discharges resulting from fire-fighting activities as well as incidental non-storm water discharges or flows that are not significant contributors of pollutants.

5.1 Implementation Status for FY2015

Table 5 describes the BMPs identified in in the Storm Water Plan for the IDDE Program and the specific actions completed between July 1, 2014 and June 30, 2015 for implementation of these BMPs as well as whether the measurable goals for the BMPs specified in the plan have been fulfilled.

Table 5: BMP Summary Table for the IDDE Program

BMP Description	Implementation Actions	Goal Met	
		Yes	No
Maintain Storm Sewer System Maps (ID-1)	In FY2015, 57 Inlets and 258 Outlets were added to the inventory for the Phase II jurisdictions/entities. With these additional points, the total current inventory in Phase II jurisdictions/entities is 34,020 inlets and 6,184 outlets.	X	
Conduct Field Screening for Non-Storm Water Flows (ID-2)	Through a series of meetings with Ron Bruzesse (GIS), an additional layer was created in ESRI Arc GIS to track outfall inspections conducted under ID-6, ID-9 and PP-2 (including CPCC and CMS). An additional written document describing the procedures was developed. Training was provided to staff for the use of the new layer for performing outfall inspections of existing features and to add new outfalls using the mobile ESRI Arc GIS while performing duties associated with the ID-6, ID-9 and PP-2 (including CPCC and CMS) program elements. A total of 165 outfalls were inspected in the Phase II jurisdictions under this program element. Two issues were identified and remediated as follows: 2/4/15 – Sanitary sewer intermittently overflowing at Matthews' festival (IDEP). 3/4/15 – Inspection of outfall for a concrete spill on us 74.	X	
Enforce Surface Water Pollution Control Ordinance (ID-3)	All NOV shells were revised in FY2014. No additional revisions were needed in FY2015. On November 13, 2014 staff training was provided regarding the issuance of NOVs and implementation of enforcement actions. The Ordinances and violations for the various jurisdictions were discussed. The NOV review and certified mailing process was also reviewed. Consistency of when to issue field vs. written NOVs was stressed. The Notice of Violation and Enforcement Decision-Making Process along with penalty/enforcement guidance was reviewed. A total of 21 written NOVs were issued during FY2015. The jurisdictions in which they were issued are as follows: Cornelius – 3; Davidson – 2; Huntersville – 4; Matthews – 4; Mecklenburg County – 2; Mint Hill – 3; and Pineville – 3. The types of NOVs and/or the materials released were as follows: Post Construction Ordinance – 2; concrete - 2; cooking oil/grease – 1; other – 3; sewage -5; wash water – 6; and waste water – 2. All violations were corrected and remediated as necessary. Two (2) of the NOVs resulted in penalty assessments. The first was in the amount of $500 for a concrete discharge in Davidson. The second was in the amount of $1000 for a sewage discharge in Matthews.	X	
Implement	The program routinely performs discrete grab sampling on streams monthly (132	X	

BMP Description	Implementation Actions	Goal Met	
		Yes	No
Water Quality Monitoring Program (ID-4)	events, 924 samples analyzed), benthic macroinvertebrate community sampling annually (11 events), and fish community sampling on a rotating schedule. Additional grab samples are completed on an as needed basis. The program administers a quality assurance program plan approved by NCDENR in 2009, which contains several Standard Operating Procedures and Standard Administrative Procedures. The program renewed Biological Laboratory Certification with NCDENR on 11/18/14.		
Develop and Implement Fixed Interval Stream Monitoring Program (ID-4.1)	Fixed Interval Monitoring was conducted on the 2nd Wednesday of each month at 11 sites throughout the Phase II jurisdictions (see Attachment 2). At each site, samples were collected and analyzed for 17 water quality parameters. Nine (9) action level exceedances were detected during the year (see Attachment 3). These exceedences are consistent with past exeedences and are not indicative of a single traceable source. Where fecal coliform exceeded the Action level threshold during baseflow (1 observation), re-samples were collected and follow up actions implemented. No significant pollution problems (sanitary sewer overflows or illicit discharges) were detected as a result of these follow up actions.	X	
Develop and Implement Benthic/Habitat Monitoring Program (ID-4.3)	Benthic macroinvertebrate bioassessments were conducted at 11 sites in 9 streams within the Phase II jurisdictions from July to August 2014. The qualitative benthic macroinvertebrate sampling methods developed by the State were used. Taxa richness for the pollution intolerant groups, Ephemeroptera, Plecoptera and Trichoptera, and the North Carolina Biotic Index were calculated and used to assign a State biological classification to each site. None of the 11 sites were given a Stream Bioclassification of POOR, which is an improvement over the 2 sites that rated POOR in 2013. Nine (9) sites rated FAIR. Clear and Gar Creeks were rated GOOD-FAIR. There appears to be a water quality issue in Four Mile Creek as the in-stream habitat was highly rated but the rating for the benthic community was low, indicating that habitat was not a limiting factor. Follow up investigations revealed no evidence of pollution sources. Data indicated that the rural and suburban streams are beginning to recover from the droughts that Mecklenburg County experienced in 2002, 2007 and 2008.	X	
Develop and Implement Fish Monitoring Program (ID-4.4)	Electrofishing was conducted in May of 2015 to evaluate the fish community in five (5) of Mecklenburg County's streams, including Irvins Creek (Matthews), Four Mile Creek (Matthews), Duck Creek (Mint Hill), N. Fork Crooked Creek (Matthews), and Clarke Creek (Huntersville). Mecklenburg County's Water Quality Program utilizes the standard operating procedures (SOP) used by NCDENR's Stream Fish Community Assessment Program and their Index of Biotic Integrity (NCIBI). The NCIBI rates streams in five (5) categories (Poor to Excellent) based upon 12 metrics. The NCIBI was designed to assess the structure and health of a stream's fish community. To accomplish this, it integrates information about species richness and composition, trophic composition, fish abundance and condition. Fish communities are influenced by water quality, available energy, habitat quality, flow regime, and biotic interactions. Clarke (MY10) and Four Mile Creek (MC40C) scored a Good NCIBI score (52 & 48 respectfully); while Duck Creek (MY14) scored a poor rating (32). As previously stated, Irvins Creek (MC36) and the North Fork of Crooked Creek (MY15) were sampled, but NCIBI scores were not assigned. At our sampling location, these creeks have a small drainage area and the NCIBI SOP states that only creeks with a drainage area larger than 2.8 mi^2 should use the NCIBI scoring criteria. The Good NCIBI score for Clarke and Four Mile Creeks indicates that the streams are deemed as Fully Supporting its Aquatic Life Use Support stream classification. Whereas the poor rating for Duck Creek is deemed to be Not Supporting its Life Use Support stream classification and the water quality standard is not being met. Clarke Creek has recently scored Good-Fair (FY2014) and Good (FY2015).	X	

BMP Description	Implementation Actions	Goal Met	
		Yes	No
	Mecklenburg County's Water Quality Program is going to inquire about possibly having Clarke Creek removed from the NC 303D list for ecological / biological integrity for fish communities. Even though the North Fork of Crooked Creek only has a drainage area of 1.4 mi^2 and cannot be assigned a NCIBI score, the fish community was highly diverse (11 species) with an abundant population (n=167) at our sampling location. However, Irvins Creek's fish community is very poor with a large diversity (9 species) but low abundance (n=83) and is primarily composed of tolerant species (73%). Although both of these streams are in the Town of Matthews, the land uses in the respective drainage areas are completely different. Irvins Creek is mostly developed with a large amount of impervious area (32%), which results in more flash flooding and the introduction of pollutants subsequently creating a poor fish community. The North Fork of Crooked Creek is mostly undeveloped (14.5% impervious area).		
Water Quality Monitoring Data QA/QC (ID-4.6)	Duplicate samples for each site are collected each year. Field blanks, bottle blanks, DI water blanks and trip blanks are combined into Event Blanks for each sampling run. There were only 2 observations at or above Method Detection Limits (MDL) during the year. One observation was for turbidity on 05/13/15. No data was rejected due to the very low level of detection (0.95 NTU – MDL: 0.5 NTU). One (1) detection of Bromide on Mountain Island Lake on 11/3/14 disqualified all Bromide samples taken on that date (6).	X	
CMANN (ID-4.10)	Continuous automated monitoring activities were conducted at 8 sites in the Phase II jurisdictions resulting in the collection of 218,333 QA/QC accepted data points (~88% data acceptance rate). All data collected was evaluated for the identification of potential pollution problems that were subsequently followed up on for the identification and elimination of pollution sources and restoration of degraded water quality conditions. Collected data was used to calculate the Stream Use Support Index (SUSI), which is a general indicator of water quality conditions in our streams. This index was made available to the public on the website as follows: http://stormwater.charmeck.org (select "Water Quality" at the top of the page).	X	
Quality Assurance Project Plan Administration (QAPP)	Staff reviewed and updated Standard Operating Procedures (SOPs) and Standard Administrative Procedures (SAPs), where necessary, with the help of various staff members. Revisions were mainly focused on reorganization of staff members. Staff were evaluated for possible sample collection error while performing monitoring activities and no problems were noted. All procedures were reviewed and revised (as needed) and several routine monitoring programs were audited. No corrective action reports were warranted or issued.	X	
Public Outreach Program for Illicit Discharges & Improper Waste Disposal (ID-5)	A Utility Bill Insert was distributed to 240,000 customers (homes and businesses) per month for 10 months of the year and to 258,000 customers in January and July totaling 2,916,000 customers. Inserts were two-sided and covered storm water-related topics such as flooding, living in floodplains, storm water pollution indicators, preventing and reporting storm water pollution, volunteering, etc. In addition, each Town has a link to the Storm Water Services website for information on local water quality. On September 17, 2014, MCWQP presented to 48 lawn care professionals on proper pesticide/herbicide use and lawn care maintenance. Two workshops for management staff/employees of multi-family complexes were held on December 10, 2014 and June 15, 2015. The workshops were presented to a total of 51 participants on state laws regarding private sanitary sewer systems and how to prevent sanitary sewer overflows. During FY2015, MCWQP conducted 11 public presentations to a variety of groups, businesses, and organizations. A total of 705 citizens attended these presentations. Presentation topics included storm water pollution prevention and reporting, permitting and compliance, buffers/vegetation, monitoring, structural BMP	X	

