

Draft Stormwater Management Plan
Town of Mooresville
NCS000540

April 8, 2024

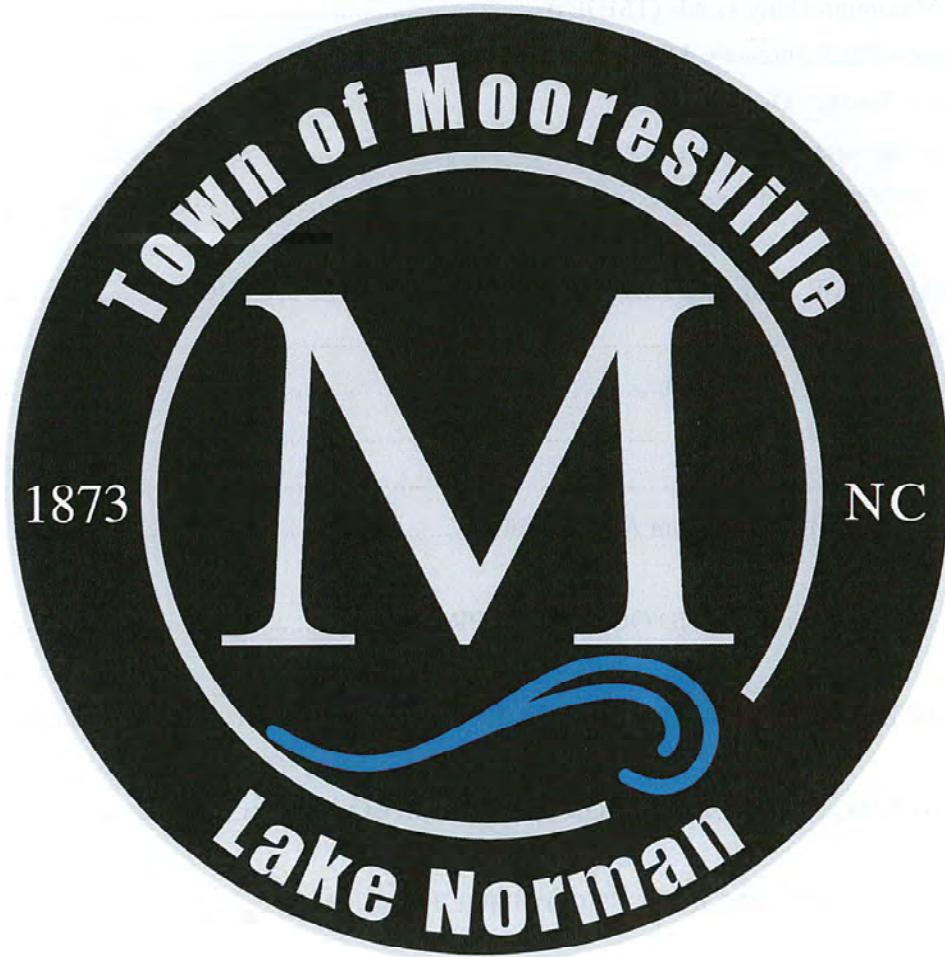


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PART 1: INTRODUCTION

The purpose of this Stormwater Management Plan (SWMP) is to establish and define the means by which the Town of Mooresville will comply with its National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit and the applicable provisions of the Clean Water Act to meet the federal standard of reducing pollutants in stormwater runoff to the maximum extent practicable.

This SWMP identifies the specific elements and minimum measures that the Town of Mooresville will develop, implement, enforce, evaluate and report to the North Carolina Department of Environmental Quality (NCDEQ) Division of Energy, Minerals and Land Resources (DEMLR) in order to comply with the MS4 Permit number NCS000540, as issued by NCDEQ. This permit covers activities associated with the discharge of stormwater from the MS4 as owned and operated by the Town of Mooresville and located within the corporate limits of the Town of Mooresville.

In preparing this SWMP, the Town of Mooresville has evaluated its MS4 and the permit requirements to develop a comprehensive 5-year SWMP that will meet the community's needs, address local water quality issues and provide the minimum measures necessary to comply with the permit. The SWMP will be evaluated and updated annually to ensure that the elements and minimum measures it contains continue to adequately provide for permit compliance and the community's needs.

Once the SWMP is approved by NCDEQ, all provisions contained and referenced in this SWMP, along with any approved modifications of the SWMP, are incorporated by reference into the permit and become enforceable parts of the permit. Any major changes to the approved SWMP will require resubmittal, review and approval by NCDEQ, and may require a new public comment period depending on the nature of the changes.

PART 2: CERTIFICATION

By my signature below I hereby 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 on 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.

I am also aware that the contents of this document shall become an enforceable part of the NPDES MS4 Permit, and that both the Division and the Environmental Protection Agency have NPDES MS4 Permit compliance and enforcement authority.

- I am a ranking elected official.
- I am a principal executive officer for the permitted MS4.
- I am a duly authorized representative for the permitted MS4 and have attached the authorization made in writing by a principal executive officer or ranking elected official which specifies me as (*check one*):
 - A specific individual having overall responsibility for stormwater matters.
 - A specific position having overall responsibility for stormwater matters.

Signature:	
Print Name:	RYAN K. RASE
Title:	Assistant Town Manager
Signed this	11 th day of April 2024.

PART 3: MS4 INFORMATION

3.1 Permitted MS4 Area

This SWMP applies throughout the corporate limits of the Town of Mooresville, including all regulated activities associated with the discharge of stormwater from the MS4. The map below shows the corporate limits of the Town of Mooresville as of the date of this document.

Town of Mooresville Corporate Limits



■ Town Limits
■ ETJ

0 0.5 1 2 Miles



3.2 Existing MS4 Mapping

The current MS4 mapping includes Drainage Structures, Drainage Pipes and Detention Areas. Drainage Structures are broken down into subtypes such as catch basins, slab inlet, manhole, etc. Feature layers contains information such as size, material, condition, and ownership where available.

Table 1: Summary of Current MS4 Mapping

Percent of MS4 Area Mapped	90	%
No. of Major Outfalls* Mapped	211	Total (approx.)

*An outfall is a point where the MS4 discharges from a pipe or other conveyance (e.g. a ditch) directly into surface waters. Major outfalls are required to be mapped to meet permit requirements. A major outfall is a 36-inch diameter pipe or discharge from a drainage area > 50-acres; and for industrial zoned areas a 12-inch diameter pipe or a drainage area \geq 2-acres.

3.3 Receiving Waters

The Town of Mooresville MS4 is located within the Catawba and Yadkin/Pee-Dee River Basins and discharges directly into receiving waters as listed in Table 2 below. Applicable water quality standards listed below are compiled from the following NCDEQ sources:

- [Waterbody Classification Map](#)
- [Impaired Waters and TMDL Map](#)
- Most recent NCDEQ Final [303\(d\) List](#)

Table 2: Summary of MS4 Receiving Waters

Receiving Water Name	Stream Index / AU Number	Water Quality Classification	303(d) Listed Parameter(s) of Interest
Byers Creek	11-89-(1)	WS-IV	
Byers Creek	11-89-(2)	WS-IV; CA	
Davidson Creek	11-106	WS-IV; CA	
McCravy Creek	11-91.	WS-IV,B; CA	
Reeds Creek	11-104-(1)	WS-IV,B	
Reeds Creek	11-104-(2)	WS-IV,B; CA	
Work Creek	11-105	WS-IV,B; CA	
Back Creek	12-108-21-1-(0.5)	WS-II;HQW	
Dye Branch	13-7-2	C	Benthos (Nar, AL, FW)
Rocky River	13-17	C	Benthos (Nar, AL, FW). Turbidity (50 NTU, AL, FW miles)
South Fork Withrow Creek	12-108-21-3-2	C	
West Branch Rocky River	13-7-3	C	

3.4 MS4 Interconnection

The MS4name MS4 is not interconnected with another regulated MS4 and directly discharges to the receiving waters as listed in Table 2 above.

3.5 Total Maximum Daily Loads (TMDLs)

The TMDL(s) listed in Table 3 below have been approved within the MS4 area, as determined by the map and list provided on the [NCDEQ Modeling & Assessment Unit web page](#). The table also indicates whether the approved TMDL has a specific stormwater Waste Load Allocation (WLA) for any watershed directly receiving discharges from the permitted MS4, and whether a Water Quality Recovery Program has been implemented to address the WLA.

Table 3: Summary of Approved TMDLs

Water Body Name	TMDL Pollutant(s) of Concern	Stormwater Waste Load Allocation (Y/N)	Water Quality Recovery Program (Y/N)
Rocky River	Fecal Coliform	N	N

TMDL for fecal coliform was approved in September 2002 but does not include an approved WLA for stormwater. Rocky River is listed on the 303(d) list for a turbidity impairment as of 1998 (IRCategory 3a1) and a Benthos Fair impairment as of 1998 (IR Category 5).

