



# STORMWATER MANAGEMENT PLAN

City of Asheville Public Works  
Stormwater Services  
PO Box 7148  
Asheville, NC 28802

**NPDES Permit No.:** NCS000435

**Reporting Year:** July 1, 2017 – June 30, 2018

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## INTRODUCTION

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### **STORMWATER MANAGEMENT PLAN OVERVIEW**

The North Carolina Division of Water Quality renewed NPDES Phase II Permit NCS000435 to the City of Asheville effective February 17, 2017 – February 16, 2022. The Stormwater Management Plan is the City of Asheville’s program to comply with NPDES Permit NCS000435 authorization to discharge Stormwater from Municipal Separate Storm Sewer Systems (MS4s) located within the City of Asheville Jurisdictional Area.

The plan is a guidance document used by City staff and the general public.

### **STATUS OF IMPLEMENTATION**

The City of Asheville is pleased to report progress for year eleven compliance with requirements of NPDES Phase II permit in the following six measures in the plan:

- Public Education and Outreach
- Public Participation and Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction Runoff Control
- Pollution Prevention and Good Housekeeping for Municipal Operations.

On June 8, 2010 the City of Asheville Council approved Stormwater Ordinance No. 3875. (Appendix A)

### **WATER QUALITY**

The City of Asheville is delegated by the state to enforce the Stormwater, Erosion and Sediment Control, and Illicit Discharge regulations within our jurisdictional area. The city has adopted and enforces a stormwater, erosion control and sedimentation and illicit discharge ordinance. (Section 7-12-2 of the Unified Development Ordinance) (Appendix B)

The city reviews and approves all development plans associated with grading, stormwater and erosion control. For projects that are less than 10,000 square feet and greater than 500 square feet, a sketch plan is required. A formal plan is required for projects that are 10,000 square feet or greater. All formal plans are required to be prepared by a qualified registered NC professional engineer or landscape architect.

For projects that disturb less than an acre and have 50 percent or less total impervious area of the developed track and are not part of a larger development are exempt from the stormwater ordinance. For all other project, stormwater controls must be designed by a licensed professional and installed. The city requires 85% removal of Total Suspended Solids and also requires that the post construction discharge not exceed pre-development discharge for the 2 year and 10 year event. Within this ordinance, the city regulates a 30’ undisturbed buffer for construction projects. All project have a buffer unless exempt by ordinance or have been previously disturbed.

The city reviews plans and inspects construction activities inside the city limits. This is included in the City's Unified Development Ordinance which regulates development. The city reviews and approves development land use plans.

The city enforces a steep slope ordinance (Section 7-12-4) (Appendix D) which limits total disturbed area based on elevation and slope of the proposed development. The city regulates the special flood hazard areas located within the city's jurisdictional area through our flood ordinance (Section 7-12-1). This ordinance utilizes the latest flood maps and regulates development within this area. (Appendix C)

State Programs: The state regulates projects that disturb over one acre that by state law cannot be regulated by the City of Asheville.

**Current FY 17-18 Budget**

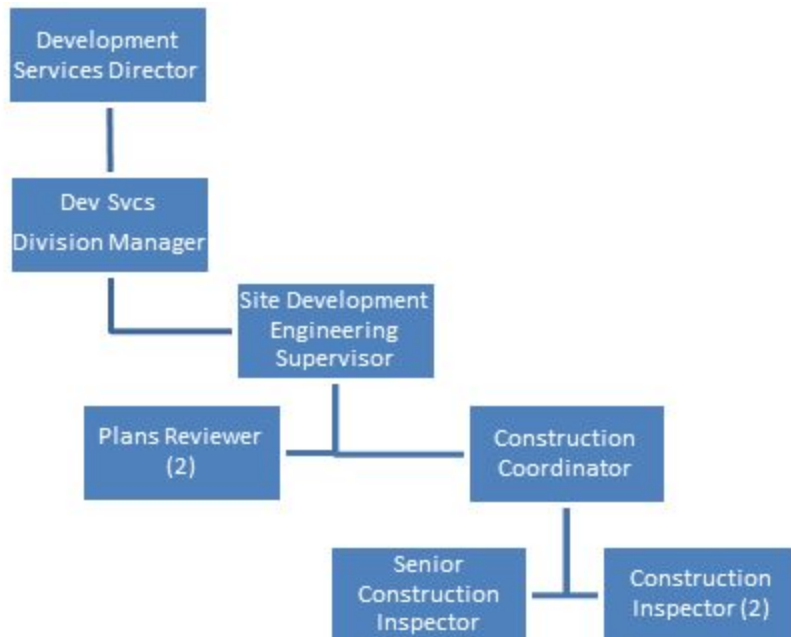
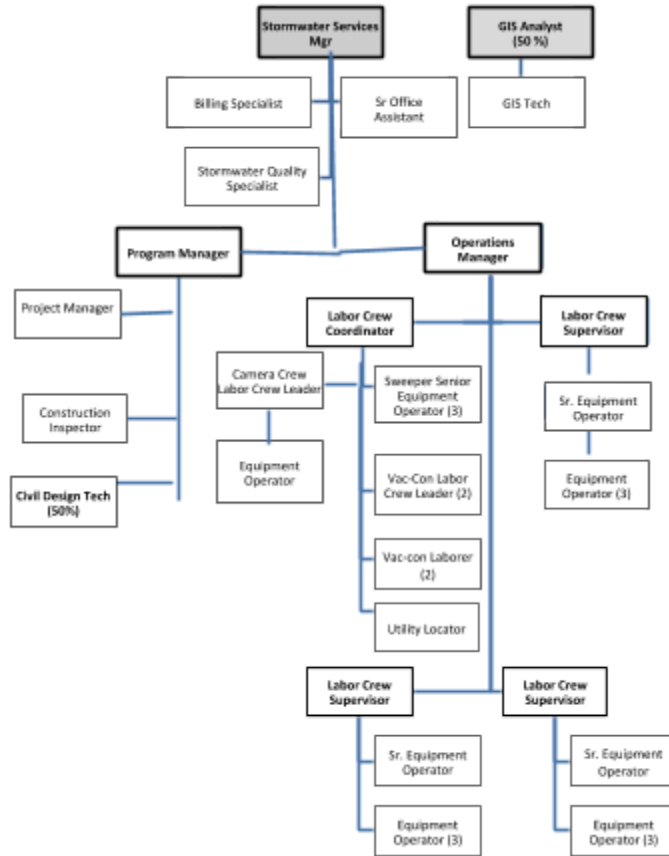
<b>REVENUES</b>	<b>FY 17-18</b>	<b>COMMENTS</b>
Permit Fees	\$5,599.00	
Permit Violation	\$100.00	
Permit Soil	\$197,786.00	
Permit Stormwater	\$39,593.73	
Delinquent & Interest Fee	\$24,870.00	
Utility Charges	\$5,581,357.49	Stormwater Utility Fees
Investments Income	\$52,108.02	
CA Sold	\$846.30	
Misc Rev	\$1,569.54	
DebtProcPr	\$1,808,270.00	
PrcdDebtPr	\$139,550.85	
Mark to Market	(\$16,617.55)	
<b>TOTAL REVENUES =</b>	<b>\$7,835,033.38</b>	
<b>EXPENSES</b>	<b>FY 17-18</b>	<b>COMMENTS</b>
Salaries & Wages	\$1,821,424.20	34 full time positions
Fringe Benefits	\$808,965.35	
Contracted Services	\$75,480.52	
Professional Services	\$97,385.44	
Rental/Lease	\$23,971.79	Copiers & Computers
Services	\$6,454.25	Printing, Advertising & Postage
Maintenance & Operations	\$298,293.90	Training, Dues, Supplies, Materials
Insurance & Bonds	\$83,958.00	
Other Expenses	\$58,749.40	Licenses, Tipping Fees, Recovery Collection Fees
Utilities	\$33,524.02	Telephone, Cell Phone & Radio Charges
Fleet Mgmt Charges	\$214,600.67	Maintenance & equipment
Street Cut Utility Charges	\$190,537.93	
Cost Allocations	\$675,203.00	
Bank Fees	\$180.00	
PayDefDebt	\$1,922,636.64	
Interest	\$50,140.00	
Debt Issue	\$25,184.21	
Transfer to GCP	\$695,938.00	
Transfer to Stormwater Capital Fund	\$1,318,434.50	
Princ Payment	\$252,566.35	
<b>TOTAL EXPENSES =</b>	<b>\$8,653,628.17</b>	