<table>
<tr><th rowspan="2">BMP Description</th><th rowspan="2">Implementation Actions</th><th colspan="2">Goal Met</th></tr>
<tr><th>Yes</th><th>No</th></tr>
<tr><td></td><td>maintenance, etc. In addition, MCWQP participated in 13 public events within Mecklenburg County. MCWQP staff interacted with an estimated total of 2,463 attendees during these events. At the beginning of FY2015, the Water Watchers Facebook page started with a total of 390 Likes and ended the fiscal year at 1,023 Likes (up 688). MCWQP staff worked with its media buyer, The Agency, to maintain the Water Watchers Facebook page and respond to all inquiries. Production of a new employee training video called “Water Pollution: What to do?” was completed in FY2015. This video and newly created materials will be utilized in FY16 to provide pollution prevention training to municipal employees who have the potential to observe a water quality problem.</td><td></td><td></td></tr>
<tr><td>Conduct Follow up Inspections and Respond to Citizen Requests and Emergencies (ID-6)</td><td>During FY2015, staff responded to 153 service requests regarding potential water quality problems in the Phase II jurisdictions. Thirteen (13) of these service requests were emergency responses. The most common type of service requests involved the discharge and/or dumping of potential surface water/storm water pollutants. The most common pollutants observed were:
• Petroleum = 17
• Sewage = 15
• Concrete = 5
• Wash water = 3
• Sediment = 3
• Chemical = 2
As a result of the 153 service requests responded to there were a total of 50 problems detected and 47 problems corrected in Phase II jurisdictions during FY2015. From those problems detected, 13 Notice of Violations (NOVs) were issued and 11 were resolved. The following table provides data regarding the number of service requests received by category in each of the Phase II jurisdictions as well as the number of responses to spills and other emergencies.
<table>
<tr><th>Jurisdiction</th><th>Number of Service Request By Category</th><th>Number of Emergency Responses</th></tr>
<tr><td>Cornelius</td><td>Buffer - 40
No Incident Identified – 7
Discharge/Dumping - 3
Accidental Spill - 3
Fish Kill - 1
Other - 1
Cornelius Total = 55</td><td>2</td></tr>
<tr><td>Davidson</td><td>Discharge/Dump – 3
Accidental Spill – 1
Fish Kill – 1
Algae Bloom – 1
Other - 1
Davidson Total = 7</td><td>0</td></tr>
<tr><td>Huntersville</td><td>Discharge/Dumping – 9
Buffer – 2
Other – 2
Accidental Spill – 1
No Incident Identified – 1
Unknown - 1
Huntersville Total = 16</td><td>2</td></tr>
<tr><td>Matthews</td><td>Discharge/Dumping – 6
No Incident Identified - 6
Accidental Spill – 5
Algae Bloom – 1
Illicit Connection – 1
Other - 1
Matthews Total = 20</td><td>2</td></tr>
</table></td><td>X</td><td></td></tr>
</table>

<table>
<tr><th>BMP Description</th><th>Implementation Actions</th><th>Goal Met
Yes</th><th>Goal Met
No</th></tr>
<tr><td></td><td>
<table>
<tr><th>Jurisdiction</th><th>Number of Service Request By Category</th><th>Number of Emergency Responses</th></tr>
<tr><td>Mint Hill</td><td>Discharge/Dumping – 3
Buffer – 1
Mint Hill Total = 4</td><td>0</td></tr>
<tr><td>Pineville</td><td>Discharge/Dumping – 2
Erosion - 1
No Incident Identified – 1
Pineville Total = 4</td><td>0</td></tr>
<tr><td>Mecklenburg</td><td>Buffer - 15
Discharge/Dumping – 10
No Incident Identified – 9
Accidental Spill – 7
Other – 3
Erosion – 1
Unknown – 1
Mecklenburg Total = 46</td><td>7</td></tr>
<tr><td>Stallings</td><td>Erosion – 1
Stallings Total = 1</td><td>0</td></tr>
<tr><td>TOTALS</td><td>153</td><td>13</td></tr>
</table>
</td><td></td><td></td></tr>
<tr><td>Stream Walk/Outfall Inventory & Inspection/ Dry Weather Flow Analysis (ID-8)</td><td>The Phase II monitoring program was coordinated with the Phase I program and all procedures that were developed in previous years were reviewed. During FY2015, stream walk procedures were the same as the previous year with minor changes. One change was that the miles in the ETJ would count towards Phase II and not Phase I as had been done in past years. Staff training was performed on 10/29/2015. Stream walks began on 11/3/2014 and were concluded on April 13, 2015, two weeks prior to the deadline. Staff walked approximately 77.14 stream miles in the Phase II and ETJ jurisdictions during FY2015. 28.03 miles were walked in Mint Hill, 32.13 in Huntersville, and 16.98 miles in the ETJ. 46 features were mapped in Mint Hill, 116 in Huntersville, and 55 in the ETJ. In all, there were 217 features mapped, 98 outfalls inspected and 105 fecal coliform samples collected. Only 1 of these samples resulted in Action level exceedances (>3000 col/100ml). No significant pollution sources were identified. All monitoring data generated under this program was reviewed. Attachment 4 illustrates the streams that were walked and the outfalls inspected and inventoried during FY2015.</td><td>X</td><td></td></tr>
<tr><td>Illicit Discharge Elimination Program (IDEP) (ID-9)</td><td>The purpose of the Illicit Discharge Elimination Program (IDEP) program is to support and enhance Illicit Discharge Detection and Elimination (IDDE) efforts in Mecklenburg County. The identification of pollution sources is accomplished by investigating and monitoring storm water outfalls, business corridors, multi-family private sewer systems, and all outfalls that drain directly to Mecklenburg County's three (3) reservoirs using qualitative and analytical measurements. IDEP activities were conducted from July 1, 2014 through June 30, 2015. A total of 19 business corridor runs were conducted in the Towns as follows: 4 in Matthews, 3 in Mint Hill, 3 in Pineville, 3 in Cornelius, 3 in Huntersville, and 3 in Davidson. Fourteen (14) problems were detected during business corridor runs and 12 were corrected. From those problems detected, seven (7) Notice of Violations (NOVs) were issued and 5 were resolved. Seven (7) grease bins were detected discharging cooking oil/grease to the ground, 2 retail businesses were detected discharging sewage from the private sanitary sewer on the property, 2 car lots and 1 marina were detected discharging wash water from vehicle washing operations, and 1 stone cutting facility was detected discharging process water from granite cutting operations to the ground.</td><td>X</td><td></td></tr>
<tr><td>Used Oil</td><td>During FY2015, two (2) inspections were conducted of facilities accepting used</td><td>X</td><td></td></tr>
</table>

BMP Description	Implementation Actions	Goal Met	
		Yes	No
Facility Inspections (ID-U)	oil from the public for recycling within the Phase II jurisdictions (see listed below). The purpose of the used oil inspections is to ensure the proper handling and disposal of used oil to prevent discharges of pollution. • Advance Auto Parts, 9507 East Independence Blvd, Matthews, inspected on November 3, 2014 • Pep Boys, 9415 East Independence Blvd, Matthews, inspected on November 10, 2014 The inspections revealed that the facilities were operating properly without pollution problems. An online interactive map of used oil facilities is posted on MCWQP's website to assist citizens in locating a facility that accepts used oil and other automotive wastes. The link is as follows: http://charmeck.org/stormwater/PollutionPrevention/Pages/UsedOilFacilities.aspx		
Evaluate Effectiveness of IDDE Program (ID-10)	During FY2015, an evaluation was completed of the effectiveness of the BMPs for the IDDE Program as described in the latest version of the Storm Water Plan. Section 5.3 below lists those improvements identified for implementation during FY2016 based on this evaluation. In general, this evaluation revealed that the IDDE Program is successful at identifying and eliminating pollution sources. There are two (2) measures of success for the IDDE Program contained in the Storm Water Plan, including the documentation of the completion of activities that demonstrate the successful completion of the BMPs associated with the program and the ratio of the number of violations compared to the number of inspections. The evaluation revealed that all documentation was successfully completed and that the ratio for FY2015 is at 6.5% based on 200 inspections conducted and thirteen (13) NOVs issued. These inspections also identified 50 problems with 47 resolved with a ratio of 94%. For FY2014, the ratio was 4% (235 inspections with 9 NOVs). For FY2013 the ratio was 2% (295 inspections and 6 NOVs) and for FY2012 the ratio was 5% (407 inspections and 22 NOVs issued). This data reveals that the ratio of the number of violations to the number of inspections has increased slightly. The desired trend is a reduction of this ratio, which would indicate fewer violations being detection as a result of inspections. In addition to the metrics above, the IDDE manual was reviewed during FY2015 and updated (pending final word processing) to reflect current procedures and practices. The IDEP program was modified to include a priority basin approach in addition to business corridor inspections, stream walks, and increased use of Microbial Source Tracking technology. In addition, outfall inspections and stream walks were conducted in catchments with less than 50 acre drainage.	X	

5.2 Status of Improvements Identified for Implementation in FY2015

Table 6 provides the status of improvements in the IDDE Program that were identified in FY2014 for implementation in FY2015.

Table 6: Status of Improvements Identified for FY2015

#	Improvements Identified for Implementation	Implementation Status
1	Conduct a data & GIS analysis to determine smaller outfalls in priority areas/sub-basins to inspect & monitor as part of ISIS.	This program was implemented in the Upper Little Sugar Creek and Edwards Branch watersheds.
2	Evaluate the feasibility of incorporating ammonia sondes into the mobile CMANN program for use in upper watershed stream reaches.	Following review of the products available, it was determined that this technology was not feasible due to the relatively high ammonia detection levels, cost of the sonde, and feedback from other entities who have

#	Improvements Identified for Implementation	Implementation Status
		used the equipment.
3	Develop a budget for updating the Water Watchers App.	Maintenance for the Water Watchers App was free for the first two (2) years, which expired in March 2015. The City of Charlotte added a maintenance contract and also conducted an iOS update for Apple and Android platforms in June 2015. These costs will be split with the County per the Umbrella Plan (30% County/70% City).
4	Communicate with the Business License Office's to determine GIS data availability.	Spatial information is available on business type location based on general standard industrial classification codes.

5.3 Improvements Identified for Implementation in FY2016

The following improvements in the IDDE Program have been identified for implementation in FY2016:

1. Utilize business license information to target specific business types for IDDE evaluations.
2. Continue to work with the City of Charlotte on updates and associated invoices for the Water Watchers App.
3. Expand microbial source tracking into areas with elevated fecal coliform levels where no source can be identified.
4. Implement intensive IDDE activities in streams exhibiting elevated fecal coliform levels.
5. Wrap additional fleet vehicles with education material on identifying and reporting pollution problems.
6. Improve field outfall inspection technology.

Section 6: Construction Site Storm Water Runoff Control Program

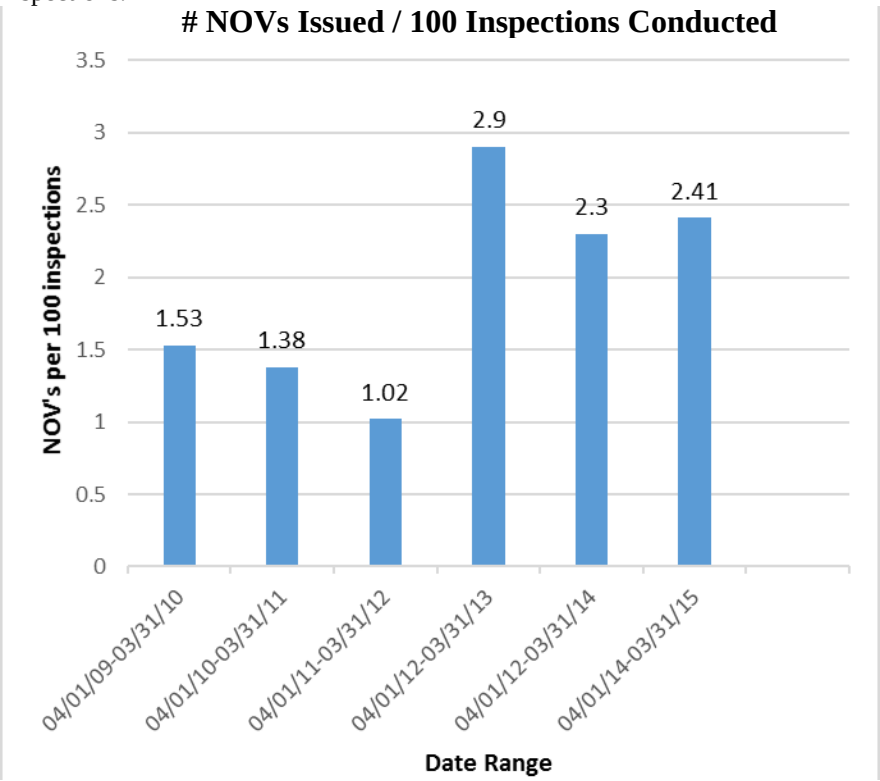
MCWQP has developed, implemented and enforced a Construction Site Storm Water Runoff Control Program for addressing the discharge of sediment and other pollutants from construction sites in Mecklenburg County's Phase II jurisdictions. The goal of the Construction Site Storm Water Runoff Control Program is to reduce pollutants in storm water runoff from construction activities that result in a land disturbance of greater than or equal to one acre. Construction activities disturbing less than one acre are included in the program if they are part of a larger common plan of development or sale that would disturb one acre or more.