3.6 Endangered and Threatened Species and Critical Habitat

Significant populations of threatened or endangered species and/or critical habitat are not identified within the regulated MS4 urbanized area. Based upon a review of the [Endangered and Threatened Species and Species of Concern by County for North Carolina Map](#) and [Listed species believe to or known to occur in North Carolina map](#) as provided by the [U.S. Fish and Wildlife Service, the species listed in Table 4 have the potential to occur within the regulated MS4 urbanized area](#). Of those species listed, Table 4 summarizes the species that may be significantly impacted by the quality of surface waters within their habitat.

Table 4: Potential Federally Listed Species/Habitat Impacted by Surface Water Quality

Scientific Name	Common name	Species Group	Federal Listing Status
<i>Helianthus schweinitzii</i>	Schweinitz's sunflower	Flowering Plants	Endangered
<i>Danaus plexippus</i>	monarch butterfly	Insects	Candidate
<i>Clemmys muhlenbergii</i>	bog turtle	Reptiles	Similarity of Appearance (Threatened)
<i>Hexastylis naniflora</i>	Dwarf-flowered heartleaf	Flowering Plants	Threatened

3.7 Industrial Facility Discharges

The Town of Mooresville MS4 jurisdictional area includes the following industrial facilities which hold NPDES Industrial Stormwater Permits, as determined from the [NCDEQ Maps & Permit Data web page](#).

Table 5: NPDES Stormwater Permitted Industrial Facilities

Permit Number	Facility Name
NCG110065	Rocky River WWTP
NCG060317	Bay State Milling Company
NCG130071	Nelco Recycling & Aggregate Co.
NCG140335	Concrete Supply Co-Mooresville
NCG140290	Thomas Concrete of Carolina, Inc.-Mooresville Plant
NCG050088	L B Plastics Incorporated
NCG070060	NGK Ceramics USA Inc
NCG170429	SHD Composite Materials Inc
NCG060346	Carolina Beverage Group LLC
NCG170418	Berry Global Mooresville
NCG050405	West Rock- Southern Container LLC
NCG050380	Pactiv LLC - Mooresville Plant
NCG070206	Cardinal FG
NCG030681	MacLean Curtis LLC
NCG081010	TOM Public Operations Facility

3.8 Non-Stormwater Discharges

The water quality impacts of non-stormwater discharges have been evaluated by the Town of Mooresville as summarized in Table 6 below. The unpermitted non-stormwater flows listed as incidental do not significantly impact water quality. The Town of Mooresville has evaluated residential and charity car washing and street washing for possible significant water quality impacts.

Street washing discharges are addressed under the Pavement Management Program in Part 10 of this SWMP. The Division has not required that other non-stormwater flows be specifically controlled by the Town of Mooresville.

Wash water associated with car washing that does not contain detergents or does not discharge directly into the MS4 is considered incidental. However, these types of non-stormwater discharges that do contain detergents have been evaluated by the Town of Mooresville to determine whether they may significantly impact water quality. These discharges were determined to be a possible cause of water quality impacts and will be addressed through the public education and outreach program (BMP 3 & 6) and pollution prevention and good housekeeping program (BMP 55-56).

Table 6: Non-Stormwater Discharges

Non-Stormwater Discharge	Water Quality Impacts
Water line and fire hydrant flushing	Incidental
Landscape irrigation	Incidental
Diverted stream flows	Incidental
Rising groundwater	Incidental
Uncontaminated groundwater infiltration	Incidental

Uncontaminated pumped groundwater	Incidental
Uncontaminated potable water sources	Incidental
Foundation drains	Incidental
Air conditioning condensate	Incidental
Irrigation waters	Incidental
Springs	Incidental
Water from crawl space pumps	Incidental
Footing drains	Incidental
Lawn watering	Incidental
Residential and charity car washing	Possible
Flows from riparian habitats and wetlands	Incidental
Dechlorinated swimming pool discharges	Incidental
Street wash water	Possible
Flows from firefighting activities	Incidental

3.9 Target Pollutants and Sources

In addition to those target pollutants identified above, the Town of Mooresville is not aware of other significant water quality issues within the permitted MS4 area.

Table 7 below summarizes the water quality pollutants identified throughout Part 3 of this SWMP, the likely activities/sources/targeted audiences attributed to each pollutant, and identifies the associated SWMP program(s) that address each. In addition, the Town of Mooresville has evaluated schools, homeowners, businesses and municipal employees as target audiences that are likely to have significant stormwater impacts. Schools were selected as a target audience due to the opportunity to educate the next generation on the importance of protecting our waterways. Homeowners and businesses were selected as they are among the highest contributors to non-point pollution through poor practices. Municipal employees were selected due to the nature of their job and the opportunity to educate staff who can pass along their knowledge and the use of Best Management Practices outside of the workplace.

Table 7: Summary of Target Pollutants and Sources

Target Pollutant(s)	Likely Source(s)/Target Audience(s)	SWMP Program Addressing Target Pollutant(s)/Audience(s)
Yard Waste (Grass Clippings, leaves)	Residential, Commercial (Landscaping companies)	Public Education & Outreach Pollution Prevention and Good Housekeeping
Trash	Residential, commercial, schools, Garbage and litter, Illegal Dumping	Public Education & Outreach Public Involvement & Participation
Fecal Coliform	Residential areas, sewer overflows, failing septic systems, Public open areas, pet waste, urbanization	Public Education & Outreach Illicit Discharge

Chemicals	Residential areas (household chemicals), commercial (automotive fluids, paint, cleaner, etc.)	Public Education & Outreach Illicit Discharge Pollution Prevention & Good Housekeeping
Sediment	Construction Activity	Public Education & Outreach, Construction Post-construction
Fats, Oils and Grease	Businesses (restaurants)	Public Education & Outreach Illicit Discharge
Illicit Discharges	General Public, Businesses, Municipal Employees	Public Education & Outreach Illicit Discharge Pollution Prevention & Good Housekeeping
Illegal Dumping & Improper Disposal of Waste	General Public, Businesses, Municipal Employees	Public Education & Outreach Illicit Discharge Pollution Prevention & Good Housekeeping

Source: www.epa.gov/npdes/npdes-best-practices

Due to the nature of each pollutant, Town Funds may be expended for outreach and education activities, construction activities, and enforcement actions.

The following table identifies the different categories of pollution and the activities that may be required to address them. It is important to note that the activities listed in the table are not exhaustive, but rather a general overview of what may be required to address each category. The activities listed in the table are intended to provide a starting point for developing a comprehensive pollution prevention and control plan. It is recommended that the activities listed in the table be modified to fit the specific needs of the community and the unique characteristics of the area.

Source: www.epa.gov/npdes/npdes-best-practices

PART 4: STORMWATER MANAGEMENT PROGRAM ADMINISTRATION

4.1 Organizational Structure

The Town of Mooresville has undergone significant restructuring since the last permit cycle. As of October 2022, the Stormwater Division was moved from under Engineering to Water Resources. The department consists of nine full-time positions, two of which are administrative positions dedicated to NPDES permit compliance. The maintenance side consists of a crew of five and one dedicated street sweeper position. Some elements of the Post Construction program are still executed through the Engineering department such as plan reviews, CO's, etc.