Note: Expenses and revenues do not balance because \$818,594.79 was taken out of the stormwater reserves to contribute to TIGER VI and other stormwater capital projects.

## FY 18-19 BUDGET

<b>REVENUES</b>	<b>FY 18-19</b>	<b>COMMENTS</b>
Soil Erosion Permits & Inspections	\$338,000	All grading, drainage & erosion control
Stormwater Permits & Inspections	\$25,000	All Stormwater quality & quantity
Floodplain Permits & Inspections	\$12,000	
Delinquent & Interest Fee	\$30,000	
Utility Charges	\$5,859,113	Stormwater Utility Fees
Investments Income	\$12,000	
Sale of Capital Assets	\$10,000	
Other Miscellaneous Revenue	\$1,288,423	
Appropriated Fund Balance	\$218,540	
<b>TOTAL REVENUES =</b>	<b>\$7,793,076</b>	
<b>EXPENSES</b>	<b>FY 18-19</b>	<b>COMMENTS</b>
Salaries & Wages	\$2,212,333	
Fringe Benefits	924,412	
Contracted Services	\$160,000	
Professional Services	\$150,000	
Rental/Lease	21,000	Copiers, Computers & IT Charges
Services	800	Printing, Advertising & Postage
Maintenance & Operations	321,055	Training, Dues, Supplies, Materials
Other Expenses	59,769	Licenses, Tipping Fees, Recovery Collection Fees
Street Cut Utility	200,000	
Cost Allocations	781,218	
Utilities	41,206	Telephone, Cell Phone & Radio Charges
Fleet Mgmt Charges	245,301	
Infrastructure	1,288,423	
Principal Payment & Interest	329,536	
Interest Expense	12,427	
Transfer to Stormwater Capital	961,638	
Ins. & Bonds	\$83,958	
<b>TOTAL EXPENSES =</b>	<b>\$7,793,076</b>	

ORGANIZATIONAL CHART STORMWATER SERVICES (FY 17/18)





## CAPITAL IMPROVEMENT PROJECTS

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**Morris Street Stormwater Improvement Project:** This project is in final design phase and consists of the installation of approximately 2,330 lf of pipe and the expansion of green infrastructure. Project was bid and awarded in fiscal year 2018 with a construction start date of June 12, 2018.

**Edwin/Celia/Canterbury Drainage Improvement Project:** This project consists of making improvements to the conveyance system along with providing water quality and quantity devices which will assist in reducing localized flooding. The City hired the firm of Hazen & Sawyer to undertake the modeling of the watershed, develop solutions combining gray and green infrastructure and develop construction drawings and documents. The project team is collecting project area data and public input. Watershed modeling has also been completed. Preliminary designs are in progress.

**Dingle Creek Wetland Rehabilitation Project:** This project is in final design phase and consists of the repair of inlet control structures at the constructed stormwater wetland. Project will be bid in fiscal year 2019.

**Lakeshore Drive Project:** This project consists of preliminary investigations and preliminary engineering to determine best course of action to remediate an existing failing storm drainage system. Surveys have been completed.

**Victoria Road Embankment Stabilization:** The design on the project is complete and consists of stabilizing an embankment where stormwater overtopped the roadway causing the slope to erode. Project will be bid in fiscal year 2019.

**Wellington Street Watershed Assessment:** The assessment identified potential projects to help reduce localized flooding and also identified additional projects or other areas to promote water quality. Potential projects will be ranked and entered in the Stormwater CIP.

**Swannanoa Flood Mitigation Project:** City staff in partnership with the US Army Corps of Engineers have finalized the feasibility report designed to help mitigate flooding within the Biltmore Village. Both agencies will be entering into a Project Partnership Agreement for the recommended project in fiscal year 2019.

**FY17 Resurfacing - Pipe Replacement:** The City is being proactive in preventative maintenance and is replacing the stormwater infrastructure prior to it failing ahead of the Streets Resurfacing Program Project. This Project consists of the installation of approximately 100 lf of pipe.

**FY18 Resurfacing - Pipe Replacement:** The City is being proactive in preventative maintenance and is replacing the stormwater infrastructure prior to it failing ahead of the Streets Resurfacing Program Project. This Project consists of the installation of approximately 1500 lf of pipe.

**River Arts District Transportation Improvement Project (RADTIP):** The RADTIP project is currently under construction. This project consists of re-building the roads along the east side

of the French Broad River in the River Arts District with new drainage systems for stormwater, including quality and quantity. Other elements of the project include widened sidewalks, bike lanes, additional parking, and improved intersections for better traffic flow. The 2.2 mile improvement includes a continuous multi-use path along the river and installation of green infrastructure.

**Pipe Replacement Projects**

<b>PROJECT</b>	<b>LF</b>
Round Oak Rd	32
#28 Bassett Rd	28
#11 Bassett Rd	27
#12 Bassett Rd	28
Mimosa Dr	20
Ellenwood Dr	110
Crabapple Ln	35
Baldwin St	40
Robinhood Rd	40
Wolfe Cove Rd	20
Bull Mountain Rd	115
Cauble St	275
Gashes Ck	136
Silverstone Dr	100
Westridge Dr	80
Dry Ridge Rd	31
Unaka Ave	40
S. Grove St	103
Caledonia Rd	59
Black Oak Dr	67
Aurora Dr	25
Depot St	240
Pressley Dr	23
<b>Total feet =</b>	<b>1,674</b>

**New Pipe Projects**

<b>PROJECT</b>	<b>LF</b>
Lookout Rd	252
Haith Dr	135
Chunns View Dr	340
Banks Ave	90
Governors View Rd	392
Brookwood Rd	290
Brookwood Rd	100
Glendale Ave	140
<b>Total feet =</b>	<b>1,739</b>

## Yearly Maintenance Activities

The maintenance activities include sinkhole repairs, replace lids, repair catch basins, road shoulder repairs, culvert repairs and ditching:

Sinkhole work orders	22
Catch Basin Repair/install work orders	12
Reset/Replace Lid	22
Drains Cleaned	3,134
Drains Inspected	2,204
Debris Removal	1,273 tons
Sweeping Curb Miles	4,853 miles
Ditching LF	28,013 lf

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## Yearly Operations Activities

<b>INSPECTIONS</b>	<b>TOTAL NUMBER</b>
Sedimentation	5,227
Stormwater	30
Notice of Violations (off site sedimentation, grading w/o permit, buffer violation, etc.)	66
<b>SEDIMENTATION PLAN REVIEWS</b>	<b>TOTAL NUMBER</b>
Received	649
Reviewed	442
Approved	605
Disapproved (Insufficient information)	5
<b>STORMWATER PLAN REVIEWS</b>	<b>TOTAL NUMBER</b>
Received	101
Reviewed	70
Approved	70
Disapproved (Insufficient information)	56
<b>Total Disturbed Acres Permitted</b>	<b>168.52</b>

**1. Objectives for Public Education and Outreach**

Distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps the public can take to reduce pollutants in stormwater runoff.