6.1 Implementation Status for FY2015

Table 7 describes the BMPs identified in the in the Storm Water Plan for Construction Site Storm Water Runoff Control Program and the specific actions completed between July 1, 2014 and June 30, 2015 for implementation of these BMPs as well as whether the measurable goals for the BMPs specified in the plan have been fulfilled.

Table 7: BMP Summary Table for the Construction Site Storm Water Control Program

BMP Description	Implementation Actions	Goal Met	
		Yes	No
Enforce Erosion Control Ordinances (CS-1)	During FY2015, the policies and procedures for the erosion control ordinances were updated and provided to staff. In addition, a total of 143 new projects were permitted in Mecklenburg County with a total disturbed acreage of 1,052.14. 1,236 inspections were performed with 23 Notice of Violations (NOV's) issued. Eight (8) penalties were assessed for $96,850 with $61,150 currently under appeal to SWAC and $23,500 being collected. Provided below are the totals for the Phase II jurisdictions. • Cornelius: 158 inspections with 2 NOV's, 1 penalty, and $4,150 currently under appeal to SWAC. • Davidson: 83 inspections with 2 NOVs, 1 penalty, and $3,700 collected. • Huntersville: 416 inspections with 5 NOV's. • Matthews: 126 inspections with 5 NOVs, 1 penalty, and $3,000 currently under appeal to SWAC. • Mint Hill: 386 inspections with 7 NOVs, 3 penalties, and $9,800 collected. • Pineville: 67 inspections with 2 NOVs, 2 penalties, $10,000 collected, and $54,000 under appeal to SWAC.	X	
Erosion Control Education (CS-2)	Three (3) erosion control educational programs were conducted during FY2015, occurring on August 26, 2014, January 8, 2015 and April 16, 2015. There were a total 374 attendees for the three (3) programs with 352 or 94% satisfactorily completing the exam.	X	
Evaluate Effectiveness of Erosion Control Program (CS-3)	During FY2015, an evaluation was completed of the effectiveness of the BMPs for the Construction Site Storm Water Control Program as described in the latest version of the Storm Water Plan. The evaluation revealed that the Construction Site Storm Water Control Program is successful at addressing the discharges of sediment and other pollutants from construction sites in Phase II jurisdictions. Three (3) improvements are recommended for implementation in FY2016 based on this evaluation as described in Section 5.3. There are two (2) measures of success for the Construction Site Storm Water Control Program contained in the Storm Water Plan, including the documentation of the completion of activities that demonstrate the successful completion of the BMPs associated with the program and the number of NOVs issued for every 100 inspections. The evaluation revealed	X	

BMP Description	Implementation Actions	Goal Met	
		Yes	No
	that all documentation was successfully completed. The results of the evaluation of the past six (6) years of NOV and inspection data is revealed in the chart provided below. Data reveals that the ratio of the number of violations to the number of inspections has increased slightly. The desired trend is a reduction of this ratio, which would indicate fewer violations being detection as a result of inspections. 		

6.2 Status of Improvements Identified for Implementation in FY2015

No improvements were recommended for FY2015.

6.3 Improvements Identified for Implementation in FY2016

The following improvements in the Construction Site Storm Water Runoff Control Program have been identified for implementation in FY2016:

1. Hire an additional inspector to handle the increase in permitted construction sites and structural storm water BMPs.

2. Add an email box on the erosion control inspection form with the financially responsible party's email address auto-populated to facilitate the issuance of reports digitally.

3. Develop and implement a City/County cross audit program, where each municipality audits the others program.

Section 7: Post-Construction Site Runoff Control Program

MCWQP has developed, implemented and enforced a Post-Construction Site Runoff Control Program for addressing post-construction storm water runoff from new development and redevelopment projects in Mecklenburg County's Phase II jurisdictions. The goal of the Post-Construction Site Runoff Control Program is to reduce pollutants in storm water runoff during post-construction conditions at new developments and redevelopments, including public transportation maintained by the permittee, that disturb greater than or equal to one acre. Developments and redevelopments disturbing less than one acre are included in the program if it is part of a larger common plan of development or sale that would disturb one acre or more.

7.1 Implementation Status for FY2015

Table 8 describes the BMPs identified in the in the Storm Water Plan for Post-Construction Site Runoff Control Program and the specific actions completed between July 1, 2014 and June 30, 2015 for implementation of these BMPs as well as whether the measurable goals for the BMPs specified in the plan have been fulfilled.

Table 8: BMP Summary Table for the Post-Construction Site Runoff Control Program.

<table>
<tr><th rowspan="2">BMP Description</th><th rowspan="2">Implementation Actions</th><th colspan="2">Goal Met</th></tr>
<tr><th>Yes</th><th>No</th></tr>
<tr><td>Implement Post-Const. Storm Water Ordinances (PC-1)</td><td>During FY2015, 302 plans were reviewed and approved for compliance with post-construction ordinances in the Phase II jurisdictions, resulting in the issuance of permits for the development of 7,171 acres. In addition, a total of 85 ordinance interpretations were made by the Storm Water Administrator during FY2015.
<table>
<tr><th>Phase II Jurisdiction</th><th># Permits Issued</th><th># Ordinance Interpretations</th></tr>
<tr><td>Cornelius</td><td>25</td><td>9</td></tr>
<tr><td>Davidson</td><td>29</td><td>8</td></tr>
<tr><td>Huntersville</td><td>134</td><td>19</td></tr>
<tr><td>Matthews</td><td>44</td><td>16</td></tr>
<tr><td>Mecklenburg County</td><td>32</td><td>4</td></tr>
<tr><td>Mint Hill</td><td>27</td><td>23</td></tr>
<tr><td>Pineville</td><td>11</td><td>6</td></tr>
</table></td><td>X</td><td></td></tr>
<tr><td>Implement BMP Inspections (PC-2)</td><td>The following tables indicate the total number of BMP inspections performed for each of the Phase II jurisdictions/entities as well as the number of notices of violation (NOVs) and Corrective Action Requests (CARs) issued and penalties assessed.
<table>
<tr><th>Jurisdiction</th><th># Inspections/ Follow Up</th><th>Brought into Compliance</th><th>Notice of Maintenance</th><th>CAR</th><th>NOV</th><th>Penalty</th></tr>
<tr><td>Cornelius</td><td>39/ 2</td><td>0</td><td>22</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Davidson</td><td>31/ 0</td><td>1</td><td>20</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Huntersville</td><td>279/ 22</td><td>10</td><td>108</td><td>2</td><td>3</td><td>1</td></tr>
<tr><td>Matthews</td><td>26/ 1</td><td>0</td><td>17</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Mint Hill</td><td>25/ 1</td><td>0</td><td>12</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>Pineville</td><td>14/ 1</td><td>0</td><td>6</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>TOTALS</td><td>414/ 27</td><td>11</td><td>185</td><td>2</td><td>3</td><td>1</td></tr>
</table>
<table>
<tr><th>Municipality</th><th># Inspections</th><th>Corrective Action Request/ Notice of Municipal Inspections</th><th>Brought into Compliance</th></tr>
<tr><td>CMS</td><td>104</td><td>88</td><td>2</td></tr>
<tr><td>CPCC</td><td>10</td><td>8</td><td>0</td></tr>
</table></td><td>X</td><td></td></tr>
</table>

<table>
<tr><th rowspan="2">BMP Description</th><th rowspan="2">Implementation Actions</th><th colspan="2">Goal Met</th></tr>
<tr><th>Yes</th><th>No</th></tr>
<tr><td>Implement a Program to Educate and Assist Developers (PC-3)</td><td>Staff continued throughout the year to develop a new feature on Mecklenburg County Polaris3G to inform the public regarding built-upon area limits on parcels. On 12/2/14 staff gave a presentation to 120 surveyors covering Post Construction, Buffers and Built Upon Area. On 3/6/15 staff gave a presentation to the Mint Hill town board (12 people) covering Post Construction BMPs. On 6/25/15 staff gave a presentation to 10 Mecklenburg Area Planners covering updates to the built-upon area restrictions. Staff completed BMP educational binders and flash drives as indicated in the table below.
<table><tr><th>Jurisdiction</th><th>Number of Educational Binders/ flash drives given to BMP Owners</th></tr><tr><td>Cornelius</td><td>1</td></tr><tr><td>Davidson</td><td>0</td></tr><tr><td>Huntersville</td><td>5</td></tr><tr><td>Matthews</td><td>0</td></tr><tr><td>Mint Hill</td><td>0</td></tr><tr><td>Pineville</td><td>0</td></tr></table></td><td>X</td><td></td></tr>
<tr><td>Evaluate Effectiveness of Post-Construction Control Program (PC-5)</td><td>Effective June 30, 2007, seven (7) post-construction ordinances were adopted in Mecklenburg County to ensure compliance with the Phase II Permit requirements, including an ordinance for each applicable jurisdiction as follows:
1. Town of Cornelius
2. Town of Davidson
3. Town of Huntersville
4. Town of Matthews
5. Town of Mint Hill
6. Town of Pineville
7. Mecklenburg County
The ordinances adopted by the Towns are applicable to their corporate limits and extra-territorial jurisdictions (ETJ). Mecklenburg County's ordinance is applicable in the one (1) square mile area south of Pineville that is outside that Town's ETJ.
The only change made to these seven (7) ordinances during FY15 occurred with the Town of Matthews. A total of 19 parcels encompassing 28.5 acres of land located on Hwy 51 and Idlewild Road bordering the Town of Mint Hill drain to the Goose Creek watershed within Matthews' jurisdiction. Specific requirements applied to this area of land in the Town of Matthews that were not adequately addressed in their ordinance with the adoption of the Site Specific Water Quality Management Plan for Goose Creek on February 1, 2009 (15A NCAC 02B .0601 through 15A NCAC 02B .0609) by the N.C. Department of Environment and Natural Resources. These specific requirements were initially addressed by modifications to the Administrative Manual, but in June 2014 the requirements were incorporated into the Town's post-construction ordinance with the adoption of their new Unified Development Ordinance. These changes are contained in Section 155.83.B.3 of this ordinance as follows:
Goose Creek District. That area of land that drains to Goose Creek in the Yadkin River Basin in the Town, including all tributaries. This area of land is not subject to the provisions of this Chapter, but rather is subject to the requirements contained in the State of North Carolina Administrative Code 15A NCAC 2B.0600 – 0.609 as administered by the North Carolina Department of Environment and Natural Resources [formerly known as § 154.032].
The Phase II post-construction ordinances in Mecklenburg County are supported by an Administrative Manual. In FY15, the following changes were made to this Manual:
1. Revised residential detention language in Section 2.5.4 and Table 2-4 because the detention ordinance does not limit the requirements to commercial development and because the Town of Matthews desires their drainage plan to require</td><td>X</td><td></td></tr>
</table>