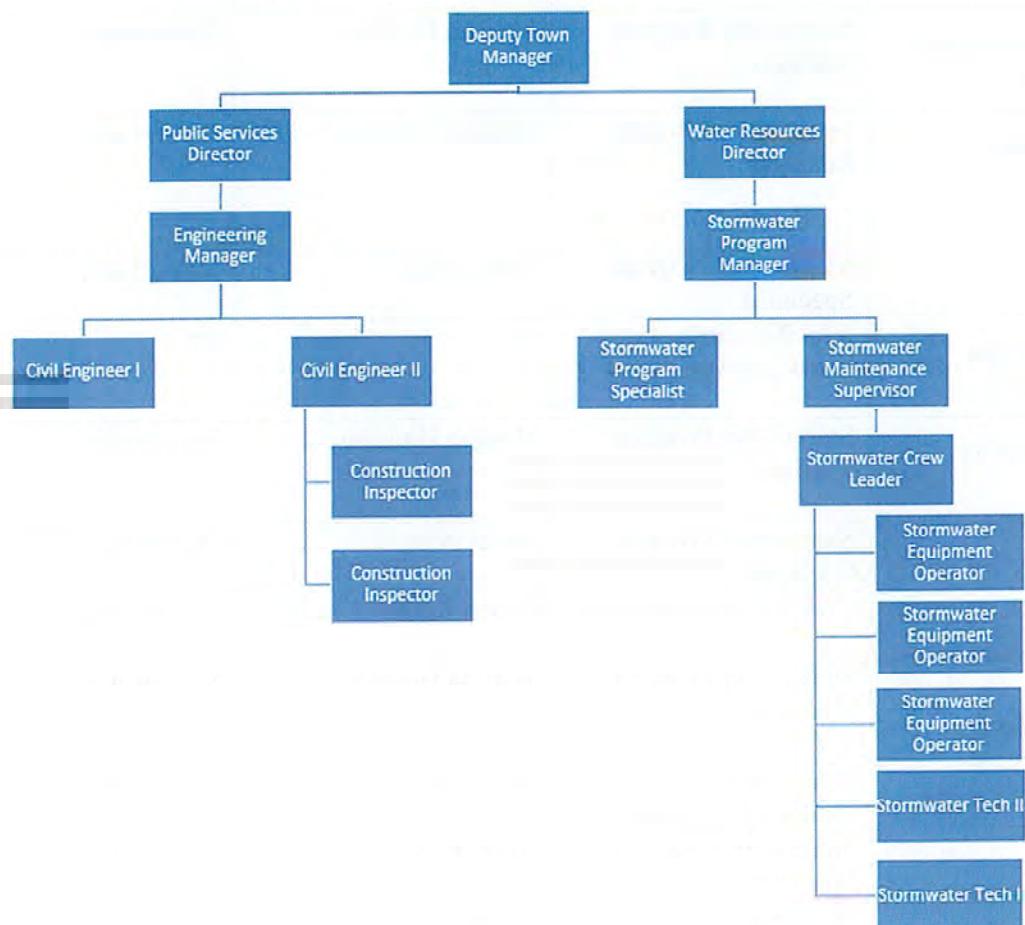


Table 8: Summary of Responsible Parties

SWMP Component	Responsible Position	Staff Name	Department
Stormwater Program Administration	Stormwater Program Manager	Marissa Houston	Stormwater
SWMP Management	Stormwater Program Manager	Marissa Houston	Stormwater
Public Education & Outreach	Stormwater Program Manager	Marissa Houston	Stormwater
Public Involvement & Participation	Stormwater Program Manager	Marissa Houston	Stormwater
Illicit Discharge Detection & Elimination	Stormwater Program Manager	Marissa Houston	Stormwater
	Stormwater Program Specialist	James Pope	Stormwater
Construction Site Runoff Control	Iredell County Interlocal Agreement	n/a	n/a
Post-Construction Stormwater Management	Stormwater Program Manager	Marissa Houston	Stormwater
	Stormwater Program Specialist	James Pope	Stormwater
	Civil Engineer II	Robert Kepley	Engineering
Pollution Prevention/Good Housekeeping for Municipal Operations	Stormwater Program Manager	Marissa Houston	Stormwater
	Stormwater Maintenance Supervisor	Nick Lynch	Stormwater
	Stormwater Program Specialist	James Pope	Stormwater
Municipal Facilities Operation & Maintenance Program	Stormwater Program Manager	Marissa Houston	Stormwater
	Stormwater Program Specialist	James Pope	Stormwater
Spill Response Program	Stormwater Program Specialist	James Pope	Stormwater
MS4 Operation & Maintenance Program	Stormwater Maintenance Supervisor	Nick Lynch	Stormwater

Municipal SCM Operation & Maintenance Program	Stormwater Program Manager	Marissa Houston	Stormwater
	Stormwater Program Specialist	James Pope	Stormwater
	Stormwater Maintenance Supervisor	Nick Lynch	Stormwater
Pesticide, Herbicide & Fertilizer Management Program	Stormwater Program Specialist	James Pope	Stormwater
Vehicle & Equipment Cleaning Program	Stormwater Program Specialist	James Pope	Stormwater
Pavement Management Program	Stormwater Maintenance Supervisor	Nick Lynch	Stormwater
Total Maximum Daily Load (TMDL) Requirements	Stormwater Program Manager	Marissa Houston	Stormwater

4.2 Program Funding and Budget

In accordance with the issued permit, the Town of Mooresville shall maintain adequate funding and staffing to implement and manage the provisions of the SWMP and comply with the requirements of the NPDES MS4 Permit. The budget includes the permit administering and compliance fee, which is billed by the Division annually.

The Town's Stormwater Department is currently funded using the stormwater utility fee that was established in January 2015. The current utility fee is set at \$3.40/ERU (1 ERU=2200sqft). The annual revenue of the stormwater utility fee for fiscal year 2021 was approximately \$1,879,480 and is used for permit compliance, maintenance of the Town's MS4 and capital improvements to the Town's MS4. The fiscal year 2022 Stormwater rate study showed current rates to be proficient to cover projected expenses over a five-year period.

4.3 Shared Responsibility

The Town of Mooresville will share the responsibility to implement the following minimum control measures, which are at least as stringent as the corresponding NPDES MS4 Permit requirement. The Town of Mooresville remains responsible for compliance if the other entity fails to perform the permit obligation, and may be subject to enforcement action if neither the Town of Mooresville nor the other entity fully performs the permit obligation. Table 9 below summarizes who will be implementing the component, what the component program is called, the specific SWMP BMP or permit requirement that

is being met by the shared responsibility, and whether or not a legal agreement to share responsibility is in place.

Table 9: Shared Responsibilities

SWMP BMP or Permit Requirement	Implementing Entity & Program Name	Legal Agreement (Y/N)
3.2 Public Education and Outreach Program	Regional Stormwater Partnership of the Carolinas	Y
3.5 Construction Site Runoff Program	Iredell County Interlocal Agreement for Enforcement Services of Iredell County Soil Erosion and Sediment Control Ordinance	Y

4.4 Co-Permittees

The are no other entities applying for co-permittee status under the NPDES MS4 permit number NCS000540 for the Town of Mooresville. Table 10 summarizes contact information for each co-permittee.

Table 10: Co-Permittee Contact Information

Co-Permittee MS4 Name	Contact Person	Phone & E-Mail	Interlocal Agreement (Y/N)
N/A	N/A	N/A	N/A

4.5 Measurable Goals for Program Administration

The Town of Mooresville will manage and report the following Best Management Practices (BMPs) for the administration of the Stormwater Management Program.

Table 11: Program Administration BMPs

Permit Ref.	2.1.2 and Part 4: Annual Self-Assessment Measures to evaluate the performance and effectiveness of the SWMP program components at least annually. Results shall be used by the permittee to modify the program components as necessary to accomplish the intent of the Stormwater Program. The self-assessment reporting period is the fiscal year (July 1 – June 30).
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Table 11: Program Administration BMPs

BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
1.	Annual Self-Assessment Evaluate the performance and effectiveness of the program components at least annually. Results shall be used to modify the program components as necessary to accomplish the intent of the Stormwater Program.	1. Prepare, conduct and document an annual evaluation of the program components.	1. Annually Permit Years 1 – 5	1. Yes/No
2.	Ensure Adequate Staff and Funding Evaluate current program funding and staff to ensure program is receiving adequate resources.	1. Conduct a documented analysis of funding and personnel. 2. Review financials and personnel on an annual basis.	1. Permit year 1 2. Permit year 2-5	1. Adequate/Inadequate 2. Adequate/Inadequate
Permit Ref.	1.6: Permit Renewal Application Measures to submit a permit renewal application no later than 180 days prior to the expiration date of the NPDES MS4 permit.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
3.	Permit Renewal Application Submit a permit renewal application and Draft SWMP no later than 180 prior to permit expiration.	1. Draft SWMP applicable to the proceeding 5 years and submit to DEQ with permit renewal application. 2. Certify the stormwater permit renewal application (Permit renewal application form and Draft SWMP for the next 5-year permit cycle) and submit to NCDEQ at least 180 days prior to permit expiration.	1. Permit Year 5 2. Permit Year 5	1. Yes/No 2. Date of permit renewal application submittal
4.	Written Required Procedures			

Table 11: Program Administration BMPs

	Written procedures for each minimum measure will be put in place and reviewed on an annual basis.	1. Establish written procedures for each minimum measure	1. Permit Year 1	1. Yes/No
		2. Review all written programs and update as needed on an annual basis.	2. Permit Year 2-5	2. Yes/No

PART 5: PUBLIC EDUCATION AND OUTREACH PROGRAM

The Town of Mooresville will implement a Public Education and Outreach Program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and steps the public can take to reduce pollutants in storm water runoff.

The target audiences and identified pollutants listed in Part 3.9 of this SWMP, which will be addressed by the Public Education and Outreach Program, are summarized in Table 12 below. In addition, the Town of Mooresville is required to inform businesses and the general public of the hazards associated with illicit discharges, illegal dumping and improper disposal of waste.

Table 12: Summary of Target Pollutants & Audiences

Target Pollutants/Sources	Target Audience(s)
Grass Clippings, leaves and yard waste	General Public, Businesses, Municipal Employees
Trash	General Public, Businesses, Municipal Employees
Pet waste	General Public, Youth
Automotive Fluids	General Public, Businesses, Municipal Employees
Litter	General Public, Businesses, Youth
Illicit Discharges	General Public, Businesses, Municipal Employees, Youth
Illegal Dumping	General Public, Businesses, Municipal Employees
Improper Disposal of Waste	General Public, Businesses, Municipal Employees
Fecal Coliform	Septic system owners, Municipal Employees, Pet owners

The Town of Mooresville will manage, implement and report the following public education and outreach BMPs.