**2. BMPs for Public Education and Outreach**

The permittee shall implement the following BMPs to meet the objectives of the Public Education and Outreach Program and shall notify the Division prior to modification of any goals.

BMP	Measurable Goals
a. Goals and Objectives	Defined goals and objectives of the Local Public Education and Outreach Program based on community wide issues.

**17-18 Accomplishment**

The City of Asheville performs a public education and outreach program currently through local schools and various organizations. Currently the program includes providing basic messages regarding clean water and the things people can do at home to help.

We also attend community meetings and discuss what stormwater is and explain ways we are working to better the community by providing a stormwater program.

Education material is also provided on the City’s website.

**18-19 Proposed Objectives**

The City will continue to search for public education and outreach opportunities.

BMP	Measurable Goals
b. Describe target pollutants and/or stressors	The permittee shall maintain a description of the target pollutants and/or stressors and likely sources.

**17-18 Accomplishment**

The City of Asheville works with Environmental Quality Institute (EQI) for the testing of six stream site samples within the city. EQI has been developing an on-going water quality database of Western North Carolina watersheds. The purpose of the research is to continue and expand the long-term monitoring of stream sites within Buncombe County. The cost is being shared by the Buncombe County Soil & Water Conservation District (SWCD), Metropolitan Sewerage District (MSD) and the City of Asheville Stormwater Services. The major focus of the monitoring is to identify problem areas as well as areas with high water quality that need to be maintained and to monitor areas where water quality improvement projects will be taking place. This contract with EQI, offers technical assistance through laboratory analysis of samples and statistical data analysis of monitoring results. Volunteers take these samples through EQI Guidelines.

The overall goal of the proposed research is to assess the present water quality of representative streams and rivers within the City of Asheville. Specific objectives include:

- Analyze water samples from six sites in Asheville for eight chemical parameters monthly, with this contract it brings the total number of sites being tested in Buncombe County to 47;
- Analyze the data statistically for trends between sites (spatial) and trends within sites over time (temporal); and
- Use the results of the analyses to assess the ability of the streams to support their various current, intended, and potential uses.

EQI laboratory analyzes all samples for the following parameters: pH, ammonia-nitrogen, nitrate-nitrogen, orthophosphate, total suspended solids, alkalinity, turbidity, and conductivity.

**18-19 Proposed Objectives:**

The City will continue the contract with EQI and focus on reducing sediment in streams.

BMP	Measurable Goals
c. Describe target audiences	The permittee shall identify, assess annually and update the description of the target audiences likely to have significant stormwater impacts and why they were selected.

**17-18 Accomplishment**

The City of Asheville target audiences are youth groups and residential property owners. Youth groups were chosen in order to educate them early as they can help educate their parents. Property owners were selected because of the large impact they can have on the storm water in the community.

**18-19 Proposed Objectives**

Continue our educational outreach to youth groups and property owners.

BMP	Measurable Goals
d. Describe residential and industrial/commercial issues	The permittee shall describe issues, such as pollutants, the likely sources of those pollutants, potential impacts, and the physical attributes of stormwater runoff, in their education/outreach program.

**17-18 Accomplishment**

The city’s education/outreach program for property owners has focused on the following pollutants:

- Car washing
- Pet waste
- Use of lawn and garden products

These pollutants were selected because they can harm fish and wildlife population, foul drinking water supplies, kill native vegetation, and make recreational areas unsafe.

### **18-19 Proposed Objectives**

Continue to educate youth groups and property owners on the dangers of these pollutants.

<b>BMP</b>	<b>Measurable Goals</b>
e. Informational Website	The permittee shall promote and maintain an internet web site designed to convey the program's message.

### **17-18 Accomplishment**

Stormwater Services continues to maintain an educational stormwater website:

<http://www.ashevillenc.gov/Departments/StormwaterServicesUtility.aspx>, and a City related blog. The website provides information about the program and also the importance of clean water to the citizens of Asheville. It provides links that show the location of the Stormwater outfalls. This information can be found on our MapAsheville GIS website. Contact information is provided on the website along with the City's hotline number.

### **18-19 Proposed Objectives**

Continue to maintain and update our current website with Stormwater projects and activities.

<b>BMP</b>	<b>Measurable Goals</b>
f. Distribute public education materials to identify target audiences and user groups.	The permittee shall distribute stormwater educational material to appropriate target groups. Instead of developing its own materials, the permittee may rely on Public Education and Outreach materials supplied by the state, and/or other entities through a cooperative agreement, as available, when implementing its own program.

### **17-18 Accomplishment**

Stormwater Services participated in Buncombe County Employability Seminar and Asheville Outlets Truck events and distributed the following brochures:

- Help Protect Our Water;
- Pet Waste;
- Illicit Discharge Detection & Elimination

Stormwater Services sent a letter to property owners located within an area that has been identified as an area that is more subjected to flooding a Repetitive Flooding Letter. The letter included:

- Information on preparing for a flood;
- Recommended permanent flood protection measures;
- Information about flood insurance policies; and
- How to protect natural floodplain functions

Stormwater Services went into schools and lead tours at our water treatment plants. During each of the tours and school visits students were given booklets inside a bag with information on how to help protect our water.

**18-19 Proposed Objectives**

Continue going to community events and distribute brochures. Continue work with schools and tours at our water treatment plants.

<b>BMP</b>	<b>Measurable Goals</b>
g. Maintain Hotline/Help line	The permittee shall promote and maintain a stormwater hotline/helpline for the purpose of public education and outreach.

**17-18 Accomplishment**

The City provides a customer service line 828-251-1122 for citizens to report illicit discharge and accidental discharge after normal business hours and weekends. The city maintains a helpline 828-232-4567 during normal business hours for citizens to call with questions or report illicit discharge. Both these numbers are promoted on brochures mailed to citizens and on the city website.

**18-19 Proposed Objectives**

Continue to maintain and promote the hotline/helpline.

<b>BMP</b>	<b>Measurable Goals</b>
h. Implement a Public Education and Outreach Program	The permittee’s outreach program, including those elements implemented locally or through a cooperative agreement, shall include a combination of approaches designed to reaching the target audiences. For each media, event or activity, including those elements implemented locally or through a cooperative agreement the permittee shall estimate and record the extent of exposure.

**17-18 Accomplishment**

<u>Activity</u>	<u>Estimated Number of Exposure</u>
Water Education Tours w/activity	236
Repetitive Flooding Letter	173
Kids in the Creek Event	318
Buncombe County Fall & Spring Field Days	1,700
Merrimon Ave Baptist Preschool	30
Buncombe County Workforce Program	300
Asheville Outlets Truck Event	2,000
School Career Day (Enka, Haw Creek, Erwin Middle	1,280
New Belgium Sustainability Event	25
Vance Elementary Events	157
YWCA Event	70
Website & Blog Post	



## **18-19 Proposed Objectives**

Continue to:

- Search for public education and outreach opportunities
- Post information on the website & blog post

## PUBLIC INVOLVEMENT AND PARTICIPATION

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### 1. Objectives for Public Involvement and Participation

Comply with State and local public notice requirements when implementing a public involvement and participation program.