BMP Description	Implementation Actions	Goal Met	
		Yes	No
	detention for single-family residential developments. 2. Revised Appendix 10-1 (Post-Construction As-built checklist) and Appendix 12-1 (Post-Construction Compliance Certification form) to clarify that a built-upon area survey is required to demonstrate compliance with the built-upon area shown on the approved plans. 3. Revised the language in Section 2.3-Exemptions to accommodate Post-Construction ordinance language changes approved by the Town of Matthews on June 9, 2014 regarding exemption criteria. During FY15, MCWQP completed an evaluation of these post-construction ordinances and the program as a whole to assess their effectiveness at fulfilling the Phase II Permit requirements and for fulfilling the specified objectives of the post-construction program specified in the Storm Water Quality Management Program Plan as follows: 1. Implement and enforce a program to address storm water runoff from new development and redevelopment projects, including public transportation maintained by the permittee. 2. Implement strategies which include a combination of structural and/or non-structural BMPs appropriate for the community. 3. Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects. 4. Ensure adequate long-term operation and maintenance of BMPs. As a result of this evaluation the ordinances were determined to be effective and no changes are proposed. <u>Effectiveness of Storm Water Quality Management Program Plan</u> An evaluation was completed of the effectiveness of the Storm Water Quality Management Program Plan, including an assessment of the identified BMPs for the Program, to determine whether all the measureable goals have been achieved. As a result of this evaluation it was determined that the Plan is effective at ensuring the effective and efficient compliance with Permit requirements. It was also determined that all the BMPs identified in the Plan were fulfilled during FY15. The evaluation of the Plan also included an assessment of the measures of success described below. 1. <u>Documentation of Storm Water Program Activities</u> – MCWQP staff effectively documented the completion of Work Plan activities annually that demonstrate achievement of each of the measureable goals for the BMPs associated with this program. All activities were documented within MCWQP's Environmental Data Management System (EDMS). 2. <u>Structural and Non Structural BMP Evaluations</u> – During FY2015, there were a total of 713 BMPs in the Phase II jurisdictions and staff conducted a total of 555 BMP inspections. The type of inspections included initial annual, follow up annual, routine maintenance, release of maintenance bond, and final construction inspections. Of the 713 BMPs, 281 BMPs (39%) required maintenance. 5 Corrective Action Requests (CARs) and Notice of Violations (NOVs) were issued and one (1) penalty assessed. Staff mailed inspection reports and letters to responsible parties listing all BMP maintenance issues and began follow up activities to ensure the BMPs were brought into compliance. Staff entered all data, including newly constructed BMPs, into the BMP database. A total of 13 BMPs were brought into compliance. The remainder of the maintenance issues will be resolved during FY2016. It took 1,384.50 hours for staff to perform BMP inspections and related activities. The number of problems detected during the 555 BMP inspections was tracked and a comparison to previous years is provided in the table below. This comparison reveals a 71% increase in the number of BMPs in the Phase II jurisdictions during the six (6) year reporting term. The percentage of BMPs with problems increased in FY2015 to 51% compared to		

<table>
<tr><th rowspan="2">BMP Description</th><th rowspan="2">Implementation Actions</th><th colspan="2">Goal Met</th></tr>
<tr><th>Yes</th><th>No</th></tr>
<tr><td></td><td>36% in FY2014; however, the overall six (6) year trend represents a decrease in the percentage of problems detected, which is an indicator of the success of the program.
<table>
<tr><th>Fiscal Year</th><th># BMPs</th><th># Inspections Conducted</th><th># BMPs with Problems</th><th>% BMPs with Problems</th></tr>
<tr><td>2010</td><td>355</td><td>510</td><td>206</td><td>58%</td></tr>
<tr><td>2011</td><td>417</td><td>-</td><td>238</td><td>57%</td></tr>
<tr><td>2012</td><td>497</td><td>443</td><td>256</td><td>58%</td></tr>
<tr><td>2013</td><td>630</td><td>453</td><td>248</td><td>55%</td></tr>
<tr><td>2014</td><td>664</td><td>668</td><td>244</td><td>36%</td></tr>
<tr><td>2015</td><td>713</td><td>555</td><td>286</td><td>51%</td></tr>
</table>
During FY2015, staff also devoted over 221 hours to performing inspections of buffers, undisturbed open space and other non-structural BMPs to ensure their long-term effectiveness. Deficiencies were identified and corrected as a result of these inspections.
<u>Recommended Changes</u>
The evaluation of the Post-Construction Program, including the ordinances and Storm Water Quality Management Program Plan, revealed that it is effective at achieving its identified goals and objectives; therefore, no changes are recommended for FY16.</td><td></td><td></td></tr>
</table>

7.2 Status of Improvements Identified for Implementation in FY2015

Table 9 provides the status of improvements in the Post-Construction Site Runoff Control Program that were identified in FY2014 for implementation in FY2015.

Table 9: Status of Improvements Identified for FY2015

#	Improvements Identified for Implementation	Implementation Status
1	Update forms for use in the implementation of the post-construction ordinance.	Forms were updated during FY2015.
2	Initiate efforts toward implementation of the online third party inspection program.	The third party inspection program is on hold pending some decisions regarding the BMP database.

7.3 Improvements Identified for Implementation in FY2016

No improvements are recommended to the Post-Construction Site Runoff Control Program during FY2016.

Section 8: Pollution Prevention/Good Housekeeping for Municipal Operations

MCWQP has developed and implemented a Pollution Prevention/Good Housekeeping Program for municipal facilities and operations. The goal of the Pollution Prevention/Good Housekeeping Program is to reduce pollutants in storm water runoff from municipal operations.

8.1 Implementation Status for FY2015

Table 10 describes the BMPs identified in the in the Storm Water Plan for Pollution Prevention/Good Housekeeping Program and the specific actions completed between July 1, 2014 and June 30, 2015 for implementation of these BMPs as well as whether the measurable goals for the BMPs specified in the plan have been fulfilled.

Table 10: BMP Summary Table for the Pollution Prevention/Good Housekeeping Program

<table>
<tr><th rowspan="2">BMP Description</th><th rowspan="2">Implementation Actions</th><th colspan="2">Goal Met</th></tr>
<tr><th>Yes</th><th>No</th></tr>
<tr><td>Implement Employee Training Program (PP-1)</td><td>Municipal facility training materials were developed using an executable program (Articulate) that allows educational administrators to combine PowerPoint slides, Pollution Prevention video clips, and final quiz questions. The purpose of training is to inform municipal operations' staff of techniques for identifying, eliminating, or reducing pollution sources at their facilities. The program was designed to be used by individuals from their computer, however it may also be utilized in a group setting. All trainings included the review of Storm Water Pollution Prevention Plans (SWPPPs), Spill Response and Clean-up Plans, and review of storm drainage systems. Separate modules included facility specific training videos on fleet maintenance, land disturbance, parks and recreation, solid waste, streets and drainage, and general municipal jobs. Each video identifies activities at these facilities that can negatively impact surface water and proper prevention techniques. At the end of the training all employees are required to participate in a quiz that reviews the major themes of the training. During FY2015, a total of 715 municipal operations' staff from the Towns, County, CMS and CPCC completed the training program. This is a significant improvement from FY2014 when 391 municipal staff completed the training. The table below indicates the number of employees that complete the training by jurisdiction/entity.
<table>
<tr><th>Jurisdiction</th><th>Start Date</th><th>End Date</th><th># of Employees Trained</th></tr>
<tr><td>Mecklenburg County</td><td>2/25/2015</td><td>5/26/2015</td><td>148</td></tr>
<tr><td>Davidson</td><td>3/5/2015</td><td>3/19/2015</td><td>10</td></tr>
<tr><td>Cornelius</td><td>4/20/2015</td><td>4/20/2015</td><td>8</td></tr>
<tr><td>Huntersville</td><td>3/13/2015</td><td>3/13/2015</td><td>9</td></tr>
<tr><td>Matthews</td><td>4/21/2015</td><td>4/30/2015</td><td>34</td></tr>
<tr><td>Pineville</td><td>2/20/2015</td><td>2/20/2015</td><td>15</td></tr>
<tr><td>Mint Hill</td><td>3/27/2015</td><td>3/27/2015</td><td>9</td></tr>
<tr><td>CMS</td><td>7/1/2014</td><td>5/5/2015</td><td>322</td></tr>
<tr><td>CPCC</td><td>8/15/2014</td><td>3/11/2015</td><td>160</td></tr>
<tr><td>Total</td><td></td><td></td><td>715</td></tr>
</table></td><td>X</td><td></td></tr>
<tr><td>Conduct Inspections</td><td>During FY2015, the procedures and inspection forms utilized for Phase II municipal operations were reviewed and no changes were made. On September 30, 2014,</td><td>X</td><td></td></tr>
</table>

<table>
<tr><th rowspan="2">BMP Description</th><th rowspan="2">Implementation Actions</th><th colspan="2">Goal Met</th></tr>
<tr><th>Yes</th><th>No</th></tr>
<tr><td>of Municipal Operations (PP-2)</td><td>
MCWQP staff training was conducted for municipal facility inspections. The training ensures consistency of inspections and included a thorough review of inspection protocols, completion of necessary forms, inspections reports, and schedules. The Storm Water Pollution Prevention Plan (SWPPP) requirements and updates were covered, including Spill Notification Contacts. Staff were also instructed to review compliance with the new Phase II Permit requirements. During FY2015, inspections were conducted at all municipally owned and operated facilities within the Phase II jurisdictions that have significant potential for generating polluted storm water runoff. There were a total of eighteen (18) facilities inspected with fourteen (14) deficiencies detected. All storm water pollution issues and SWPPP deficiencies were identified and addressed. A summary of the findings is provided in the table below.
<table>
<tr><th>Jurisdiction</th><th>Deficiencies Detected & Corrected</th></tr>
<tr><td>Cornelius</td><td>1. Contaminated soil identified and removed at Public Works facility.</td></tr>
<tr><td>Huntersville</td><td>1. Unmaintained storm drainage system.
2. Not operating in accordance with SWPPP.</td></tr>
<tr><td>Matthews</td><td>1. Erosion control concerns observed at outfall.
2. Unmaintained storm drainage system and BMP.</td></tr>
<tr><td>Mint Hill</td><td>No deficiencies detected.</td></tr>
<tr><td>Pineville</td><td>1. Improper vehicle washing observed.
2. Not operating in accordance with SWPPP.</td></tr>
<tr><td>Davidson</td><td>1. Unmaintained waste dumpster.
2. Not operating in accordance with SWPPP.</td></tr>
<tr><td>Mecklenburg County</td><td>1. Unmaintained waste dumpsters.
2. Unmaintained spill kits.
3. Unmaintained storm drainage systems and BMPs.
4. Erosion control concerns observed at outfalls.
5. Not operating in accordance with SWPPPs.</td></tr>
</table>
The procedures and inspection forms utilized for Charlotte-Mecklenburg Schools' (CMS) municipal inspections were reviewed and no changes were made. On September 30, 2014, MCWQP staff training was conducted for CMS municipal facility inspections. The training ensures consistency of inspections and included a thorough review of inspection protocols, completion of necessary forms, inspections reports, and schedules. The CMS facilities with a Storm Water Pollution Prevention Plan (SWPPP) currently combine their SWPPP with a Spill Prevention, Control and Countermeasures (SPCC) Plan. The SWPPP/SPCC Plans were reviewed during the CMS municipal inspections. MCWQP staff were instructed to review compliance with the new Phase II Permit requirements during the CMS municipal inspections. During FY2015, MCWQP staff conducted municipal inspections at thirty (30) CMS owned and operated facilities that have a potential to generate polluted storm water runoff. Of the 30 selected CMS facilities, twenty-two (22) had not been previously inspected by MCWQP. MCWQP staff identified deficiencies and provided recommendations for several of the CMS facilities. The inspection reports with the findings for each facility were mailed to CMS and follow-up inspections were conducted as necessary to confirm compliance. All potential pollution sources and SWPPP deficiencies were adequately addressed, which include the following:

Erosion control concerns
Improper disposal of mop bucket wash water
Unmaintained municipal waste and recycling dumpsters
Unmaintained sanitary sewer cleanouts
Floor drain determinations recommended

</td><td></td><td></td></tr>
</table>

BMP Description	Implementation Actions	Goal Met	
		Yes	No
	• Improper storage of materials • Unmaintained storm drainage systems and structural storm water best management practices (BMPs) • Inadequate controls at vehicle/equipment area(s) - fueling, washing, storage areas • Inadequate controls at waste storage / disposal areas The procedures and inspection forms utilized for the Central Piedmont Community College's (CPCC) municipal inspections were reviewed and no changes were made. On September 30, 2014, MCWQP staff training was conducted for CPCC municipal facility inspections. The training ensures consistency of inspections and included a thorough review of inspection protocols, completion of necessary forms, inspections reports, and schedules. The Storm Water Pollution Prevention Plans (SWPPPs) were reviewed and updated during the CPCC municipal inspections. MCWQP staff were instructed to review compliance with the new Phase II Permit requirements during the CPCC municipal inspections. During FY2015, MCWQP staff conducted inspections at four (4) CPCC owned and operated campuses with a significant potential for generating polluted storm water runoff. MCWQP staff identified deficiencies and provided recommendations for each of the CPCC facilities. The inspection reports with the findings for each facility were mailed to CPCC and follow-up inspections were conducted as necessary to confirm compliance. All potential pollution sources and SWPPP deficiencies were adequately addressed. A list of the deficiencies identified during inspections is provided below. • Erosion control concerns. • Unmaintained storm drainage systems and structural storm water best management practices (BMPs). • Non-storm water discharges observed. • Unmaintained municipal waste and recycling dumpsters. • Inadequate controls at waste storage / disposal areas. • Improper storage. • Not operating in accordance with SWPPPs. A total of 52 municipal inspections were conducted at Phase II facilities during FY2015 as follows: Towns and County at 18, CMS at 30, and CPCC at 4.		
Maintain and Implement Storm Water Pollution Prevention Plans (PP-4)	During FY2015, SWPPPs were reviewed and revised as necessary during the facility inspections. Deficiencies in fulfilling plan requirements were also addressed during inspections. These findings are included in the table above in PP-2. CMS updates their own SWPPPs and combines them with the facility SPCC plans. Copies of the plans were sent to MCWQP for review to determine if the requirements were being met. Mecklenburg County Solid Waste facilities also update their own SWPPPS. Revisions and recommendations that were made are as follows: <u>Towns and Mecklenburg County</u> • Foxhole Landfill - Since there are some construction activities currently being completed at the site, MCWQP recommended that the site map be updated when the construction activities are completed. • Cornelius Public Works - An update was made to the Pollution Prevention Team Member roster to include a backup contact. • Fleet Maintenance - Updated the Mecklenburg Fleet Management SWPPP to comply with the NCG080063 permit conditions and requirements. The most recent qualitative and analytical monitoring results, non-storm water discharge certification, and other items were added as necessary. • Emergency Management Services - Facility primary contact person changed from Gary Moore to Bryan Edwards. • Huntersville Public Works - Facility map information was updated due to shelter	X	

BMP Description	Implementation Actions	Goal Met	
		Yes	No
	facilities being constructed on the site. CMS • CMS Building Services - CMS Building Services has opted to create and update the facility's SWPPP in-house. A review of the SWPPP was conducted by C. Broadway during the facility inspection on 1/23/2015. All elements of the plan met or exceeded Phase 2 permit requirements. MCWQP recommended that a check for non-storm water discharge be conducted on an annual basis. • CMS, Craig Avenue - Facility contact was changed from Diana Kooser to Jeff Mitchell. CPCC • CPCC, Central - Facility contact was changed from Mr. Tom Bass to the new Grounds & Site Coordinator for the CPCC Central Campus, Mr. Zack Lester. • CPCC, Harper Campus – Recommended that the records of pesticides applicators and their licenses be added to the SPPP. • CPCC Cato – Added section 3.0 Spill Prevention and Response Plan. Changed facility contact information.		
Maintain and Update an Inventory of Municipal Operations (PP-5)	The purpose of the Municipal Facility Inventory is to fulfill the requirement of the Phase II permit listed in Section G.2.b. of Permit NCS000395 for Mecklenburg County and the six towns, which requires development of an inventory of county and town-owned municipal operations that have significant potential for generating polluted storm water runoff. During FY2015, the Phase II Municipal Facility Inventory Procedures were reviewed and updated. The procedures include a facility inspection form used to identify facilities with a "significant potential" to pollute. Inventories for the six Towns, CMS, CPCC and Mecklenburg County have been developed. Parcels are considered to have a potential to generate pollution if they have one or more buildings on them. These parcels are to be evaluated utilizing the facility exposure form to determine if they have a significant potential to generate polluted storm water runoff in accordance with Section G.2.a. of the Phase II Permit. Facilities that are inspected as part of PP-2 are not included in this process. During FY2015, 198 Phase II owned parcels were evaluated generating the following results: • Mecklenburg County - A total of 135 parcels were inspected and evaluated. Several parcels that previously had at least one building on them now have no buildings on them. Most of the structures were removed for the construction of greenways. These parcels were determined not to have a significant potential to pollute. Several parcels on the list currently have SWPPPs in place and are inspected under the PP-2 program. The remaining parcels with at least one building on them were field evaluated to determine if they significant potential to pollute. None of the inspected facilities were found to have a significant potential to pollute. • Cornelius - 13 parcels were inspected. One was a school and was added to the PP-2 CMS inspection rotation and one was the Town maintenance facility which is inspected annually under PP-2. The remaining had no significant potential to pollute storm water. • Davidson – 8 parcels were inspected. None had a significant potential to pollute storm water. • Huntersville – 13 parcels were inspected. None had a significant potential to pollute storm water. • Matthews – 11 parcels were inspected. None had a significant potential to pollute storm water. • Mint Hill – 5 parcels were inspected. None had a significant potential to pollute storm water.	X	

BMP Description	Implementation Actions	Goal Met	
		Yes	No
	• Pineville - 13 parcels were inspected. None had a significant potential to pollute storm water. • CMS - There are currently 195 CMS facilities on the inventory list. The inventory list was cross referenced with the PP-2 CMS inspection list to determine which facilities may need to be added to the PP-2 inspection list. There were four (4) locations that were not currently located on the PP-2 inspection list. They have now been added to the PP-2 inspection list rotation. Additionally, there were three (3) newly built schools that were added to the inventory and to the PP-2 inspection program. • CPCC - There are currently 32 CPCC facilities on the inventory list. The inventory list was cross referenced with the PP-2 CPCC inspection list. All parcels with structures have SWPPPs in place and are currently inspected annually under PP-2. Additionally, several parcels were determined to have no building structures on them and were therefore identified as not having a significant potential to pollute storm water. During FY2015, none of the parcels inspected had a significant potential to generate polluted storm water runoff. The inventories will be updated annually and additional facilities will be evaluated as needed in FY16.		
Evaluate Effectiveness of Pollution Prevention/ Good Housekeeping Program (PP-9)	During FY2015, an evaluation was completed of the Pollution Prevention and Good Housekeeping Program and it was found to be effective at fulfilling permit requirements and the requirements of the Storm Water Plan. To meet the established goals and objectives specified in the Storm Water Plan and to prevent and reduce storm water pollution from municipal activities, storm water pollution prevention training was provided to a total of 715 employees. Additionally, annual inspections were conducted of all municipal owned and operated facilities with the significant potential for generating polluted storm water runoff. The program identified and addressed a total of 58 findings for all Phase II jurisdictions, including CMS and CPCC (see table below). This is a 5% decrease from the 61 findings in FY2014. Unmaintained Storm Drain Systems (3) and BMPs (11) accounted for 14 (24%) of the findings. This represents a 36% decrease from FY2014. There was an increase in wash water discharges (actual and potential) from zero in FY2014 to 4 in FY2015. These were all at CMS facilities. One (1) facility had several missing sewer clean out caps and another had vehicle washing issues. Two (2) CMS facilities had mop water discharges. Another significant increase was in waste disposal areas where the majority of the deficiencies were missing dumpster plugs and covers. Recommendations were made to the facilities to correct these issues and focus will be given in FY2016 to ensure that proper waste disposal techniques are implemented. Significant improvements were made in some inspection findings. Findings associated with not operating in accordance with SWPPPs decreased from 5 to 4 (20%) and floor drain issues decreased by 75%, from 4 to 1. During the inspections, the SWPPPs were reviewed to ensure that specified actions are being followed to reduce storm water pollution. Some minor improvements, updates and recommendations were made to the plans including map and personnel updates. There were only four (4) repeat findings on a total of 50 facility inspections. Two (2) repeat findings were found at CPCC locations. One (1) was for a dry weather flow that was verified through monitoring to be non-sewage and possibly from an adjacent permitted cooling tower discharge. The other was not operating in accordance with the SWPPP. The third was for failure to conduct semi-annual qualitative monitoring at the Cornelius public works facility. The fourth was minor staining observed from leaking buses on the asphalt storage lot at a CMS facility. Municipal facility inventories for the Phase II jurisdictions/entities were evaluated and updated. The parcels with one (1) or more buildings on them were evaluated to determine if they have a significant potential to generate polluted storm water	X	

BMP Description	Implementation Actions	Goal Met	
		Yes	No

runoff. Utilizing the facility exposure form, field evaluations were completed at 195 sites during FY2015. Inspection results revealed that none of the sites had a significant potential to generate polluted storm water runoff. The inventories will be updated annually and additional facilities will be evaluated as needed in FY2016. This is an effective means of identifying properties that are not included in PP-2 that have the potential to pollute. Further property evaluations will be conducted in FY2016 as inventories are updated. Inspection and activity reports were written in Cityworks to document all activities for the Pollution Prevention and Good Housekeeping Program. They include attached spreadsheets and associated documents that support meeting the established goals and objectives of the program.

FY2015 Inspection Findings	Number of Findings by Fiscal Year									
	07	08	09	10	11	12	13	14	15	Total
Illicit Connections	5	1	0	0	0	0	0	0	0	7
Wash Water Discharge	3	0	2	0	0	0	1	0	4	10
Oil / Petroleum Discharge	10	2	3	3	0	0	2	0	0	20
Other Discharge	0	0	0	0	0	0	0	2	0	2
Waste storage/ disposal area	2	1	5	5	0	0	7	8	16	44
Improper Storage	4	0	2	2	0	0	2	7	7	24
Equipment Maintenance Needed	1	0	2	0	0	0	0	0	0	3
Not Operating in Accordance with WPPP	12	7	5	4	0	0	10	5	4	47
Erosion	2	0	0	1	0	0	16	8	10	37
Inadequate Housekeeping	2	2	0	2	0	0	0	0	0	6
Unmaintained Storm Drain System (+BMPs)	0	0	0	0	0	0	17	25	14	58
Floor Drains	0	0	0	0	0	0	0	4	1	5
Vehicle/ equipment area(s)	0	0	0	0	0	0	0	2	2	4
Totals	**41**	**13**	**19**	**17**	**0**	**0**	**55**	**61**	**58**	**264**

8.2 Status of Improvements Identified for Implementation in FY2015

Table 11 provides the status of improvements in the Pollution Prevention/Good Housekeeping Program that were identified in FY2014 for implementation in FY2015.