Table 13: Public Education and Outreach BMPs

Permit Ref.	3.2.2 and 3.2.4: Outreach to Targeted Audiences			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
5.	General Education Stormwater Handouts			
	Stormwater education handouts will be distributed to the general public and businesses.	1. Review and update Target Pollutants/Sources and Target Audiences.	1. Once, Permit year 1	1. Yes/No/Partial

Table 13: Public Education and Outreach BMPs

	Topics that will be addressed are general stormwater awareness and targeted education to address the target pollutants/sources in Table 12.	2. Review and update Targeted Education handouts. 3. Distribute handouts to Town offices and facilities. 4. Distribute applicable handouts in the field during illicit discharge investigations. 5. Mail applicable handouts with illicit discharge Notices of Violation (NOVs). 6. Distribute handouts at Town festivals and events.	2. Once, Permit year 1 3. Annually, Permit years 1-5 4. Continuously, Permit years 1-5 5. Continuously, Permit years 1-5 6. Continuously, Permit years 1-5	2. Yes/No; 3. Yes/No; Number of handouts left at each facility 4. Yes/No; Number of handouts distributed 5. Yes/No; Number of handouts mailed 6. Yes/No; Number of handouts distributed
6.	Public Event Outreach Provide general stormwater education, targeted education, and information about volunteer opportunities during at least one Town sponsored event annually.	1. Coordinate a Stormwater booth for at least one Town sponsored event or festival per year. 2. Document approximate number of interactions with public at each Town event or festival	1. Annually, Permit years 1-5 2. Continuously, Permit years 1-5	1. Yes/No; Number of events attended 2. Number of staff contact hours
7.	Youth Presentations Continue to participate in day camps and after school programs at Town recreation facilities. Stormwater administrative personnel will participate in a youth program/event at least once a year. Information will include general stormwater awareness, pollution prevention and target pollutant information where applicable.	1. Stormwater administrative personnel will participate in at least one youth program/event per year. 2. Document number of youth interactions.	1. Annually, Permit years 1-5 2. Continuously, Permit years 1-5	1. Number of events attended 2. Topic and number of youth attendees per presentation/event
8.	Utility Bill Insert (Town Voice)			

Table 13: Public Education and Outreach BMPs

	<p>Stormwater topics will be published in the Town Voice four times a year. The Town Voice is a publication sent out to all residents and businesses receiving a utility bill.</p> <p>Topics that will be addressed are general stormwater awareness and targeted education to address the target pollutants/sources in table 12. Additional topics may be selected based on Town wide issues.</p>	1. Develop content to be included in Town Voice articles and provide to Communications and Marketing Department at least four times a year.	1. Continuously, Permit Year 1-5	1. Yes/No
		2. Document the number of articles published in the Town Voice or other paper media outlet.	2. Continuously, Permit Year 1-5	2. Number of topics published
9. Partnership with Regional Stormwater Partnership of the Carolinas (RSPC)				
	Maintain partnership with the RSPC and collaborate with members to educate and bring awareness to the public about stormwater issues and their impact on water quality and the environment.	1. Review Memorandum of Understanding to assure RSPC has the authority to implement this program on the Town's behalf.	1. Once, Permit Year 1-5	1. Yes/No
		2. Maintain membership with RSPC.	2. Annually, Permit Year 1-5	2. Yes/No/Partial; confirm payment of membership dues
		3. Document exposure for media campaigns.	3. Continuously, Permit years 1-5	3. Number of listeners, viewers, attendees, etc.
10. Annual Report				
	Develop an annual stormwater report for the public that highlights accomplishments for the department during the Fiscal Year. Report will be made available to the public on the Town website (see BMP 9.2)	1. Develop an annual stormwater report for the public.	1. Annually, Permit Year 1-5	1. Yes/No

Table 13: Public Education and Outreach BMPs

Permit Ref.	2.1.7, 3.2.3 and 3.6.5(c): Web Site Measures to provide a web site designed to convey the program's message(s) and provide online materials including ordinances, or other regulatory mechanisms, or a list identifying the ordinances or other regulatory mechanisms, providing the legal authority necessary to implement and enforce the requirements of the permit and SWMP. The web page shall also provide developers with all relevant post-construction requirements, design standards, checklists and/or other materials.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
11.	Town Stormwater Website			
	The Town of Mooresville Stormwater department will continue to maintain an informational website for use by residents, businesses, and developers. Content will consist of information on the Town's stormwater program including MS4 permit, current SWMP, annual report, applicable ordinances and The website will also include resources for developers and advertise the stormwater hotline and an online mechanism for reporting stormwater questions or concerns.	1. Include information on the stormwater program 2. Include information for developers 3. Maintain the stormwater web page (keep forms and contact information up to date) 4. Update Town Stormwater page with most recent Fiscal Year annual report 5. Continue to advertise website on educational materials and presentations	1. Once, Permit Year 1 2. Once, Permit Year 1 3. Continuously, Permit Year 1-5 4. Annually, Permit Year 1-5 5. Continuously, Permit Year 1-5	1. Yes/No/Partial 2. Yes/No/Partial 3. Yes/No/Partial 4. Yes/No/Partial 5. Yes/No/Partial
Permit Ref.	3.2.5: Stormwater Hotline Measures for a stormwater hotline/helpline for the purpose of public education and outreach.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
12.	Maintain Stormwater Hotline			
	The Town will continue to maintain and promote a stormwater hotline for the purpose of public education and outreach. The Stormwater Hotline is the general line for the Public Services facility. Administrative staff are trained to forward stormwater related calls to the appropriate staff member.	1. Maintain a stormwater hotline phone number for public use 2. Continue to advertise phone number on educational materials and presentations 3. Establish staff responsible for answering inquiries that come in on stormwater hotline.	1. Continuously, Permit Year 1-5 2. Continuously, Permit Year 1-5 3. Once, Permit Year 1	1. Yes/No/Partial 2. Yes/No/Partial 3. Yes/No/Partial

Table 13: Public Education and Outreach BMPs

		4.Train hotline staff on general stormwater education, complaint call protocols and appropriate contacts for referral of stormwater issues	4. Annually, Permit Year 1-5	4. Yes/No/Partial
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PART 6: PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM

This SWMP identifies the minimum elements and implementation of a Public Involvement and Participation Program that complies with applicable State, Tribal and local public notice requirements. The Town of Mooresville will manage, implement and report the following public involvement and participation BMPs.

Table 14: Public Involvement and Participation BMPs

Permit Ref.	3.3.1: Public Input Mechanisms for public involvement that provide for input on stormwater issues and the stormwater program.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
13.	Stormwater Survey			
	Administrative staff will develop online surveys to provide residents and businesses with the opportunity to provide feedback on the Town's stormwater program. Surveys will also gauge public knowledge on stormwater issues and perceptions on water quality.	1. Develop stormwater surveys to provide citizens with an opportunity to submit feedback on the stormwater program. 2. Make the stormwater survey available year-round on the Town Stormwater Website 3. Advertise the Stormwater survey at least once per year on Town social media and in Town Voice.	1. Annually, Permit Year 1-5 2. Continuously, Permit Year, 1-5 3. Annually, Permit Year 1-5	1. Number of survey responses 2. Yes/No/Partial 3. Yes/No/Partial Number of media posts/articles
14.	Public Meetings			
	The Town will hold public meetings to give the public an opportunity to provide input on the stormwater program and discuss any stormwater issues in the community.	1. The Town will hold two meetings to allow for public input on the stormwater program	1. Permit Year 1 and Permit Year 5	1. Yes/No/Partial Number of meetings held Number of attendees
15.	Stormwater Hotline			
	The Town will continue to promote the hotline for public education and involvement. The Stormwater Hotline is the general line for the Public Services facility. Administrative staff are trained to forward stormwater	1. Train hotline staff on general stormwater education, complaint call protocols and appropriate contacts for referral of stormwater issues	1. Annually, Permit Year 1-5	1. Yes/No/Partial

Table 14: Public Involvement and Participation BMPs

	related calls to the appropriate staff member.	2. Trained staff will monitor the hotline for stormwater related inquiries.	2. Annually, Permit Year 1-5	2. Number of stormwater related calls received by hotline
16.	Online Reporting Mechanism			
	The Town of Mooresville website hosts an online tool for citizens to report issues directly to the appropriate Town department.	1. Maintain an online reporting tool to be advertised on the Town website.	1. Annually, Permit Year 1-5	1. Number of reports received by Stormwater department
Permit Ref.	3.3.2: Volunteer Opportunities Measures to provide volunteer opportunities designed to promote ongoing citizen participation.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
17.	Storm Drain Marking			
	Maintain and continue to promote the Storm Drain Marking volunteer program. Storm drain marking events may be organized by stormwater staff. Individuals and groups will also have the opportunity to volunteer on their own throughout the year.	1. Advertise volunteer opportunity year-round on the Town's Community Connect volunteer platform 2. Organize at least one storm drain marking event a year	1. Continuously, Permit Year, 1-5 2. Annually, permit year 1-5	1. Yes/No/Partial 2. Number of events Number of participants Number of drains marked
18.	Adopt-A-Drain			
	Maintain and continue to promote the Adopt-A-Drain volunteer program. The Adopt-A-Drain program is hosted through an ArcGIS Experience website to be maintained by Stormwater Administrative staff. Participants make a 1-year commitment to adopt a storm drain(s) of their choosing and are required to submit monthly monitoring reports.	1. Advertise volunteer opportunity year-round on the Town's Stormwater Website 2. Maintain an interactive website for Adopt-A-Drain program	1. Continuously, Permit Year, 1-5 2. Annually, permit year 1-5	1. Yes/No/Partial 2. Yes/No/Partial Number of drains adopted Number of monitoring reports received
19.	Creek Week			
	The Town will hold an Annual Creek week celebration full of stormwater educational presentations, activities, and volunteer events.	1. Hold annual Creek Week	1. Annually, permit year 1-5	1. Yes/No Number of event sign ups Number of staff contact hours
20.	Stream Clean-Up Events			