### 2. BMPs for Public Involvement and Participation

The permittee shall implement the following BMPs to meet the objectives of the Public Involvement and Participation Program and shall notify the Division prior to modification of any goals.

BMP	Measurable Goals
a. Volunteer community involvement program	The permittee shall include and promote volunteer opportunities designed to promote ongoing citizen participation.

### **17-18 Accomplishment**

The City of Asheville partners with Asheville Greenworks to provide Adopt-a-Street Program. Groups and organizations are encouraged to help reduce litter by participating in Asheville's Adopt-A-Street program. Participants agree to pick up litter from their adopted street at least six times per year. Greenworks provides groups with bags, vests, gloves, and pick-up sticks. The City of Asheville provides garbage pickup and signs on the street to recognize the litter reduction efforts. This year 18 new streets were adopted bringing the total of adopted streets to 235.

The City of Asheville partners with RiverLink to provide Adopt-a-Stream program. This is a hands-on way for local residents and businesses to get actively involved in improving the water quality of the French Broad River Watershed. This very flexible program gives the tools and knowledge to make a difference in our watershed by cleaning up local streams. Participants are required a minimum of two cleanups per year and report any water related issues/problems to RiverLink. The City of Asheville provides garbage pickup and signs to RiverLink to install on the streams to recognize the litter reduction efforts. This year three new teams joined the program bringing the total to 18 adopted streams.

The City of Asheville partners with Mountain True and RiverLink to provide storm drain stenciling in our community. The city provides the stenciling equipment to Mountain True and RiverLink, they organize and provide the volunteers. With this partnership approximately 153 storm drains have been stenciled this fiscal year.

### **18-19 Proposed Objectives**

The City will continue the partnerships with Asheville Greenworks, RiverLink and Mountain True. We will also continue to look for partnerships opportunities to perform various stormwater activities.

<b>BMP</b>	<b>Measurable Goals</b>
b. Mechanism for Public involvement	The permittee shall provide and promote a mechanism for public involvement that provides for input on stormwater issues and the stormwater program.

**17-18 Accomplishment**

The City provides a stormwater e-mail ([stormwater@ashevillenc.gov](mailto:stormwater@ashevillenc.gov)) and phone number (828-232-4567) in which the public can provide input and report on stormwater issues.

Personnel from the City’s stormwater division meet often with individual citizens to discuss their specific concerns or questions related to stormwater.

The City provides the Asheville App for citizens to report issues or concerns.

Social media is also used to interact with citizens.

**18-19 Proposed Objectives**

Continue to provide a stormwater email and phone number for the public to provide input and report any stormwater issues.

<b>BMP</b>	<b>Measurable Goals</b>
c. Hotline/Helpline	The permittee shall promote and maintain a hotline/helpline for the purpose of public involvement and participation.

**17-18 Accomplishment**

The City provides a customer service line 828-251-1122 for citizens to report illicit discharge and accidental discharge after normal business hours and weekends. The city maintains a helpline 828-232-4567 during normal business hours for citizens to call with questions or report illicit discharge. Both these numbers are promoted on brochures mailed to citizens and on the city website.

We also have the Asheville App where citizens can report problems or concerns.

**18-19 Proposed Objectives**

Continue to maintain and promote the hotline/helpline.

**1. Objectives for Illicit Discharge Detection and Elimination**

- a. Implement and enforce a program to detect and eliminate illicit discharges into the MS4;
- b. Maintain a storm sewer system map, showing the location of major outfalls and the names and location of waters of the United States that receive discharges from those outfalls;
- c. Prohibit, through ordinance, or other regulatory mechanism, non-stormwater discharges except as allowed in this permit and implement appropriate enforcement procedures and actions;
- d. Implement a plan to detect and address non-stormwater discharges, including illegal dumping to the MS4;
- e. Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste; and
- f. Address the following categories of non-storm water discharges or flows (i.e., illicit discharges) only if you identify them as significant contributors of pollutants to the MS4: waterline flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated groundwater infiltration, uncontaminated pumped groundwater, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (discharges or flows from fire fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the United States).

**2. BMPs for Illicit Discharge Detection and Elimination**

The permittee shall implement the following BMPs to meet the objectives of the Illicit Discharge Detection and Elimination Program and shall notify the Division prior to modification of any goals.

BMP	Measurable Goals
a. Maintain an Illicit Discharge Detection and Elimination Program	Maintain a written Illicit Discharge Detection and Elimination Program, including provisions for program assessment and evaluation and integrating program.

**17-18 Accomplishment**

The City of Asheville currently relies on our stormwater ordinance (Section 7-12-2) which guides the illicit discharge process. The City will continue to follow this guidance from the ordinance and continue to look for ways to enhance this program.

**18-19 Proposed Objectives**

Continue to follow ordinance and establish a written program for illicit discharge.

BMP	Measurable Goals
b. Maintain adequate legal authorities	The permittee shall maintain an IDDE ordinances or other regulatory mechanisms that provides the legal authority to prohibit illicit connections and discharges.

**Accomplishment**

The City of Asheville Council approved and adopted Ordinance 3875 on June 8, 2010. Section 1 (k) regulates illicit discharge (Appendix A). The city had a previous Ordinance 3520 adopted on August 21, 2007 that addressed illicit discharge, stormwater and erosion control.

**18-19 Proposed Objectives**

Continue to follow ordinance.

BMP	Measurable Goals
c. Maintain a Storm Sewer System Base Map of Major Outfalls	The permittee shall maintain a current map showing major outfalls and receiving streams.

**17-18 Accomplishment**

The City maintains and updates maps of the stormwater system throughout the city in both ArcGIS and in MapAsheville, both of which are GIS based systems. The general public has access to MapAsheville through the City’s website. These maps are updated periodically to show the new storm drainage systems that have been installed. Both of these mapping systems show the locations of streams, rivers, ponds and lakes that may be affected by any stormwater that may enter them.

**18-19 Proposed Objectives**

Continue to maintain and update maps of the Stormwater system in both ArcGIS and in MapAsheville.

BMP	Measurable Goals
d. Implement a program to detect dry weather flows	The permittee shall maintain a program for conducting dry weather flow field observations in accordance with written procedures.

**17-18 Accomplishment**

The City of Asheville construction inspectors perform routine inspections of all grading, erosion control and stormwater projects currently under construction. These inspectors are assigned a specific area within the City in which they are familiar with the stormwater systems. Also, the stormwater maintenance and operation staff performs routine inspections and maintenance of the publicly maintained storm drain systems throughout the City.

In the event that they discover a suspected illicit discharge, or a resident of the city reports a questionable discharge, City staff is notified and visit the site and take photos. In the event that the City is unable to identify the discharge, the NC Division of Water Resources is contacted for testing purposes. Assuming there is evidence of an illicit discharge, the owner is notified in person (if possible) and by certified letter about what has been found, the amount of time to cure

and ramifications should they choose not to comply in accordance with section 7-12-2 of the UDO which covers civil penalties.