Table 11: Status of Improvements Identified for FY2015

#	Improvements Identified for Implementation	Implementation Status
1	Work with Phase II jurisdictions to improve the maintenance of their storm drain systems and structural BMPs at all their facilities.	During FY2015, 114 inspections were performed of BMPs owned by Phase II jurisdictions/entities, resulting in the identification of 11 deficiencies that were reported to the responsible parties for corrective actions. This represents a 36% decrease in deficiencies detected from FY2014.
2	Work with Phase II jurisdictions to ensure proper storage techniques at all their facilities.	The proper storage of materials is an item on the inspection check list. Material storage areas are inspected, deficiencies are noted in the report, and actions are taken by facilities to improve practices.
3	Develop and implement updated procedures for identifying municipal facilities with the significant potential to pollute and update the inventory and Storm Water Quality Pollution Prevention Plan as necessary.	The procedures are provided in Attachment 5.

8.3 Improvements Identified for Implementation in FY2016

The following improvements in the Pollution Prevention/Good Housekeeping Program have been identified for implementation in FY2016:

1. Migrate training modules onto the Meck.edu ELearning software.

2. Coordinate with Meck.EDU personnel on developing an implantation plan for entities outside of Mecklenburg County to access online modules.

3. Develop video segments that pertain to pollution prevention and good housekeeping for future replacement of vendor provided training videos.

4. Provide better coordination in training between the City of Charlotte and Mecklenburg County

5. Make an effort to collaborate with the Air Awareness Campaign and Solid Waste Services in an effort to provide uniform environmental messages to municipal employees.

Section 9: Total Maximum Daily Loads (TMDLs)

MCWQP has developed and implemented a program for addressing non-point source pollutant loading associated with the Total Maximum Daily Loads (TMDLs) approved by EPA for the receiving waters of the Phase II MS4 storm water discharges and/or waters downstream of these discharges. The goal of the TMDL Program is to reduce non-point source pollutant loading to the receiving stream to the maximum extent practicable.

9.1 Implementation Status for FY2015

Table 12 describes the BMPs identified in the in the Storm Water Plan for the TMDL Program and the specific actions completed between July 1, 2014 and June 30, 2015 for implementation of these BMPs as well as whether the measurable goals for the BMPs specified in the plan have been fulfilled.

Table 12: BMP Summary Table for the TMDL Program

BMP Description	Implementation Actions	Goal Met	
		Yes	No
Evaluate Impaired Waters (IW-1)	During FY2015, MCWQP completed an evaluation of the impaired waters located in the Phase II jurisdictions as identified by NCDENR's 2014 Category 5 Water Quality Assessments 303(d) list, which was approved by EPA on December 19, 2014. Two streams were removed from the 303(d) list in Mecklenburg County, including Long Creek for Copper and Clear Creek for Turbidity. New 303(d) listed impaired waters included three (3) Catawba River Basins and one (1) stream as follows: Lake Wylie below elevation 570 for PCB Fish Tissue; Lake Norman below elevation 760 for PCB Fish Tissue; Mountain Island Lake below elevation 648 for PCB Fish Tissue; and the West Fork Twelvemile Creek for Poor Fish Community. The final 303(d) list also included Mallard Creek from the source to 0.2 miles downstream of the Stoney Creek confluence for Copper.	X	
Develop and Implement Water Quality Recovery Plans (IW-2)	All necessary Water Quality Recovery Programs (WQRPs) have been developed and implemented for those watersheds in the Phase II jurisdictions with TMDLs that include a Waste Load Allocation (WLA) assigned to storm water, including Rocky River (fecal coliform), Goose Creek (fecal coliform), Steele Creek (fecal coliform), McKee Creek (fecal coliform), and Long Creek (turbidity). Mecklenburg County is the lead in the implementation of the Rocky River and Goose Creek WQRPs whereas the City of Charlotte is responsible for implementing the WQRPs for Steele Creek, Long Creek, and McKee Creek in cooperation with Mecklenburg County. In the 2010 version of the 303d list, the fecal coliform impairment listing for the portion of Goose Creek in Mint Hill and Mecklenburg County was moved from Category 4t to Category 1t (no criteria exceeded). As a result, MCWQP discontinued the implementation of the Water Quality Recovery Program following approval from NCDENR and subsequently implemented expanded BMPs within the scope of the six (6) minimum measures to continue water quality recovery efforts for reducing fecal coliform levels in Goose Creek. The WQRP for the Rocky River TMDL was evaluated and updated by MCWQP in August 2015. The WQRP is available on the following website: http://stormwater.charmeck.org (select "Info for Other Municipalities," select "Water Quality," select "Water Quality Recovery Plans and Watershed Master Plans," select "Rocky River Water Quality Recovery Program Plan"). On August 25, 2015, the WQRP was attached to an email and sent to Mike Randall with NCDENR. The email included a description of the updates made to the Rocky River WQRP as follows:	X	

BMP Description	Implementation Actions	Goal Met	
		Yes	No
	• Section C – Assessment of available monitoring data. • Section D – Evaluation of TMDL watershed area in Mecklenburg County for development of a monitoring plan. • Section E – Description of additional measures to be implemented to enhance water quality. • Section E – Explanation as to how the measures above are designed to enhance water quality. • Section E – Description of activities to be implemented within the remainder of the permit term to enhance water quality. • Section F – Identification of a schedule for completing activities. • Section F – Description of methods for tracking and reporting successes designed to reduce non-point source pollutant loading to the maximum extent practicable.		
Develop and Implement Water Quality Recovery Strategies (IW-3)	All Water Quality Recovery Strategies (WQRSs) have been developed and implemented for those watersheds with TMDLs that do not include a WLA assigned to storm water, including Sugar Creek (fecal coliform and turbidity), Little Sugar (fecal coliform, turbidity and DO), McAlpine Creek (fecal coliform, turbidity and DO) and Lake Wylie (chlorophyll a). Mecklenburg County is the lead in the development and implementation of the WQRS for Lake Wylie whereas the City of Charlotte is the lead for the other WQRSs. The strategies focus on the identification and elimination of pollution sources using stream walks, water sampling, continuous monitoring, and public education. The WQRS for Lake Wylie was updated in August 2015 along with the updates to the Storm Water Quality Management Program Plan (see Section 12 below), which was attached to an email and sent to Mike Randall with NCDENR on August 25, 2015.	X	
Assess, Report and Modify WQRPs (IW-4)	An evaluation was completed of the effectiveness of the TMDL Program as described in the latest version of the Storm Water Plan. As a result of this evaluation, improvements to the WQRP for the Rocky River were identified for implementation in FY2016 as described in Section 9.3 below. On August 25, 2015, the TMDL evaluation was attached to an email and sent to Mike Randall with NCDENR.	X	

9.2 Status of Improvements Identified for Implementation in FY2015

No improvements were recommended for FY2015.

9.3 Improvements Identified for Implementation in FY2016

The following improvements in the TMDL Program have been identified for implementation in FY2016:

Additional IDDE activities in the Rocky River watershed to enhance efforts to restore water quality and comply with the TMDL. Specific targets established for assessing development in the Rocky River watershed to determine whether a water quality monitoring plan is needed.

Section 10: Program Effectiveness

During FY2015, the permittee has satisfactorily implemented the BMPs and fulfilled the measurable goals specified in Storm Water Permit No. NCS000395 in accordance with the Storm Water Plan. The other provisions of the Permit have also been satisfactorily fulfilled; therefore, compliance with the Permit has been achieved. The permittee further finds that the implementation of the Storm Water Plan as well as the individual BMPs contained in the Plan has resulted in satisfactory compliance with all but three (3) of the seven (7) identified measures of success as indicated in Table 13, thus demonstrating overall program effectiveness. The implementation of the program enhancements described in Table 14 are meant to improve effectiveness.

Table 13: Improvements Identified for Implementation in FY2015

#	Measures of Success	Target	FY2015 Results	Target Met (Yes or No)
1	Documentation – Document Storm Water Program activities that demonstrate successful fulfillment of BMPs.	All activities documented	All activities documented	Yes
2	Raising Awareness – Increase percentage of respondents that are aware of water quality issues based on Storm Water Public Opinion Survey results.	50%	45%	No, decreased by 5%
3	Number of Contacts and Distribution Estimates – Increase percentage of population reached based on Media Campaign results.	Improvement from previous years	96.6% reached 39 times for FY15 compared to 90.3% reached 33.2 times for FY14	Yes
4	Number of Volunteer Events – Increase number of volunteer events completed.	110 events	148 events	Yes, exceeded by 38 events
5	Number of Notices of Violation Issued – Decrease number of notices of violations issued compared to the number of inspections conducted (includes inspections related to IDEP, Service Requests, NOVs, Outfalls, and Stream Walks).	Improvement from previous years	21/1005 or 0.02 for FY15 compared to 11/1173 or 0.009 for FY2014	No, increased by 0.011
6	Structural and Non Structural BMP Evaluations – Decrease number of problems detected compared to the number of inspections conducted.	Improvement from previous years	286/555 or 0.51 in FY15 compared to 244/668 or 0.36 for FY14	No, increased by 0.15
7	Facility Inspection Findings – Decrease number of findings related to storm water pollution compared to the number of inspections conducted and repeat findings minimized.	Improvement from previous years	58/52 or 1.11 for FY15 compared to 61/52 or 1.17	Yes, decreased by 0.06

Section 11: Program Enhancements for FY2016

Table 14 summarizes the improvements recommended for implementation in FY2016 as identified in the previous sections. In the FY2016 annual report, the status of the implementation of these improvements will be described.

Table 14: Improvements Identified for Implementation in FY2016

#	Improvements Identified for Implementation in FY2016	Justification	Desired Impact
Public Education and Outreach Program			
1	Continue to build social media presence.	Public's increased reliance on social media for obtaining information.	Increase awareness (Numbers 2 and 3 in Table 13).
2	Research and utilize other government agency newsletters (ex: Airwaves, The Recycler) to post storm water-related items and volunteer opportunities.	Ensure we are utilizing all available opportunities within our Agency to get our message out.	Increase awareness (Numbers 2 and 3 in Table 13).
3	Update frequently used educational materials/handouts after moving to the new facility.	Ensure that our updated contact information is available to the public following our move to a new building in early 2016.	Increase awareness (Numbers 2 and 3 in Table 13).
4	A new brochure/handout should be created for Volunteer Opportunities.	Current brochure is out of date.	Increase volunteerism (Number 4 in Table 13).
5	Work with media buyer to promote MCWQP through public event opportunities.	Public events are an underutilized avenue for promoting our message.	Increase awareness (Numbers 2 and 3 in Table 13).
6	Continue working on creating short videos for the Water Watchers Facebook page.	Increase our followers on Facebook.	Increase awareness (Numbers 2 and 3 in Table 13).
7	Create training videos on MCWQP presentations for teachers (i.e. "Train the Trainer")	Reduce staff time and improve overall efficiency of classroom presentations.	Increase awareness (Numbers 2 and 3 in Table 13).
8	Continue to work on getting messages out to the business sector.	This audience is under targeted in our current educational campaign.	Increase awareness (Numbers 2 and 3 in Table 13).
9	Complete last two of three vehicle wraps.	Inexpensive method for getting the message out.	Increase awareness (Numbers 2 and 3 in Table 13).
10	Work with the media buyer to finalize the types of pollution and volunteer TV commercials.	Increase focus of media campaign on pollution prevention.	Increase awareness (Numbers 2 and 3 in Table 13).
Public Involvement and Participation Program			
1	Continue to build the volunteer email list for individuals and business groups.	Improve our efficiency at communicating with our volunteers.	Increase volunteerism (Number 4 in Table 13).
IDDE Program			
1	Utilize business license information to target specific business types for IDDE evaluations.	Target compliance efforts to specific business types.	Increase compliance (Number 5 in Table 13).
2	Continue to work with the City of Charlotte on updates and associated invoices for the Water Watchers App.	Enhance reporting of pollution problems by the public.	Increase compliance (Number 5 in Table 13).
3	Expand microbial source tracking into areas	Identify and eliminate sources	Increase compliance