Table 14: Public Involvement and Participation BMPs

The Town will sponsor at least one stream cleanup event each year geared towards the general public. The goal of events will be removing trash and debris from local waterways and educate the public on the impacts of stormwater runoff to local waterways.	1. Stormwater staff will identify areas affected by high volume of trash/litter or illegal dumping sites that volunteers can assist in cleaning.	1. Annually, permit year 1-5	1. Yes/No/partial
	2. Coordinate at least 1 cleanup event for a local waterway	2. Annually, permit year 1-5	2. Number of clean-up events held Number of participants Tonnage of waste removed

PART 7: ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

The Town of Mooresville will develop, manage, implement, document, report and enforce an Illicit Discharge Detection and Elimination Program which shall, at a minimum, include the following illicit discharge detection and elimination BMPs.

Table 15: Illicit Discharge Detection and Elimination BMPs

Permit Ref.	3.4.1: MS4 Map Measures to develop, update and maintain a municipal storm sewer system map including stormwater conveyances, flow direction, major outfalls and waters of the United States receiving stormwater discharges.			
	A	B	C	D
BMP No.	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
21.	Additions to Stormwater System Inventory			
	The Town stormwater database consists of Drainage Structures, Drainage Pipes and Detention Areas. Data was collected by various Engineering and GIS staff over the years as well as by a separate consultant back in 2016. The Town GIS department has had significant turnover over the past 3 years so as-built data from new projects has not inventoried. There are also some data gaps for existing data collected in the field by Town personnel. The Town will be contracting a consultant to update Town utility GIS inventories. Consultant will be inputting infrastructure from new developments and filling in data gaps.	1. The Town will contract a GIS consultant to input backlogged as-built data 2. Add flow directions to the map for existing infrastructure	1. Permit Year 1 2. Beginning permit Year 2 and continuously until complete	1. Yes/No/Partial Number of drainage structures, drainage pipes and detention areas added to inventory 2. % corrected for flow direction
22.	Continuous Updates to MS4 Map			
	The Town will maintain a current map of the storm sewer system including stormwater conveyances, flow direction, major outfalls and receiving waters.	1. Add infrastructure to the stormwater conveyance inventory for new developments and newly located existing assets 2. Continue to update data gaps and missing attribute information for existing infrastructure	1. Continuously, Permit Year 2-5 2. Continuously, Permit Year 2-5	1. Number of assets added to inventory annually 2. Number of assets updated

Table 15: Illicit Discharge Detection and Elimination BMPs

Permit Ref.	3.4.2: Regulatory Mechanism Measures to provide an IDDE ordinance or other regulatory mechanism that provides legal authority to prohibit, detect, and eliminate illicit connections and discharges, illegal dumping and spills into the MS4, including enforcement procedures and actions.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
23.	Maintain Adequate Legal Authorities			
	The Town will maintain its existing ordinance (Mooresville Code of Ordinances Ch. 25 Post Construction and Illicit Discharge and Connection) that came into effect on September 2, 2014. This ordinance provides legal authority to prohibit, detect, and eliminate illicit connections and discharges, illegal dumping and spills into the MS4, including enforcement procedures and actions.	1. Review ordinance and update if revision is required to maintain legal authority	1. Annually, Permit Year 1-4	1. Yes/No Date Reviewed report if a revision is required and if a revision is made
Permit Ref.	3.4.3: IDDE Plan Measures to maintain and implement a written IDDE Plan to detect and address illicit discharges, illegal dumping and any non-stormwater discharges identified as significant contributors of pollutants to the MS4. The plan shall provide standard procedures and documentation to: a) Locate priority areas likely to have illicit discharges, b) Conduct routine dry weather outfall inspections, c) Identify illicit discharges and trace sources, d) Eliminate the source(s) of an illicit discharge, and e) Evaluate and assess the IDDE Program.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
24.	Dry Weather Screening Program			
	The Town will perform dry weather screening of major outfalls (no rain in the previous 72 hours) to proactively identify illicit discharges and connections. Procedures for conducting screening are maintained within the IDDE plan and are to be followed by all staff.	1. Inspect 50% of major outfalls within the MS4 annually with goal of inspecting all outfalls twice within the permit cycle 2. Record number of illicit discharges detected	1. Annually, Permit Year 1-5 2. Annually, Permit Year 1-5	1. % of Outfalls Inspected 2. Number of Illicit Discharges and Connections identified as a result of Dry Weather Program

Table 15: Illicit Discharge Detection and Elimination BMPs

25.	Detection and Elimination			
	As another proactive approach for illicit discharge detection, stormwater staff will routinely inspect areas in Town that are deemed to have a high potential for illicit discharges. High risk industries such as mobile pet grooming, vehicle washing, vehicle detailing, landscaping, etc. may also be observed in the field to assure compliance with the Town's Illicit Discharge Ordinance. Targeted education fliers will be distributed in the field to educate industries on best management practices to prevent illicit discharges. Applicable fliers will also be distributed to parties involved in illicit discharge investigations to help inform and correct actions that may lead to an illicit discharge.	1. Identify high potential areas for illicit discharges 2. Inspect areas in town with a high potential for illicit discharges or for generating polluted runoff 3. Provide targeted education fliers to high-risk facilities/industries and to parties involved in illicit discharge investigations.	1. Once, Permit Year 1 2. Monthly, Permit Year 1-5 3. Continuously, Permit Year 1-5	1. Yes/No 2. Number of inspection activities 3. Number of handouts distributed
26.	Investigate Sources of Identified Illicit Discharges			
	The Town will maintain procedures within the IDDE Plan for investigation of potential illicit discharges, illicit connections, and illegal dumping.	1. Maintain procedures for investigation of illicit discharges.	1. Continuously, Permit Year 1-5	1. Yes/No/Partial
		2. Investigate reported illicit discharges and track to source if source is unknown	2. Continuously, Permit Year 1-5	2. Number of illicit discharges reported. Number of reports investigated. Number of confirmed illicit discharges resolved/eliminated.
Permit Ref.	3.4.4: IDDE Tracking Measures for tracking and documenting the date(s) an illicit discharge, illicit connection or illegal dumping was observed, the results of the investigation, any follow-up of the investigation, the date the investigation was closed, the issuance of enforcement actions, and the ability to identify chronic violators.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
27.	Track and Document Illicit Discharge Investigations			
	ArcGIS Survey123 will continue to be utilized to track illicit discharges, illicit connections, and illegal dumping.	1. Review Survey123 Illicit Discharge Report form and update if needed.	1. Once, Permit Year 1	1. Yes/No/Partial Date Reviewed report if a revision is required and if a revision is made

Table 15: Illicit Discharge Detection and Elimination BMPs

		2.Utilize Survey123 format to track issuance of enforcement actions	2.Continuously, Permit Years 1-5	2. Number of illicit discharge reports logged in database Number of NOV's Number of Open investigations Number of closed investigations
Permit Ref.	3.4.5: Staff IDDE Training Measures to provide training for municipal staff and contractors who, as part of their normal job responsibilities, may observe an illicit discharge, illicit connection, illegal dumping or spills. Training shall include how to identify and report illicit discharges, illicit connections, illegal dumping and spills. Each staff training event shall be documented, including the agenda/materials, date, and number of staff participating.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
28.	Town Staff Illicit Discharge Training The Town will continue to implement annual Illicit Discharge training for appropriate municipal staff. Training will be conducted through the Town's Safety Skills platform and assigned annually to every employee registered in the system. Police and Fire do not utilize the Safety Skills platform. Separate training will be developed for annual employee sign off.			
Permit Ref.	3.4.6: IDDE Reporting Measures for the public and staff to report illicit discharges, illegal dumping and spills. The mechanism shall be publicized to facilitate reporting and shall be managed to provide rapid response by appropriately trained personnel.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
29.	Citizen Reporting Residents and businesses will be able to report illicit discharges through the existing stormwater hotline and through the online reporting mechanism on the Town website. The online reporting tool will send an email to all applicable stormwater when a request is received.			
		1. Advertise Stormwater Hotline for IDDE reporting	1. Continuously, Permit Years 1-5	1. Yes/No
		2. Utilize Stormwater Hotline to receive IDDE reports	2. Continuously, Permit Years 1-5	2. Number of IDDE reports received by hotline
		3. Utilize online reporting tool on Stormwater Website to receive IDDE reports	3. Continuously, Permit Years 1-5	3. Number of IDDE reports received through online reporting form

Table 15: Illicit Discharge Detection and Elimination BMPs

30.	Staff Reporting			
	Applicable Town staff will be trained on how to identify and report illicit discharges. This training directs Town staff to report illicit discharges directly to the Stormwater Program Specialist and provides current contact information for that staff member.	1. Advertise Stormwater Program Specialist contact info for Town staff to report Illicit Discharges	1. Annually, Permit Years 1-5	1. Number of IDDE reports received by Town staff

PART 8: CONSTRUCTION SITE RUNOFF CONTROL PROGRAM

In accordance with 15A NCAC 02H .0153, the Town of Mooresville relies upon the North Carolina Sedimentation Pollution Control Act (SPCA) of 1973 as a qualifying alternative program to meet a portion of the NPDES MS4 Permit requirements for construction site runoff control measures. The SPCA requirements include reducing pollutants in stormwater runoff from construction activities that result in land disturbance of greater than or equal to one acre, and includes any construction activity that is part of a larger common plan of development that would disturb one acre or more. The state SPCA Program is either delegated to a city/town, delegated to a county, or implemented by NCDEQ in non-delegated areas.