**18-19 Proposed Objectives**

Construction inspectors will continue to perform routine inspections. Also the maintenance and operations staff will perform routine inspections and maintenance of the storm drain systems.

<b>BMP</b>	<b>Measurable Goals</b>
e. Investigate sources of identified illicit discharges	The permittee shall maintain written procedures for conducting investigations of identified illicit discharges.

**17-18 Accomplishment**

City of Asheville has staff that responds to illicit discharge concerns which includes identifying the source and working with the property owner to resolve the issue. This fiscal year 17 illicit discharge complaints were responded to by the City of Asheville.

Provide residents with a 24/7 on call number to report illicit discharge, off-site sedimentation and other related issues.

**18-19 Proposed Objectives**

Continue to perform these duties.

<b>BMP</b>	<b>Measurable Goals</b>
f. Track and document investigations illicit discharges	For each case the permittee shall track and document 1) the date(s) the illicit discharge was observed; 2) the results of the investigation; 3) any follow-up of the investigation; and 4) the date the investigation was closed.

**17-18 Accomplishment**

The Stormwater Quality Specialist investigates all illicit discharge complaints. All complaints are documented with pictures and the date the investigation was closed, as well as any follow up needed. Complaints and inspections are also logged in a database.

**18-19 Proposed Objectives**

Continue to track all illicit discharge complaints.

<b>BMP</b>	<b>Measurable Goals</b>
g. Provide Employee Training	The permittee shall implement and document a training program for appropriate municipal staff, who as part of their normal job responsibilities, may come into contact with or otherwise observe an illicit discharge or illicit connection.

**17-18 Accomplishment**

Conducted Municipal Storm Water Pollution Prevention training to the following departments:

- Stormwater Services
- E-building NPDES Training
- Streets Division

Staff was informed of hazards associated with illegal discharge and improper disposal of waste during the Storm Water Pollution Prevention training.

**18-19 Proposed Objectives**

Incorporate training for new employees during the orientation process.

<b>BMP</b>	<b>Measurable Goals</b>
h. Provide Public Education	The permittee shall inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

**17-18 Accomplishment**

Students were informed about the hazards associated with illicit discharge and ways they can help protect our water during the water education tours, Rugby Middle School Water Education Day, Buncombe County Field Days and school career days. Brochures about illicit discharge were also handed out during the Asheville Outlets Truck Event.

**18-19 Proposed Objectives**

Continue to educate the public on illicit discharge during our water education tours, school events and all public events.

<b>BMP</b>	<b>Measurable Goals</b>
i. Provide a public reporting mechanism	The permittee shall promote, publicize, and facilitate a reporting mechanism for the public and staff to report illicit discharges and establish and implement citizen request response procedures.

**Accomplishment**

The City has a 24 hour telephone number in which a staff member is on call to respond to issues related to illicit discharge, off-site sedimentation and other related issues. This telephone number is located on the City of Asheville's website and on educational brochures mailed annually to the public.

**18-19 Proposed Objectives**

Continue to provide a 24 hour telephone number to report issues related to illicit discharge, off-site sedimentation and other related issues.

<b>BMP</b>	<b>Measurable Goals</b>
j. Enforcement of the IDDE ordinance	The permittee shall implement a mechanism to track the issuance of notices of violation and enforcement actions as administered by the permittee. This mechanism shall include the ability to identify chronic violators for initiation of actions to reduce noncompliance.

**Accomplishment**

City of Asheville Stormwater Ordinance No. 3875 allows the enforcement of notices of violations for illicit discharge. All NOV's are logged into our database, a hard copy of all correspondence are kept in a file located in the Stormwater Quality Specialist office.

**18-19 Proposed Objectives**

Continue to enforce city ordinance.



## CONSTRUCTION SITE RUNOFF CONTROLS

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1. The permittee has a delegated Sediment and Erosion Control Program. As such, the permittee is responsible for compliance with the Sediment Pollution Control Act of 1973 and Chapter 4 of Title 15A of the North Carolina Administrative Code. The delegated Sediment and Erosion Control Program effectively meets the maximum extent practicable (MEP) standard for Construction Site Runoff Controls by permitting and controlling development activities disturbing one or more acres of land surface and those activities less than one acre that are part of a larger common plan of development as authorized under the Sediment Pollution Control Act of 1973 and Chapter 4 of Title 15A of the North Carolina Administrative Code.

### **Accomplishment**

Stormwater employees enforce Ordinance 3875 adopted on June 8, 2010 by the Asheville City Council and previous Ordinance 3520 adopted on August 21, 2007 which consisted of erosion control, illicit discharge and stormwater. City of Asheville UDO Section 7-12-2 provides mechanisms for plan review, construction site inspections and enforcement

### **17-18 Proposed Objectives**

Continue to enforce the City of Asheville UDO.

2. The NCG010000 permit, as administered by the State, establishes requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality.

### **Accomplishment**

#### **Regulatory Mechanism**

The City of Asheville, Unified Development Ordinance, Section 7-12-2, includes requirements for an approved Grading Permit for all land disturbance activity 500 feet or greater. Exemptions to erosion control are allowed, in accordance with the Sediment and Erosion Control Act.

The City of Asheville Unified Development Ordinance, Section 7-12-2, in conjunction with the City of Asheville Standard Specifications and Details Manual requires implementation of appropriate erosion and sediment control Best Management Practices (BMP's) based on plans which are approved by City staff as part of the Grading Permit review process.

Section 7-12-2 (k)(3) of the City of Asheville UDO prohibits illicit discharges and improper disposal into the stormwater system as follows:

*7-12-2(k)(3) Illicit discharge: It is unlawful for any person to throw, drain, run or otherwise discharge to any component of the City's MS4 or to the waters of the State of North Carolina or to cause, permit or allow to suffer to be thrown, drained, run, or*

*allowed to seep or otherwise discharge into such system or receiving water all matter of any nature excepting only such storm or surface water as herein authorized.*

Control and disposal of discarded building materials and litter are regulated under Chapter 15 of the City of Asheville Unified Development Ordinance. This Section requires that all waste be placed in receptacles that are made readily accessible to City collection crews or private collection agencies.

Section 15-43 requires the control of all construction and demolition refuse as follows:

*Sec. 15-43. Construction and demolition sites. All construction and demolition contractors shall provide onsite refuse receptacles, bulk containers or detachable containers for loose debris, paper, waste building materials, scrap building materials and other trash produced by those working on the site. All such materials shall be containerized by the end of each workday, and the site shall be kept in a reasonably clean and litter-free condition. The number and type of refuse receptacles, bulk containers or detachable containers shall be determined by the solid waste manager based on the size of the project. Dirt, mud, construction materials or other debris deposited upon any public or private property as a result of construction or demolition activities shall be immediately removed by the contractor and in all cases by the end of the workday.*

Per Section 15-45 (h) of the City of Asheville UDO, a Certificate of Occupancy may not be issued until all construction or demolition refuse has been removed from the site.

*Section 15-45 (h) (4) Building materials. The city shall not be responsible for the collecting, handling or disposal of building materials that originate from private property preliminary to, during or subsequent to the construction of new buildings or from demolition of existing structures. Such materials or refuse shall be collected and disposed of by the property owner or the person doing the work. If such material or refuse has not been removed and disposed of by the property owner or the person doing the work, the building inspections division shall not issue a certificate of occupancy even though other requirements for such certificate have been met. The certificate of occupancy shall be issued only when the requirements of this subsection, as well as any other requirements, have been met.*

Disposal of hazardous waste and concrete washout is prohibited in tree protection areas under Section 7-11-3 (c) (2) c.