#	Improvements Identified for Implementation in FY2016	Justification	Desired Impact
	with elevated fecal coliform levels where no source can be identified.	of fecal coliform bacteria.	(Number 5 in Table 13).
4	Implement intensive IDDE activities in streams exhibiting elevated fecal coliform levels.	Identify and eliminate sources of fecal coliform bacteria.	Increase compliance (Number 5 in Table 13).
5	Wrap additional fleet vehicles with education material on identifying and reporting pollution problems.	Enhance reporting of pollution problems by the public.	Increase compliance (Number 5 in Table 13).
6	Improve field outfall inspection technology.	Current technology is out of date.	Increase compliance (Number 5 in Table 13).
Construction Site Storm Water Runoff Control Program			
1	Hire an additional inspector to handle the increase in permitted construction sites and structural storm water BMPs.	Increase inspection activity.	Increase compliance (Number 6 in Table 13).
2	Add an email box on the erosion control inspection form with the financially responsible party's email address auto-populated to facilitate the issuance of reports digitally.	Improve efficiency at issuing inspection reports.	Increase compliance (Number 6 in Table 13).
3	Develop and implement a City/County cross audit program, where each municipality audits the others program.	Enhance program effectiveness.	Increase compliance (Number 6 in Table 13).
Post-Construction Site Runoff Control Program			
1	No enhancements recommended for FY2016.		
Pollution Prevention and Good Housekeeping Program			
1	Migrate training modules onto the Meck.edu ELearning software.	Use technology to improve the effectiveness and efficiency of training programs.	Increase compliance (Number 7 in Table 13).
2	Coordinate with Meck.EDU personnel on developing an implantation plan for entities outside of Mecklenburg County to access online modules.	Use technology to improve the effectiveness and efficiency of training programs.	Increase compliance (Number 7 in Table 13).
3	Develop video segments that pertain to pollution prevention and good housekeeping for future replacement of vendor provided training videos.	Focus training on local pollution prevention issues and eliminate reliance on vendor produced videos.	Increase compliance (Number 7 in Table 13).
4	Provide better coordination in training between the City of Charlotte and Mecklenburg County.	Coordinate and expand current training programs.	Increase compliance (Number 7 in Table 13).
5	Make an effort to collaborate with the Air Awareness Campaign and Solid Waste Services in an effort to provide uniform environmental messages to municipal employees.	Coordinate and expand current training programs.	Increase compliance (Number 7 in Table 13).
TMDL Program			
1	Additional IDDE activities in the Rocky River watershed.	Enhance efforts to restore water quality.	TMDL compliance.
2	Specific targets established for assessing development in the Rocky River watershed.	Determine whether a water quality monitoring plan is needed.	TMDL compliance.

Section 12: Storm Water Quality Management Program Plan Modifications for FY2016

Part II, Section A of Mecklenburg County's Phase II Permit (Permit # NCS000395) specifies that the Storm Water Quality Management Program Plan, referred to as the Storm Water Plan, must be kept up to date by the permittee. It further specifies that the permittee must evaluate the effectiveness of the Storm Water Plan at least annually and modify as necessary to address any procedural, protocol or programmatic changes. The modified Storm Water Plan must be submitted to the Director of NCDENR within 90 days for approval. In August 2015, MCWQP completed its annual review of the Storm Water Plan developed for compliance with Permit # NCS000395. Provided below are the significant changes that were made to the plan as a result of this evaluation.

- Section 2 – Funding information updated.
- Section 3 – Electronic newsletters added, stream cleanup name changed, and social media information added.
- Section 4 – Creek ReLeaf and Volunteer Monitoring added to volunteer programs.
- Section 5 – Figures updated, Illicit Discharge Elimination Program (IDEP) added, CMANN removed from IDDE.
- Section 6 – The program responsible for compliance with this section was changed from Water Quality to Permitting and Compliance due to the reorganization.
- Section 7 – The program responsible for BMP inspections was changed from Water Quality to Permitting and Compliance due to the reorganization.
- Section 8 – Municipal facility inventory techniques changed.
- Section 9 – TMDL compliance measures updated.
- Appendix A – Contact information updated.

On August 25, 2015, MCWQP attached the updated Storm Water Plan to an email to Mike Randall with NCDENR. The above changes to the plan were included in this email. The updated Storm Water Plan is also available at the following website: http://stormwater.charmeck.org (select "Info for Other Municipalities," select "Water Quality," select "NPDES Phase II-Mecklenburg County and Incorporated Towns," select "Phase II Storm Water Management Plan").

Attachment 1: Public Education Vehicle Wraps

Attachment 2: Fixed Interval Monitoring Sites

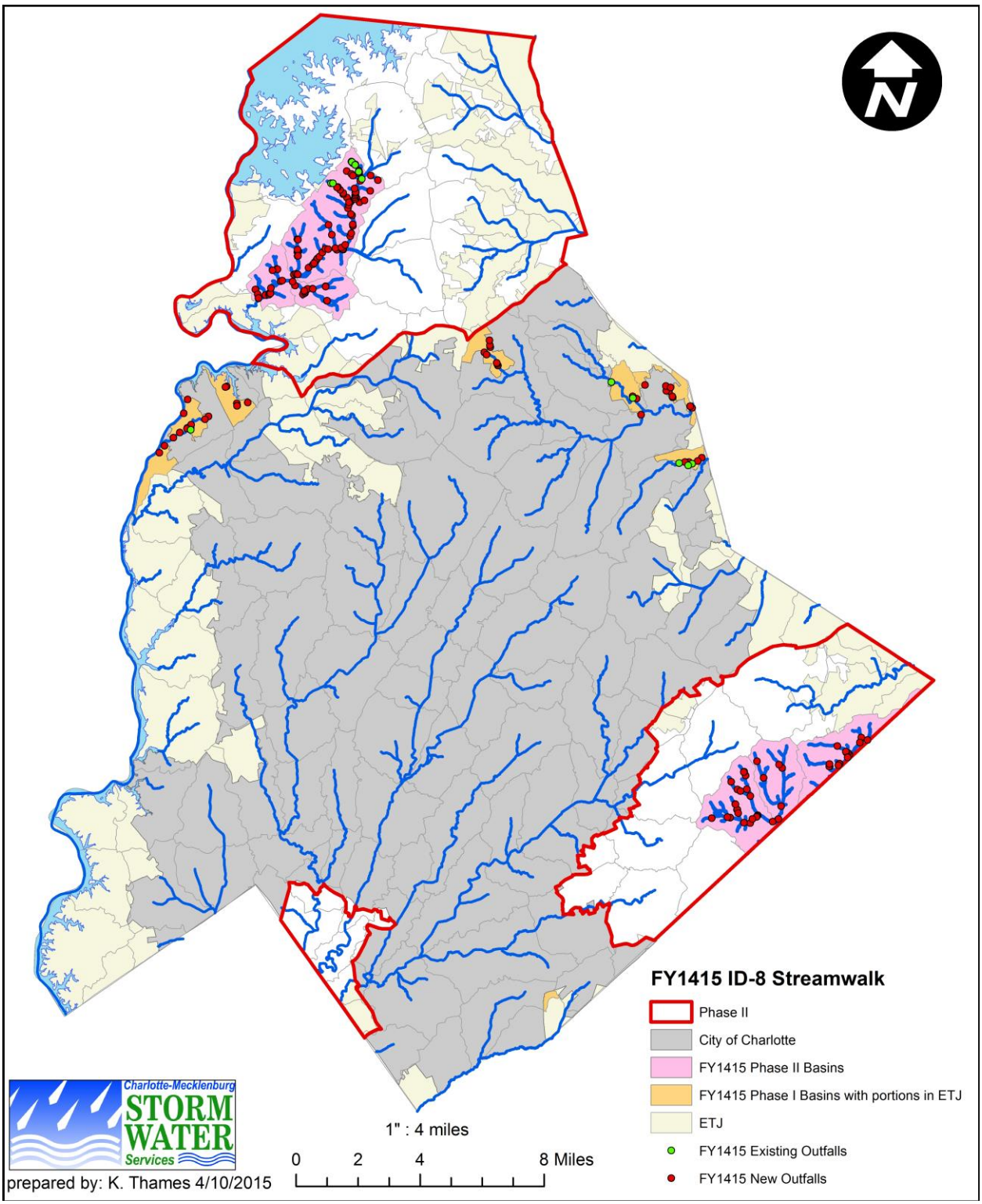
Sites	Creek	Jurisdiction
MC2	McDowell	Cornelius
MY1B	W. Branch Rocky River	Davidson
MC4	McDowell	Huntersville
MC50	Gar	Huntersville
MY10	Clarke's	Huntersville
MC36	Irvins	Matthews
MC40C	Four Mile	Matthews
MY14	Duck	Mint Hill
MY15	N. Fork Crooked	Mint Hill
MY8	Clear	Mint Hill
MY9	Goose	Mint Hill

Parameters
Ammonia-Nitrogen
Fecal Coliform
Total Kjeldahl Nitrogen
Nitrate/Nitrite
Total Suspended Solids
Total Phosphorus
Enterococcus
E. Coli
Turbidity
Suspended Sediment
Magnesium
Calcium
Hardness
Copper
Lead
Chromium
Zinc

Attachment 3: Fixed Interval Monitoring Action-Watch Report

Element	Storm	Site	Collected	Analyte	Result	Unit	Flag
ID4.1	No	MY14	7/9/2014	Specific Conductivity	589	uS/cm	Action
ID4.1	No	MY14	10/8/2014	Total Phosphorus	1.6	mg/L	Action
ID4.1	No	MY14	10/8/2014	Total Phosphorus	1.6	mg/L	Action
ID4.1	No	MY14	11/12/2014	Total Phosphorus	1.5	mg/L	Action
ID4.1	No	MY14	7/9/2014	Total Phosphorus	2	mg/L	Action
ID4.1	No	MY14	3/11/2015	Total Phosphorus	0.15	mg/L	Action
ID4.1	No	MY1B	7/9/2014	Fecal Coliform	1100	CFU/100 ml	Action
ID4.1	No	MY9	10/8/2014	Total Phosphorus	0.12	mg/L	Action
ID4.1	No	MY9	7/9/2014	Total Phosphorus	0.13	mg/L	Action

Attachment 4: Stream Walk/Outfall Inspection-Inventory and Dry Weather Flows



Attachment 5: Phase II Municipal Facility Inventory Procedures
July 30, 2015

Purpose

The purpose of the Municipal Facility Inventory is to fulfill the requirement of the Phase II permit listed in Section G.2.b. of Permit NCS000395 for Mecklenburg County and the six towns, which requires development of an inventory of county and town-owned municipal operations that have significant potential for generating polluted storm water runoff.