Table 16: Qualifying Alternative Program Components for Construction Site Runoff Control Program

Permit Reference	State or Local Program Name	Legal Authority	Implementing Entity
3.5.1 - 3.5.4	Iredell County Delegated SPCA Program*	15A NCAC Chapter 04, NCDEQ Approved Delegation, Interlocal Agreement/Joint Resolution, Local Ordinance	Iredell County

* The local delegated SPCA Program ordinance(s)/regulatory mechanism(s) can be found at:
<https://www.iredellcountync.gov/DocumentCenter/View/13782/Appendix-H-Soil-Erosion-and-Sedimentation-Control-Ordinance>

The Town of Mooresville also implements the following BMPs to meet NPDES MS4 Permit requirements:

Table 17: Construction Site Runoff Control BMPs

Permit Ref.	3.5.6: Public Input			
	Measures to provide and promote a means for the public to notify the appropriate authorities of observed erosion and sedimentation problems.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
31.	Municipal Staff Training			
	Train municipal staff who receive calls from the public on the protocols for referral and tracking of construction site runoff control complaints.	1. Train municipal staff on proper handling of construction site runoff control complaints.	1. Annually Permit Years 1-5	1. Number of staff trained
32.	Stormwater Hotline			
	The Town will maintain a stormwater hotline for citizens to report issues. Applicable sediment and erosion issues will be forwarded to Iredell County or NCDEQ for enforcement.	1. Maintain a stormwater hotline phone number for public use	1. Continuously, Permit Year 1-5	1. Yes/No

Table 17: Construction Site Runoff Control BMPs

Permit Ref.	3.5.5: Waste Management Measures to require 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 impact to water quality.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
33.	Establish and Maintain Legal Authority Develop and implement an ordinance to require construction site operators to control waste at the construction site that may cause adverse impact to water quality.			
	1. Develop and adopt ordinance that addresses construction site waste	1. Permit Year 1	1. Yes/No date adopted	
	2. Maintain legal authority	2. Annually, Permit years 1-5	2. Yes/No Date of Review Were any revisions required?	
	3. Enforce ordinance using illicit discharge reporting and tracking mechanism in Survey123	3. Continuously, Permit Years 1-5	3. Yes/No	
34.	Contractor Education The Town shall provide construction site operators with educational materials regarding construction waste management			
	1. Develop factsheet to share at preconstruction meetings	1. Once, Permit Year 1	1. Yes/No/Partial	
	2. Add fact sheet to Town stormwater web page	2. Once, Permit Year 1	2. Yes/No/Partial	
	3. Distribute fact sheet at preconstruction meetings	3. Continuously, Permit Year 1-5	3. Number of fact sheets distributed	

PART 9: POST-CONSTRUCTION SITE RUNOFF CONTROL PROGRAM

This SWMP identifies the minimum elements to develop, 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 are located within the Town of Mooresville and discharge into the MS4. These elements are designed to minimize water quality impacts utilizing a combination of structural Stormwater Control Measures (SCMs) and/or non-structural BMPs appropriate for the community, and ensure adequate long-term operation and maintenance of SCMs.

In accordance with 15A NCAC 02H .0153 and .1017, the Town of Mooresville implements the following State post-construction program requirements, which satisfy the NPDES Phase II MS4 post-construction site runoff control requirements as Qualifying Alternative Programs (QAPs) in the MS4 area(s) where they are implemented.

Table 18: Qualifying Alternative Program(s) for Post-Construction Site Runoff Control Program

State QAP Name	State Requirements	Local Ordinance / Regulatory Mechanism Reference
Water Supply Watershed (WS-II)	15A NCAC 2B .0620 - .0624	Chapter 3.6.2 Town of Mooresville Unified Development Ordinance
Water Supply Watershed (WS-IV)	15A NCAC 2B .0620 - .0624	Chapter 3.6.2 Town of Mooresville Unified Development Ordinance

The Town of Mooresville has existing requirements other than Qualifying Alternative Program(s) for implementation of the NPDES Phase II MS4 post-construction program requirements. These existing requirements are codified in local ordinance(s), and implementation is further defined in guidance, manuals and/or standard operating procedure(s) as summarized in Table 19 below.

Table 19: Summary of Existing Post-Construction Program Elements

Permit Requirements for Plan Review and Approval	Municipal Ordinance/Code Reference(s) and/or Document Title(s)	Date Adopted
3.6.2(a) Authority	Sec. 25-5.- Post Construction and Illicit Discharge and Connection, Town of Mooresville Code of Ordinances	September 2, 2014
3.6.3(a) & 15A NCAC 02H.0153(c) Federal, State & Local Projects	Sec. 25-11. - Post Construction and Illicit Discharge and Connection, Town of Mooresville Code of Ordinances	September 2, 2014
3.6.3(b) Plan Review	Sec. 25-5. - Post Construction and Illicit Discharge and Connection, Town of Mooresville Code of Ordinances	September 2, 2014
3.6.3(c) O&M Agreement	Sec. 25-20.- Post Construction and Illicit Discharge and Connection, Town of Mooresville Code of Ordinances	September 2, 2014
3.6.3(d) O&M Plan	Sec. 25-20.- Post Construction and Illicit Discharge and Connection, Town of Mooresville Code of Ordinances	September 2, 2014
3.6.3(e) Deed Restrictions/Covenants	Sec. 25-24.- Post Construction and Illicit Discharge and Connection, Town of Mooresville Code of Ordinances	September 2, 2014
3.6.3(f) Access Easements	Sec. 25-27.- Post Construction and Illicit Discharge and Connection, Town of Mooresville Code of Ordinances	September 2, 2014
Permit Requirements for Inspections and Enforcement	Municipal Ordinance/Code Reference(s) and/or Document Title(s)	Date Adopted
3.6.2(b) Documentation	25-19.- Post Construction and Illicit Discharge and Connection, Town of Mooresville Code of Ordinances	September 2, 2014
3.6.2(c) Right of Entry	25-31.- Post Construction and Illicit Discharge and Connection, Town of Mooresville Code of Ordinances	September 2, 2014
3.6.4(a) Pre-CO Inspections	25-12.- Post Construction and Illicit Discharge and Connection, Town of Mooresville Code of Ordinances	September 2, 2014
3.6.4(b) Compliance with Plans	25-19.- Post Construction and Illicit Discharge and Connection, Town of Mooresville Code of Ordinances	September 2, 2014
3.6.4(c) Annual SCM Inspections	25-19.- Post Construction and Illicit Discharge and Connection, Town of Mooresville Code of Ordinances	September 2, 2014
3.6.4(e) Qualified Professional	25-19.- Post Construction and Illicit Discharge and Connection, Town of Mooresville Code of Ordinances	September 2, 2014
Permit Requirements for Fecal Coliform Reduction	Municipal Ordinance/Code Reference(s) and/or Document Title(s)	Date Adopted
3.6.6(a) Pet Waste	Sec. 17-19.- Parks, Animals and Pets, Town of Mooresville Code of Ordinances	June 6, 2022

	Sec. 3-1.- Animals, Unsanitary maintenance of premises unlawful, Town of Mooresville Code of Ordinances	August 2, 1993
	Sec. 14-90.-Nuisances, Conditions constituting a public nuisance, Town of Mooresville Code of Ordinances	August 4, 2008
3.6.6(b) On-Site Domestic Wastewater Treatment	Sec. 24-16.- Water and Sewers- Septic tank requirements, Town of Mooresville Code of Ordinances	August 2, 1999

The annual reporting metrics for the post construction program are provided in Table 20: Post Construction Site Runoff Control BMPs below.