*Section 7-11-3 (c) (2) c. Prohibited activities. All contractors must be made aware of the areas designated for protection. No disturbance can occur within the tree protection area including:*

- *Grading*
- *Filling*
- *Parking*
- *Storage of debris or materials, including topsoil*
- *Sedimentation and erosion control measures*
- *Disposal of hazardous wastes or concrete washout*

• *Attaching of nails, ropes, cables, signs, or fencing to any preserved tree.*

- d. *Permissible encroachments. Where physical site constraints exist, utilities may encroach into the tree protection area provided they are tunneled at least two feet directly below the tree roots to minimize root damage. A construction detail shall be required.*

*Other encroachments various in nature may be permitted provided that the contractor follows-through on the written recommendation of a certified arborist or consulting arborist to minimize any potential impact and certify that the activity will not damage the tree under normal circumstances.*

- e. *Silt fencing. If silt fencing is required to control sedimentation, the fencing must be placed along the uphill edge of a tree protection zone in order to prevent sediment from accumulating in the critical root zone area (refer to the City of Asheville's Standards and Specifications Manual for details).*

### **18-19 Proposed Objectives**

Continue to enforce the City of Asheville UDO.

3. The permittee shall provide and promote a means for the public to notify the appropriate authorities of observed erosion and sedimentation problems. The permittee may implement a plan promoting the existence of the NCDEQ or DEQ, Division of Energy, Mineral, and Land Resources “Stop Mud” hotline to meet the requirements of this paragraph..

### **Accomplishment**

We provide a main Stormwater line 828-232-4567 during normal business hours Monday – Thursday 7:00 am – 5:30 pm. Also after hours, weekends and holidays we provide a customer service number (828) 251-1122. We also provide a stormwater e-mail [stormwater@ashevillenc.gov](mailto:stormwater@ashevillenc.gov) where the public can also report erosion and sedimentation problems. All of these are promoted on our website, City channel & brochures.

### **18-19 Proposed Objectives**

Continue to provide these resources for the public.

POST-CONSTRUCTION SITE RUNOFF CONTROLS

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**1. Objectives for Post-Construction Site Runoff Controls**

- a. Implement and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the small MS4. The program shall ensure that controls are in place that would prevent or minimize water quality impacts.
- b. Implement strategies which include a combination of structural Stormwater Control Measures (SCM) and/or non-structural best management practices (BMPs) appropriate for the community.
- c. Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects.
- d. Ensure adequate long-term operation and maintenance of BMPs.

**2. BMPs for Post-Construction Site Runoff Controls**

The permittee shall implement the following BMPs to meet the objectives of the Post-Construction Stormwater Management Program. To the extent there is any conflict between this permit and the post-construction ordinances adopted by the permittee as approved by the Division, the post-construction ordinances shall apply with regard to permit compliance.

<b>BMP</b>	<b>Measurable Goals</b>
a. Adequate legal authorities	<p>Maintain through an ordinance, or other regulatory mechanism, adequate legal authorities designed to meet the objectives of the Post-Construction Site Runoff Controls Stormwater Management program.</p> <p>The permittee shall have the authority to review designs and proposals for new development and redevelopment to determine whether adequate stormwater control measures will be installed, implemented, and maintained.</p> <p>The permittee shall have the authority to request information such as stormwater plans, inspection reports, monitoring results, and other information deemed necessary to evaluate compliance with the Post-Construction Stormwater Management Program.</p> <p>The permittee shall have the authority to enter private property for the purpose of inspecting at reasonable times any facilities, equipment, practices, or operations related to stormwater discharges to determine whether there is compliance the Post Construction Stormwater Management Program.</p>

**Accomplishment**

The primary regulatory mechanism for the City of Asheville is the Unified Development Ordinance (UDO). Specifically Section 7-12-2 deals with stormwater, soil erosion and sedimentation control and illicit discharges and connections.

Section 7-12-2(f)(1) calls for all development and redevelopment to which this subsection applies shall comply with the standards herein. The design of facilities to comply with these standards shall be based on procedures contained in the stormwater BMP manual or as approved by the stormwater administrator guided by the spirit, purpose and intent of this section.

Section 7-12-2 (f)(1)(b) calls to provide extended detention for the difference between the pre-development and post development volume of the 2-year 24-hour SCS Type II design storm. The increase in runoff volume must be detained between 24-hours to 72-hours. Provided that the stormwater administrator may require volume control for the difference between the pre-development and post development volume of the 25-year 24-hour storm if by using existing watershed master plan analysis it is found that that additional volume reduction is required to protect downstream properties, natural and built drainage facilities due to the additional runoff volumes from the 25-year 24-hour storm event.

Section 7-12-2 (f)(2)(a) calls for the run-off from the first one inch of rain to be detained between 48 and 120 hours. Section 7-12-2(f)(2)(b) calls for all structural stormwater systems to have a minimum 85% average annual removal for Total Suspended Solids (TSS). Devices listed in the North Carolina Division of Water Resources Stormwater as achieving 85% TSS removal are accepted as well as proprietary devices on a case-by-case basis. The proprietary devices must have site specific supporting data that demonstrates that they will achieve the desired performance with the specific soil types of the proposed site and the anticipated flows.

**18-19 Proposed Objectives**

Continue to operate our program.

<b>BMP</b>	<b>Measurable Goals</b>
b. Strategies which include Stormwater Control Measures (SCMs) appropriate for the MS4	Strategies which include Stormwater Control Measures (SCMs) appropriate for the MS4, include, but are not limited to compliance with 15A NCAC 02H Section .1000 effectively meets the Post-construction Stormwater Runoff control requirements.

**Accomplishment**

The City of Asheville requires that all projects that involve a stormwater BMP have an Operation and Maintenance (O & M) Agreement filed with the city and recorded in the Buncombe County Register of Deeds office before a Certificate of Occupancy is issued. The agreement binds the owner and any future owners. The agreement requires the owner to maintain, repair and if necessary, reconstruct the structural BMP. It also grants the city a right of entry in the event that the Stormwater Administrator has reason to believe that it has become necessary to inspect, monitor, maintain, repair or reconstruct the structural BMP. The agreement states that if the Stormwater Administrator has deemed an order directing the correction, repair, replacement or maintenance of the facility has not been satisfactorily complied with within a reasonable period of time the city may, after notice to the owner enter the land and perform any necessary work to

place the facility in proper working condition. The cost can be recouped by placing a lien on the property or charging 150% of the cost for labor and materials.

In addition to the post-construction requirements, all private projects that involve the installation of a stormwater BMP must have a private inspection contract between the financially responsible person and an individual of equivalent licensure of the designer or certified specialist for bi-weekly inspections of the installation of the BMP. The grading and stormwater permit cannot be issued until this contract has been provided to the city.

The City of Asheville enforces a 30 feet wide undisturbed aquatic buffer along all jurisdictional perennial or intermittent streams (7-12-2(f)(3)). The city does not currently have any designated trout streams within our jurisdiction. Also, the city does not issue permits for any work in conjunction with jurisdictional streams or wetlands without permits being issued by DWR and/or the Army Corps of Engineers.