Procedure for Evaluation of Facilities

During the first permit term, the following language was contained in Section G regarding Pollution Prevention and Good Housekeeping for Municipal Operations: "Develop an inventory of all facilities and operations owned and operated by the permittee with the potential for generating polluted stormwater runoff. Specifically inspect the potential sources of polluted runoff, the stormwater controls, and conveyance systems. Evaluate the sources, document deficiencies, plan corrective actions, and document the accomplishment of corrective actions." Charlotte Mecklenburg Storm Water Services (CMSWS) updated its Storm Water Quality Management Program Plan (Storm Water Plan) to include procedures to evaluate 20 percent of the municipal operations each year of the current permit to determine which county and town-owned facilities have the "potential for generating polluted stormwater runoff" and are therefore required to comply with this Section of the permit. The program element for this requirement was PP-5. CMSWS used the phased approach described in "A" below to conduct this evaluation. This evaluation was completed by the end of the permit term on June 30, 2010, resulting in the development of the Tables 11, 12, 13, and 14 of the Storm Water Plan.

Mecklenburg County's Phase II Permit was renewed on November 11, 2011. This new permit changed Section G from applying to facilities with the "potential for generating polluted stormwater runoff" to applying to facilities with the "significant potential for generating polluted stormwater runoff." This change resulted in CMSWS changing its evaluation procedures to those described in "B" below. This evaluation was completed on June 30, 2015.

A. FIRST PERMIT TERM

1. Accumulate a listing of all county and town-owned properties in a spreadsheet format.
2. Determine if the properties are located in an urbanizing area (UA). All properties in Mecklenburg County have been deemed to be an urbanizing area by the State of North Carolina.

3. Determine which properties do not contain building improvements (i.e. vacant parcels). Properties containing no building improvements are deemed to have no potential to pollute storm water and will not likely have a storm water conveyance system. To conduct this evaluation, CMSWS will:
    a. Use the attached spreadsheet format to collect data from each jurisdiction including the County (spreadsheet already completed) and each of the Towns.

The spreadsheets are located in the following directory: G:\WQxfer\WQ\Phase II Inventory\.

b. Sort the parcels in the spreadsheet by ascending size and start the evaluation with the smaller parcels first. After sorting, each parcel will be assigned a database number in the first column in the spreadsheet starting with the number one (1) for the smallest parcel.
c. Review aerial photographs of the properties on-line through use of Polaris with the "parcel number labels", "streams", "SWIM buffer", "10-ft Contours" and "aerial photography" layers turned on. The parcel will also be highlighted by using the "ID parcel" tool.
d. CMSWS staff will print out copies of the map and the ownership information for documentation. The database number for that file will be handwritten on the upper right hand side of the map and the ownership record stapled behind the map. The hard copies will be filed in a three-ring binder by database number.
e. Mark the number of buildings in the appropriate column of the spreadsheet for each parcel.
f. Properties with no buildings or a single building are not included in the Phase II process at this time. CMSWS staff will mark the "Applicable" column with "N" and add a comment as to why the property is not applicable to Phase II (i.e. – no building structures).

4. Other parcels containing 2 or more buildings will require further evaluation to determine if applicable to the Phase II process:
    a. By reviewing the aerial photographs and contours, determine if the property discharges directly into a stream without going through a MS4 system (system maintained by City and County). CMSWS staff can use Mecklenburg County Storm Water Services Interactive Mapping site (http://www.704336rain.com/disclaimer.html) to view storm drain inlets and piping to assist in this evaluation. If the storm drain system meets these criteria, Phase II is applicable to this property. CMSWS staff will mark the "Applicable" column as "Y" and add a comment as to why the property is applicable to Phase II (i.e. storm drainage system discharges directly to a stream). If it is unclear the property drains directly to the surface water, do not mark anything on the spreadsheet.
    b. Field evaluations will be required for all remaining properties without a "Y" or an "N" in the "Applicable" column. Field evaluations will be conducted in the following manner:
        i. The attached **Phase II Parcel Evaluation Sheet** will be used to document applicability. Each step of the flow chart will be circled as evaluated as well as notes related to applicability or non-applicability.
        ii. The operations or activities that have the potential to pollute storm water will be noted as well. Photographs will be taken if staff is unclear of applicability.
        iii. The **Phase II Parcel Evaluation Sheet** will be stapled behind the ownership records page and re-filed in the appropriate three-ring binder.
        iv. CMSWS staff will update the spreadsheet with a "Y" or "N" in the "Applicability" column as appropriate.

B. SECOND PERMIT TERM

CMSWS changed its evaluation procedures for the second permit term to include facilities with the "significant potential for generating polluted storm water runoff" in the Pollution Prevention and Good Housekeeping Program described in Part II, Section G.2.a of the permit. For the purposes of this permit, "significant potential" shall mean that the facility has:

1. Exposure of significant materials, and
2. No written procedures or controls in place to prevent pollution.

For facilities that meet these criteria, staff will need to evaluate what level of pollution prevention implementation measures are necessary to reduce the potential for polluted storm water runoff. These levels of implementation can include (but not limited to):

1. Development of a full Storm Water Pollution Prevention Plan,
2. Development of written Standard Operating Procedures (SOPs) for activities on-site that have a significant potential to pollute storm water,
3. Required inspections, and/or
4. Required pollution prevention training for on-site staff.

The following table provides the number of properties with one or more buildings that may require further evaluation during the second permit term based upon the Phase II inventories completed during the first permit term.

Co-Permitee	Number of Properties with one or more Buildings
Cornelius	16
Davidson	10
Huntersville	17
Matthews	10
Mint Hill	2
Mecklenburg County	172
CMS	195
CPCC	32
TOTAL	**454**

Based upon guidance documents provided by NCDENR in the BIMS database, jurisdictions will review several types of municipal operations in their evaluation. Below is a listing of the municipal operation types along with a summary of how each has been addressed or will be addressed.

- Transfer stations – None of the Co-permittees operate transportation transfer stations. The County operates four (4) solid waste transfer stations, which are currently included in the Pollution Prevention and Good Housekeeping Program.
- Fleet maintenance – Fleet maintenance facilities have been evaluated and are currently included in the Pollution Prevention and Good Housekeeping Program.
- Airports - None of the Co-permittees operate airports.

- Animal shelters – None of the Co-permittees operate animal shelters with the exception of the Town of Matthews that has an animal shelter at the Public Works facility, which is currently included in the Pollution Prevention and Good Housekeeping Program.
- Waste Water Treatment Plants - None of the Co-permittees operate waste water treatment plants.
- Water plants - None of the Co-permittees operate water treatment plants.
- Construction debris sites - None of the Co-permittees operate construction debris sites.
- Transit authority - None of the Co-permittees operate public transit systems.
- Public works operations – Public Works facilities have been evaluated and are currently included in the Pollution Prevention and Good Housekeeping Program.
- Prisons – None of the Co-permittees operate prisons; however, Mecklenburg County does operate two jails (Mecklenburg County Jail Central and Mecklenburg County Jail North), which were evaluated in FY14. It was determined that they do not have a significant potential for storm water pollution and will not be included in the Pollution Prevention and Good Housekeeping Program. The contact for these jails is Captain Mike Greer (704-336-8544).
- Emergency service facilities – Emergency service facilities have been evaluated. Mecklenburg County operates the Mecklenburg County Medic facility, which is currently included in the Pollution Prevention and Good Housekeeping Program. The Town of Matthews operates an emergency service facility along with Fire Station #1, which has been evaluated and determined not to have a significant potential to pollute. This facility will not be included in the Pollution Prevention and Good Housekeeping Program.
- Fire stations - None of the Co-permittees operate fire stations with the exception of the Town of Matthews, which operates two (2) fire stations. Both fire stations have been evaluated and determined not to have a significant potential to pollute. These facility will not be included in the Pollution Prevention and Good Housekeeping Program. All the Towns have volunteer fire stations that they do not own or operate; therefore, they will not be included in the Pollution Prevention and Good Housekeeping Program.
- Landfills – Mecklenburg County operates one active landfill (Foxhole) and one inactive landfill (Harrisburg Rd.). Both of these facilities are included in the Pollution Prevention and Good Housekeeping Program.
- Schools – CMS and CPCC school facilities have been evaluated and are included in the Pollution Prevention and Good Housekeeping Program.
- Parks – The County and Towns operate several parks, which will be evaluated for inclusion in the Pollution Prevention and Good Housekeeping Program. Contact information for Parks:
    - County Parks- Peter Cook (704-336-7762)
    - Cornelius – Johnnie Northern (704-239-8673)
    - Davidson – Jess Bouk (704-892-7591)
    - Huntersville – Michael Jaycocks (704-766-2220)
    - Matthews – Michael King (704-708-1263)
    - Mint Hill – Tim Garner (704-545-9727)
    - Pineville – Chip Hill (704-889-2291)
- Waste recycling centers - The County operates four (4) solid waste recycling stations, which are included in the Pollution Prevention and Good Housekeeping Program.

- Vehicle maintenance operations – Vehicle maintenance operations for all co-permittees have been evaluated and are included in the Pollution Prevention and Good Housekeeping Program.
- Vehicle wash operations - None of the Co-permittees operate Vehicle Wash Operation facilities as dedicated municipal operations.
- Pump stations or lift stations - None of the Co-permittees operate Pump Station or Lift Station facilities as dedicated municipal operations.

Based upon the above information, the following evaluation procedures will be followed:

1. CMSWS will field-inspect Parks and Recreation Parks that have maintenance sheds and complete an evaluation of the significant potential to pollute. Facilities will be added to the program as necessary.
2. CMSWS will review the inventory list and determine which of the properties containing one or more buildings need to be field-inspected. These properties will be field-inspected over the remaining permit term.
3. During the inspection, CMSWS will evaluate if a significant potential exists and if so, which activities are conducted on site that could cause pollution.
4. After the evaluation, various levels of implementation will need to be selected and documented for each site.
5. Any facilities that have a significant potential to pollute will be added to the Pollution Prevention and Good Housekeeping Program and included in Tables 11, 12, 13, and 14 of the Storm Water Plan.
6. There are currently 195 CMS facilities on the inventory list. Many of these are currently on our inspection list for the program or will be inspected by 2018. The inventory list will be cross referenced with the inspection list to determine which facilities still need to be evaluated. These evaluations will be completed and facilities will be included in the program as necessary.
7. There are currently 32 CPCC facilities on the inventory list. Most of these are currently on our inspection list. The inventory list will be cross referenced with the inspection list to determine which facilities still need to be evaluated. These evaluations will be completed and facilities will be included in the program as necessary.
8. The inventory of facilities will be updated annually as follows:
    a. The Supervisor for the Compliance Section will contact Jennifer Morrell of Real Estate Services at 980.314.2514 and an updated list of properties owned by the six (6) Towns, Mecklenburg County, CMS, and CPCC will be obtained prior to January 31st of every year.
    b. The Supervisor will assign staff to compare the updated list to the list on file from the previous fiscal year. At a minimum, these lists will include the address or parcel number of the property, date acquired and total acreage. These lists will be completed prior to March 31st of every year.
    c. The Supervisor will evaluate the lists for accuracy and will assign properties for evaluation in the Work Plan for the next fiscal year. The purpose of the evaluation will be to determine if the properties have a significant potential to pollute as defined on the top of page 3 of this document. If a property is determined to have a significant potential to pollute, then assigned staff will

recommend the actions necessary to mediate this potential as well as recommend a time frame for implementation.

d. The Supervisor will review this information and assign corrective actions as deemed necessary with the intent of completion during the same fiscal year as the initial inspection.
e. The Supervisor will work with the Program Manager to update the Storm Water Plan to include new properties into the Pollution Prevention and Good Housekeeping Program.
f. If follow up actions are deemed necessary for future fiscal years, the Supervisor will be responsible for incorporating these actions into annual Work Plans.