Table 20: Post Construction Site Runoff Control BMPs

Permit Ref.	3.6.5(a), 3.6.5(b), and 4.1.3: Minimum Post-Construction Reporting Requirements Measures to document activities over the course of the fiscal year (July 1 – June 30) including appropriate information to accurately describe progress, status, and results.			
	A	B	C	D
BMP No.	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
35.	Standard Reporting			
	Implement standardized tracking, documentation, inspections and reporting mechanisms to compile appropriate data for the annual self-assessment process. Data shall be provided for each Post-Construction/ Qualifying Alternative Program being implemented as listed in Tables 18 and 19.	1. Track number of plan reviews exceeding 1 acre disturbance for residential & .50 acre disturbance non-residential performed. 2. Track number of plans approved. 3. Maintain a current inventory of constructed SCMs including SCM type, location and last inspection date. 4. Track number of annual SCM inspections submitted. 5. Track number and type of enforcement actions taken.	1. Continuously Permit Years 1-5 2. Continuously Permit Years 1-5 3. Continuously Permit Years 1-5 4. Continuously Permit Years 1-5 5. Continuously Permit Years 1-5	1. Number of plan reviews performed 2. Number of plan approvals issued 3. Summary of number and type of SCMs added to the inventory; 4. Number of SCM inspections. 5. Number of enforcement actions issued.
Permit Ref.	2.3 and 3.6: Qualifying Alternative Program(s) Measures to develop, implement and enforce additional BMPs in order to comply with the QAP state program requirements.			
	A	B	C	D

Table 20: Post Construction Site Runoff Control BMPs

BMP No.	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
36.	The QAP requirements are fully met by the existing QAP for post-construction, see references provided in Table 18			
	The Phase II ordinance is implemented throughout the Town of Mooresville. Low Density sites are not exempt through Phase II. Water Supply Watershed rules also apply in applicable areas for maximum built upon area thresholds.	1. Review Phase II annually	1. Permit Year 1-5	1. Yes/No
Permit Ref.	3.6.2: Legal Authority Measures to maintain adequate legal authorities through ordinance or other regulatory mechanism to: (a) review designs and proposals for new development and redevelopment to determine whether adequate stormwater control measures will be installed, implemented, and maintained, (b) 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, and (c) 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 with the Post-Construction Stormwater Management Program.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
37.	This permit requirement is fully met by the existing post-construction program, see references provided in Table 19			
	Review ordinances to ensure the Town maintains proper legal authority to enforce permit requirements	1. Review ordinances in Table 19 annually	1. Permit Year 1-5	1. Yes/No
Permit Ref.	3.6.3: Plan Review and Approval Measures to maintain plan review and approval authority, standards and procedures to: (a) Require Federal, State, and local government projects to comply with Post-Construction Program requirements throughout the entire MS4 permitted area, unless the entity is subject to its own NPDES MS4 permit or a qualifying alternative program, (b) Conduct site plan reviews of all new development and redeveloped sites that disturb greater than or equal to one acre, and sites that disturb less than one acre that are part of a larger common plan of development or sale for compliance with 15A NCAC 02H .1017 and the qualifying alternative programs that apply within your jurisdiction, (c) Ensure that each project has an Operation and Maintenance Agreement that complies with 15A NCAC 02H .1050(12), (d) Ensure that each project has an Operation and Maintenance Plan that complies with 15A NCAC 02H .1050(13), (e) Ensure that each project has recorded deed restrictions and protective covenants, that require the project to be maintained consistent with approved plans, and (f) Ensure that each SCM and associated maintenance accesses be protected in a permanent recorded easement per 15A NCAC 02H 1050 (9) and (10).			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
38.	This permit requirement is fully met by the existing post-construction program, see references provided in Table 19			

Table 20: Post Construction Site Runoff Control BMPs

	Review ordinances to ensure the Town maintains proper legal authority to enforce permit requirements	1. Review ordinances in Table 19 annually	1. Permit Year 1-5	1. Yes/No
Permit Ref.	3.6.4: Inspections and Enforcement Measures to maintain inspection and enforcement authority, standards and procedures to: (a) Conduct post-construction inspections prior to issuing a Certificate of Occupancy or a Temporary Certificate of Occupancy. Alternatively, the project owner may provide a surety bond to guarantee compliance with the approved plan(s), (b) Ensure that the project has been constructed in accordance with the approved plan(s), (c) Ensure annual inspection of each permitted SCM to ensure compliance with the approved Operation and Maintenance Agreement, (d) Ensure inspection of low density projects at least once during the permit term, and (e) Require that inspections be conducted by a qualified professional.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
39.	Compliance inspections of privately owned SCMs The Town will conduct compliance inspections on every privately owned SCM at least once during the permit cycle. <i>(This inspection requirement lives separately from BMP 57 where annual inspections are required to be submitted by the SCM owner. All inspections are to be completed by a qualified professional.)</i>			
Permit Ref.	3.6.6: Fecal Coliform Reduction Measures to control, to the maximum extent practicable, sources of fecal coliform per 15A NCAC 02H .1017(7). At a minimum, the program shall include: (a) A pet waste management component, which may be achieved by revising an existing litter ordinance, and (b) An on-site domestic wastewater treatment system component, if applicable, which may be coordinated with local county health department, to ensure proper operation and maintenance of such systems.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
40.	This permit requirement is fully met by the existing post-construction program, see references provided in Table 19			

PART 10: POLLUTION PREVENTION AND GOOD HOUSEKEEPING PROGRAMS

This SWMP provides a comprehensive pollution prevention and good housekeeping strategy for the Town of Mooresville municipal facilities and operations. Pollution prevention and good housekeeping is accomplished through the implementation of seven required programs, which collectively address the ultimate goal of preventing or reducing pollutant runoff from municipal operations such as parks and open space maintenance, fleet and building maintenance, new construction and land disturbances, and municipal storm sewer system maintenance.

Pollution prevention and good housekeeping for municipal operations includes the following programs:

1. Municipal Facilities Operation and Maintenance Program
2. Spill Response Program
3. MS4 Operation and Maintenance Program
4. Municipal SCM Operation and Maintenance Program
5. Pesticide, Herbicide and Fertilizer Management Program
6. Vehicle and Equipment Maintenance Program
7. Pavement Management Program

The Town of Mooresville will manage, implement and report the pollution prevention and good housekeeping BMPs as specified in Table 21 below for each required program.

Table 21: Pollution Prevention and Good Housekeeping BMPs

Permit Ref.	3.7.1: Municipal Facilities Operation and Maintenance Program			
	A	B	C	D
BMP No.	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
41.	Municipal Facility Operation & Maintenance Plans			
	An O&M Plan will be developed and maintained for each municipal facility with the potential to generate stormwater pollution. Each O&M plan will outline Best Management Practices to be followed at each facility, maintenance practices, inspection and monitoring frequencies/requirements, and spill response procedures. The overall Operation and Maintenance Program	1. Update facility specific O&M plans for each existing municipal facility with the potential to generate stormwater pollution 2. Develop facility specific O&M plan for new Town facilities with the potential to generate stormwater pollution	1. Permit Year 1 2. Continuously, Permit Year 1-5	1. Number of facility O&M plans updated 2. Number of New Facility O&M plans developed

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	for Municipal Facilities can be found in Chapter 2 of the Pollution Prevention and Good Housekeeping Program and Procedures Manual.	3.Enforce and inspect facilities to ensure compliance with O&M Plans	3. Annually, Permit Year 1-5	3. Yes/No
42.	Municipal Facility Inventory			
	Maintain an up-to-date inventory of municipal facilities with potential to generate polluted runoff. Facilities will be assessed for their potential to produce polluted runoff. High Potential facilities will be inspected more frequently than facilities deemed as Low Potential. Inspection frequency will be noted in the facility inventory spreadsheet as well as in each facility specific O&M plan.	1. Update list of existing Town owned facilities 2.Perform inspection of all facilities to evaluate pollution potential of facilities from the inventory and classify as High Potential or Low Potential 3.Update inventory as needed when facilities are added or closed	1. Once, Permit Year 1 2.As needed 3. Continuously, Permit Year 1-5	1. Number of facilities inventoried 2.Yes/No/Partial; Number of inspections performed, Number of facilities classified as High Potential and Low Potential 3.Number of facilities added/revisions made
43.	Municipal Facility Inspections			
	Inspections will be conducted for every Town facility to assure good housekeeping practices are being followed. Inspectors will utilize the procedures found in Section 2.4 of the Pollution Prevention and Good Housekeeping Program and Procedures Manual. Inspections will be conducted on the frequency indicated in the facility specific O&M plans.	1. Review procedures for Town facility inspections 2.Conduct Town facility inspections annually for low potential facilities and semi-annually for high potential facilities.	1. Once, Permit Year 1 2. Annually, Permit Year 1-5	1. Yes/No/Partial 2. Yes/No/Partial; Number of inspections of High Potential and Low Potential facilities conducted
44.	Staff Training			
	The Town will provide training opportunities to applicable Town staff to ensure they are qualified to inspect facilities and enforce	1.Relevant Stormwater staff will receive formal training once per permit cycle	1.Once, during Permit Year 1-5	1.Yes/No # of trained staff
Permit Ref.	3.7.2: Spill Response Program Measures for facilities and operations that store and/or use materials that have the potential to contaminate stormwater runoff if spilled. The permittee shall maintain written spill response procedures and train staff on spill response procedures.			
BMP No.	A	B	C	D
Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric	
45.	Spill Response Procedures			
	Maintain spill response procedures and continue training of appropriate staff.	1. Review general spill response procedures	1. Once, Permit Year 1	1. Yes/No/Partial; Are procedures accurate? Yes/No/Status