Section 7-11-4 of the UDO established the requirements for green space reservation in both residential and non-residential developments in the city’s jurisdiction. For single family and duplex subdivisions with lot size of one acre or more a minimum of 20% of the subdivision lot area is to be reserved as open space. In other residential areas 500 square feet of open space per unit or 15% of the lot area, whichever is greater, is to be reserved. Non-residential uses (schools, churches) must reserve a minimum of 20% of lot area. For all non-residential areas excluding the Central Business District 5 to 15% of the lot area is to be reserved.

The City of Asheville’s Public Works Department operates two vacuum trucks that clean out storm drainage pipes and structures. The city operates these trucks on a cycle and inspects and cleans areas on a periodic basis. The city also operates 3 sweepers to assist with preventing any material from entering into the storm drainage system. The City’s of Asheville’s Public Works staff will also responds to complaints on storm drains and other drainage structures as needed.

**18-19 Proposed Objectives**

Continue to require that all projects that involve a stormwater BMP have an Operation and Maintenance Agreement filed with the city and recorded in the Buncombe County Register of Deeds office before a Certificate of Occupancy is issued.

<b>BMP</b>	<b>Measurable Goals</b>
c. Plan reviews	The permittee shall conduct site plan reviews of all new development and redeveloped sites that disturb greater than or equal to one acre (including sites that disturb less than one acre that are part of a larger common plan of development or sale). The site plan review shall address how the project applicant meets the performance standards and how the project will ensure long-term maintenance.

**Accomplishment**

UDO Section 7-12-2 provides the mechanism for the City of Asheville to review plans.

**18-19 Proposed Objectives**

Continue to enforce the UDO.

BMP	Measurable Goals
d. Inventory of projects with post-construction structural stormwater control measures	The permittee shall maintain an inventory of projects with post-construction structural stormwater control measures installed and implemented at new development and redeveloped sites, including both public and private sector sites located within the permittee's corporate limits that are covered by its post-construction ordinance requirements.

**17-18 Accomplishment**

Every BMP constructed within the City of Asheville is required to have an Operation and Maintenance (O & M) Agreement written that describes the location of the structure, lists the owner, describes the structure proper, and describes the function and required maintenance. The owner of the BMP is required to have the structure inspected by a licensed professional every year and provide the results of the inspection to the City of Asheville. The city maintains a database listing all O & M agreements located within our corporate limits, the owner's information and when the annual inspection report was received.

Staff conducts random inspections of BMPs within our corporate limits.

**17-18 Proposed Objectives**

Continue this requirement.

BMP	Measurable Goals
e. Deed Restrictions and Protective Covenants	The permittee shall provide mechanisms such as recorded deed restrictions and protective covenants that ensure development activities will maintain the project consistent with approved plans.

**17-18 Accomplishment**

The City of Asheville requires Operation and Maintenance agreements to be recorded as part of the project closeout process. The City uses this O & M agreement to ensure the post construction SCM is maintained and functions as designed. The City also maintains a hard copy of the agreement and an electronic listing of each BMP which includes the location, owner and a running list of the dates of inspections.

**18-19 Proposed Objectives**

Continue to require a recorded BMP.

BMP	Measurable Goals
f. Provide a mechanism to require long-term operation and maintenance of structural Stormwater Control Measures (SCMs)	The permittee shall implement or require an operation and maintenance plan for the long-term operation of the SCMs required by the program. The operation and maintenance plan shall require the owner of each SCM to perform and maintain a record of annual inspections of each SCM. Annual inspection of permitted structural SCMs shall be performed by a qualified professional.

**Accomplishments**

City of Asheville ordinance requires that an annual inspection of permitted structural BMPs be performed by a qualified professional and a copy sent to the city.

**18-19 Proposed Objectives**

Continue to enforce ordinance.

<b>BMP</b>	<b>Measurable Goals</b>
g. Inspections	To ensure that all stormwater control measures are being maintained pursuant to its maintenance agreement, the permittee shall conduct and document inspections of each project site covered under performance standards, at least one time during the permit term. Before issuing a certificate of occupancy or temporary certificate of occupancy, the permittee shall conduct a post-construction inspection to verify that the permittee’s performance standards have been met or a bond is in place to guarantee completion. The permittee shall document and maintain records of inspection findings and enforcement actions and make them available for review by the permitting authority.

**17-18 Accomplishments**

To ensure that all stormwater control measures are being maintained pursuant to maintenance agreements, the City of Asheville conducts and inspects each project site covered under performance standards, at least one time during the permit term. Before issuing certificate of occupancy or temporary certificate of occupancy a post-construction inspection is performed.

**18-19 Proposed Objectives**

Continue the inspections process.

<b>BMP</b>	<b>Measurable Goals</b>
h. Educational materials and training for developers	The permittee shall make available through paper or electronic means, ordinances, post-construction requirements, design standards checklist, and other materials appropriate for developers. New materials may be developed by the permittee, or the permittee may use materials adopted from other programs and adapted to the permittee’s new development and redevelopment program.

**17-18 Accomplishments**

Ordinances, post-construction requirements, design standards checklist, and other materials appropriate for developers are available electronically on our website ([www.ashevillenc.gov](http://www.ashevillenc.gov)). All close out documents are given to developers during the pre-con meetings and are available upon request.

City staff meets individually with developers as necessary.



**18-19 Proposed Objectives**

Continue to maintain website and provide documents to developers during the pre-con meetings.

<b>BMP</b>	<b>Measurable Goals</b>
i. Enforcement	The permittee shall track the issuance of notices of violation and enforcement actions. This mechanism shall include the ability to identify chronic violators for initiation of actions to reduce noncompliance.

**17-18 Accomplishments**

A file is created for all notices of violation that contains all information pertinent to the project including owner information, contractor information, project address, any permit numbers attached to the project, a copy of the written notice of violation and any photos that were taken. A digital file is also created which includes all of the aforementioned information. The digital files are broken down by year. Every time a new violation is discovered, the inspector reviews the digital files containing previous notices of violation to discover if a pattern of repeat violations is beginning to occur with a particular contractor or owner prior to the new notice of violation being written.

**18-19 Proposed Objectives**

Continue to track the issuance of notices of violation and enforcement actions.

POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

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**1. Objectives for Pollution Prevention and Good Housekeeping for Municipal Operations**

- a. Implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.
- b. Provide employee training to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance.

**2. BMPs for the Pollution Prevention and Good Housekeeping for Municipal Operations**

The permittee shall implement the following BMPs to meet the objectives of the Pollution Prevention and Good Housekeeping Program and shall notify the Division prior to modification of any goals.

BMP	Measurable Goals
a. Inventory of municipally owned or operated facilities	The permittee shall maintain current inventory of facilities and operations owned and operated by the permittee with the potential for generating polluted stormwater runoff.

**17-18 Accomplishment**

The Real Estate Manager with the City of Asheville maintains a current inventory of facilities and operations owned and operated by the City.

**18-19 Proposed Objectives**

Continue to work with the Real Estate Manager to maintain a current inventory of facilities.

BMP	Measurable Goals
b. Operation and Maintenance (O&M) for municipally owned or operated facilities	The permittee shall maintain and implement, evaluate annually and update as necessary an Operation and Maintenance (O&M) program for municipal owned and operated facilities with the potential for generating polluted stormwater runoff. The O&M program shall specify the frequency of inspections and routine maintenance requirements.