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		2. Review specific spill response procedures for operations with potential to produce high hazard spills.	2. Once, Permit Year 1	2. Yes/No/Partial; Are procedures accurate? Yes/No/Status
		3. Relevant stormwater staff will receive formal training once per permit cycle	3. Once, during Permit Year 1-5	3. Yes/No # of trained staff
Permit Ref.	3.7.3: MS4 Operation and Maintenance Program Measures to minimize pollutants in the stormwater collection system. The permittee shall provide operation and maintenance staff training on stormwater awareness and pollution prevention, perform MS4 inspections, maintain the collection system including catch basins and conveyances; and establish specific frequencies, schedules, and standard documentation.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
46.	MS4 Operation and Maintenance (O&M) Written Program			
	The Town will maintain an Operation and Maintenance Plan for the MS4. This plan currently resides in Chapter 4 of the Pollution Prevention and Good Housekeeping Program and Procedures Manual. The O&M plan outlines inventory locations, inspection procedures, repair prioritization guidance	1. Review the existing MS4 Operation and Maintenance Plan and update as needed to meet permit requirements	1. Once, Permit Year 1	1. Yes/No/Partial; Date Reviewed; Any revisions required?
		2. Perform infrastructure inspections in accordance with the guidelines in the O&M plan	2. Continuously, Permit Year 1-5	2. Yes/No/Partial; Number of inspections documented
		3. Document and prioritize maintenance activities identified by routine inspections or citizen reports	3. Annually, Permit Year 1-5	3. Yes/No/Partial; Number of work orders closed
47.	Staff Training			
	The Town will provide stormwater training to applicable staff. The Employee Training Program is outlined in Chapter 5 of the Pollution Prevention and Good Housekeeping Program and Procedures Manual. Training content will include, but is not limited to general stormwater awareness, pollution prevention/good housekeeping, detecting/reporting	1. Train New Employees on Stormwater Pollution Prevention	1. Continuously, Permit Year 1-5	1. Number of employees who attended New Hire orientation
		2. Require new Public Works employees to complete department specific checklists.	2. Continuously, Permit Year 1-5	2. Number of checklists submitted to Stormwater Program Specialist
		3. Hold annual training for applicable Town employees	3. Annually, Permit Year 1-5	3. Number of Employees trained

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	illicit discharges and spill response. Types of training include new employee training, department specific checklists, annual employee training, and facility manager training.	4.Train facility managers for Town owned facilities with a high potential for stormwater pollution	4. Once, Permit Year 1	4. Number of facility managers trained
Permit Ref.	3.7.4: Municipal SCM Operation and Maintenance Program Measures to manage municipally-owned, operated, and/or maintained structural stormwater control measures (SCMs) that are installed for compliance with the permittee's post-construction program. The permittee shall maintain a current inventory of SCMs, perform SCM inspections and maintenance, and shall establish specific frequencies, schedules, and documentation.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
48.	Inventory of Municipally Owned/Operated SCMs The Town will maintain an inventory of all SCMs that were installed for compliance with the Town's post-construction program.			
	1. Update inventory of existing Town-owned SCMs with information including type, year built, date of last inspections and maintenance actions	1. Once, Permit Year 1	1. Yes/No/Partial; Number of municipal SCMs installed for compliance with the post-construction program	
49.	Municipal SCM Operation and Maintenance Program The Town will maintain a written program for Municipally Owned/Maintained SCMs. The program resides in Chapter 3 of the Pollution Prevention and Good Housekeeping Program and Procedures manual. The program will outline inspection frequencies, maintenance schedules and documentation requirements. Inspections will be documented using Survey123 and any required maintenance will be entered as a work order in the service request/work order ArcGIS Online system.			
	1. Include inspection frequencies on inventory of Town-owned SCMs installed for compliance with the post construction program	1. Once, Permit Year 1	1. Yes/No	
	2. Develop/maintain Operation and Maintenance Plans for each type of stormwater control measure installed	2. Continuously, Permit Years 1-5	2. Yes/No/Partial	
	3. Perform routine inspection, following frequency set out in O&M, of Town-owned SCMs installed for compliance with the post construction program	3. Annually, Permit Years 1-5	3. Number of municipal SCM inspections done	
	4. Ensure all SCM inspections are completed by qualified Town staff	4. Annually, Permit Years 1-5	4. Number of staff with SCM Inspection and Maintenance Certification from NC State	

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Permit Ref.	3.7.5: Pesticide, Herbicide and Fertilizer Management Program Measures to minimize water quality impacts from the use of landscape chemicals. The permittee shall provide routine pollution prevention and chemical use, storage and handling training, and shall ensure compliance with permits and applicator certifications.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
50.	Pesticide, Herbicide and Fertilizer Compliance			
	Ensure staff compliance with permits and certifications for the administering of pesticides, herbicides and fertilizers.	1. Maintain Right-of-Way Pest Control, Public Health Control, and Ornamental & Turf Pest Control applicator certifications for appropriate Town staff.	1. Continuously, Permit Years 1-5	1. Yes/No/Partial; Number of Staff Members with active certifications
51.	Pesticide, Herbicide and Fertilizer Applicator Training			
	Provide training to of Town staff who apply landscape chemicals in order to minimize water quality impacts from pesticides, herbicides and fertilizers.	1. Provide training to applicable staff on pollution prevention and chemical use, storage, and handling.	1. Annually, beginning in permit year 2	1. Yes/No/Partial; Number of Staff Members Trained
Permit Ref.	3.7.6: Vehicle and Equipment Maintenance Program Measures to prevent and minimize contamination of stormwater runoff from areas used for municipal vehicle and equipment maintenance and/or cleaning. The permittee shall ensure that municipal industrial facilities subject to NPDES industrial permitting comply with those permit requirements, provide routine pollution prevention training to staff, perform routine inspections, and establish specific frequencies, schedules, and documentation.			
BMP No.	A	B	C	D
	Description of BMP	Measurable Goal(s)	Schedule for Implementation	Annual Reporting Metric
52.	NPDES Industrial Permit Compliance			
	The Town will ensure that NPDES industrial permit requirements are met at all applicable municipally owned sites. Stormwater Pollution Prevention Plans will be maintained by stormwater staff and consist of inspection & monitoring, frequencies, schedules and documentation requirements. * Non NPDES facility Inspections: See BMP 46. All Town facilities	1. Maintain a municipal facility inventory with a field to track which facilities have an NPDES permit 2. Develop/Review SPPPs for each permitted facility which includes inspection frequencies, inspection forms and best management practices to be followed.	1. Continuously, Permit Year 1-5 2. Once, Permit Year 1	1. Number of NPDES permitted facilities. 2. Yes/No/Partial; Date of SPPP implementation/review

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	have their own Operation and Maintenance Plan which outlines the Best Management Practices to be followed on site. Facilities which have vehicle washing or maintenance activities that may take place on site will have BMPs tailored to this. All Town facilities will be inspected in accordance with the frequency laid out in the O&M.	3. Perform facility inspections for compliance with NPDES permit	3. As required by permit, Permit Years 1-5	3. Number of inspections performed
53.	Staff Training Relevant stormwater staff will be trained on Pollution Prevention and Good Housekeeping Measures to ensure they have the knowledge to enforce this minimum measure.	1. Relevant stormwater staff will receive formal training at least once during the permit cycle	1. Once, during Permit Year 1-5	1. Yes/No # staff trained
Permit Ref.	3.7.7: Pavement Management Program Measures to reduce pollutants in stormwater runoff from municipally-owned streets, roads, and parking lots within the permittee's corporate limits. The permittee shall implement measures to control litter, leaves, debris, particulate and fluid pollutants associated with vehicles, and establish specific frequencies, schedules, and documentation.			
BMP No.	A Description of BMP	B Measurable Goal(s)	C Schedule for Implementation	D Annual Reporting Metric
54.	Street Sweeping Implement the street sweeping program as outlined in the Pollution Prevention and Good Housekeeping Program and Procedures Manual. The Town has one full-time position dedicated to street sweeping and operates 4-5 days a week following two different routes running on alternating weeks. The sweeper is also responsible for the cleaning of larger Town parking lots and occasional cleanup after special events.	1. All Town maintained roads with curb and gutter will be swept at least 4 times a year. 2. Evaluate effectiveness of program	1. Annually, Permit Year 1-5 2. Annually, Permit Year 1-5	1. Yes/No/Partial 2. Quantity of Pollutants Removed and Cost for Removal
55.	Leaf Collection and Yard Waste The Town collects leaves and yard waste year-round. This is collected on a weekly basis on the day following the residents garbage collection day.			
56.	Parking Lot Maintenance			

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Implement a Standard Operating Procedure to reduce polluted stormwater runoff from municipally maintained parking lots.	1.Implement Parking Lot Maintenance and Cleaning SOP	1. Permit Year 1	1. Yes/No/Partial; Date of approval
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