**17-18 Accomplishment**

Stormwater staff continuing to work with each individual department within the City of Asheville organization to formalize and implement an Operation and Maintenance program for each department. The O&M specifies the frequency of inspections and routine maintenance requirements.

### **18-19 Proposed Objectives**

Continue to work with each City of Asheville department on their O & M specifications.

<b>BMP</b>	<b>Measurable Goals</b>
c. Spill Response Procedures for municipally owned or operated facilities	The permittee shall have written spill response procedures for municipal operations.

### **17-18 Accomplishment**

As part of the O&M program for each City department, a written spill response procedure is included.

Spill kits and Good Housekeeping Posters have been placed at the Public Works Department vehicle yard. Small spill kits were also placed in all supervisors vehicles for the department.

### **18-19 Proposed Objectives**

Continue the O&M program for each department.

<b>BMP</b>	<b>Measurable Goals</b>
d. Streets, roads, and public parking lots maintenance	The permittee shall evaluate existing and new BMPs annually that reduce polluted stormwater runoff from municipally-owned streets, roads, and public parking lots within their corporate limits. The permittee must evaluate the effectiveness of these BMPs based on cost and the estimated quantity of pollutants removed.

### **17-18 Accomplishment**

The City of Asheville reduced polluted stormwater runoff from streets, roads and public parking lots within our corporate limits by street sweeping and the use of vacuum trucks. During this fiscal year we sweep approximately 4,853 miles of curb and gutter, our target is three to four times per year. This operation removed 1,273 tons of material from entering the streams and rivers. The City evaluates our budget annually to identify funding opportunities to be utilized toward stormwater programs.

### **18-19 Proposed Objectives**

Continue our street sweeping operations, stormwater maintenance operations and other stormwater projects.

<b>BMP</b>	<b>Measurable Goals</b>
f. Operation and Maintenance (O&M) for municipally – owned or maintained catch basins and conveyance systems	The permittee shall maintain and implement an O&M program for the stormwater sewer system including catch basins and conveyance systems that it owns and maintains.

**17-18 Accomplishments**

The City of Asheville maintenance program consists of leaf and garbage pick-up, yard waste and brush removal, street sweeping, and storm-drain cleaning and maintenance within the city's rights of way.

The City of Asheville Public Works Stormwater staff periodically cleans and inspects all catch basins in our maintained system. The Public Works Department upgrades or rehabilitates existing structures when warranted. Staff also sweep on an annual basis, our target is 3-4 times per year.

The City of Asheville Public Works Department operates two vacuum trucks that clean out storm drainage pipes and structures. The trucks have cleaned and inspected 5,338 drains this fiscal year. The city operates these trucks on a cycle and inspects and cleans areas on a periodic basis. The city also operates 3 sweepers to assist with preventing any material from entering into the storm drainage system. The City of Asheville Public Works staff also responds to complaints on storm drains and other drainage structures as needed. The City of Asheville Public Works Department staff cleans the storm drainage systems on an average of once a year or as otherwise needed with a vacuum truck.

Through these operation the city removed 1,273 tons of material that had the potential to enter the Stormwater system.

**18-19 Proposed Objectives**

Stormwater staff will continue to clean and inspect all catch basins in our system. The goal is to continue to operate vacuum trucks cleaning out storm drainage pipes on a periodic basis, continue to clean the storm drainage system on an annual basis and the City of Asheville plans to continue to perform street sweeping operations.

<b>BMP</b>	<b>Measurable Goals</b>
g. Identify municipally owned or maintained structural stormwater controls	The permittee shall a current inventory of municipally-owned or operated structural stormwater controls installed for compliance with the permittee's post-construction ordinance.

**17-18 Accomplishments**

City of Asheville has an inventory of municipally owned or operated structural stormwater controls.

**18-19 Proposed Objectives**

Continue to maintain spreadsheet.

<b>BMP</b>	<b>Measurable Goals</b>
h. O&M for municipally-owned or maintained structural stormwater controls	The permittee shall maintain and implement an O&M program for municipally-owned or maintained structural stormwater controls installed for compliance with the permittee's post-construction ordinance.

	<p>The O&amp;M program shall specify the frequency of inspections and routine maintenance requirements.</p> <p>The permittee shall inspect and maintain all municipally-owned or maintained structural stormwater controls in accordance with the schedule developed by permittee. The permittee shall document inspections and maintenance of all municipally-owned or maintained structural stormwater controls.</p>
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**17-18 Accomplishments**

Maintenance takes place on an as needed base. These are inspected routinely by City staff.

**18-19 Proposed Objectives**

Continue maintenance when needed. This coming year we have partnered with RiverLink to perform minor maintenance and inspections of the city maintained BMP's. We have a MOU with them for this.

BMP	Measurable Goals
i. Pesticide, Herbicide and Fertilizer Application Management	The permittee shall ensure municipal employees and contractors are properly trained and all permits, certifications, and other measures for applicators are followed.

**17-18 Accomplishments**

The City of Asheville Parks and Recreation department ensures that municipal employees and contractors are properly trained on application of pesticide, herbicide and fertilizer.

**18-19 Proposed Objectives**

Parks and Recreation will continue to require this training.

BMP	Measurable Goals
j. Staff training	The permittee shall implement an employee training program for employees involved in implementing pollution prevention and good housekeeping practices.

**17-18 Accomplishments**

Conducted Municipal Storm Water Pollution Prevention training to the following departments:

- Stormwater Services
- E-building NPDES Training
- Parks & Recreation Maintenance

**18-19 Proposed Objectives**

Incorporate staff training into the New Employee Orientation process.

BMP	Measurable Goals
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k. Prevent or Minimize Contamination of Stormwater Runoff from all areas used for Vehicle and Equipment Cleaning	The permittee shall describe measures that prevent or minimize contamination of the stormwater runoff from all areas used for vehicle and equipment cleaning.
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**17-18 Accomplishment**

The City has a wash bay with an oil water separator, which is connected to the sewer system, where vehicles and equipment are cleaned.

**18-19 Proposed Objectives**

Continue to require vehicles and equipment be washed at the city's wash bay.

## TOTAL MAXIMUM DAILY LOADS (TMDLs)

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1. Objective of a Water Quality Recovery Program: Reduce levels of the pollutant of concern in accordance with approved Waste Load Allocation (WLAs) assigned to stormwater in an approved TMDL. N/A
2. The Permittee shall comply with the requirement of an approved TMDL. N/A
3. Within 12 months of the final approval of a TMDL, the permittee's annual reports shall include a description of existing programs, controls, partnerships, projects, and strategies to address impaired waters and a brief explanation as to how the programs, controls, partnerships, projects and strategies address impaired waters. N/A
4. Within 24 months of the final approval of a TMDL, the permittee's annual reports shall include an assessment of whether additional structural and/or non-structural BMPs are necessary to address impaired waters and a brief explanation as to how the programs, controls, partnerships, projects and strategies address impaired waters. N/A
5. Within 36 months of the final approval of a TMDL, the permittee's annual reports shall include a description of activities expected to occur and when the activities are expected to occur. N/A
6. If there was no storm water load allocation in the TMDL, in lieu of developing a Water Quality Recovery Plan, the permittee shall evaluate strategies and tailor and/or expand BMPs within the scope of the six minimum measures to enhance water quality recovery strategies in the watershed(s) to which the TMDL applies. The permittee shall describe the strategies and tailored and/or expanded BMPs in their Stormwater Management Plan and annual reports.