KANNAPOLIS
Stormwater

Stormwater Management Plan (NCS000413)

November 2023

Stormwater Management Plan
City of Kannapolis
NCS000413

November 2023

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SWMP Revision Summary

DATE	SECTIONS REVISED	REVISION COMMENTS
2/2021	Part 4, Section 4.5 and Part 5 – Part 10	Revised to update BMPs and the schedule for implementation for deficiencies noted during Audit
10/2023	Parts 3 through 10	Revised based on DEQ meeting on 10/31/2023
11/15/2023	PART 4: STORMWATER MANAGEMENT PROGRAM ADMINISTRATION, BMP 8.2, BMP 10, BMP 11, BMP 28	Revised based on comments provided in an email by Isaiah Reed, NCDEQ

PART 1: INTRODUCTION

The purpose of this Stormwater Management Plan (SWMP) is to establish and define how the City of Kannapolis complies 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 City of Kannapolis has and continues to develop, implement, enforce, evaluate and report to the North Carolina Department of Environmental Quality (NCDEQ) Division of Energy, Minerals and Land Resources (DEMLR) to comply with the MS4 Permit number **NCS000413**, as issued by NCDEQ. This permit covers activities associated with the discharge of stormwater from the MS4, as owned and operated by the City of Kannapolis, and located within the corporate limits of the City of Kannapolis.

In preparing this SWMP, the City of Kannapolis 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 adequately provide for permit compliance and the community's needs. A mock audit, performed by a 3rd party, was conducted in November 2019, and the actions found during the audit to improve the program have been incorporated into this SWMP.

Once NCDEQ approves the SWMP, all provisions contained and referenced in this SWMP, along with any approved modifications of the SWMP, will be incorporated by reference into the permit and become enforceable parts of the permit.

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:	Michael Legg
Print Name:	*Michael B. Legg*
Title:	*City Manager*
Signed this 16 day of November 2023 .	

PART 3: MS4 INFORMATION

3.1 Permitted MS4 Area

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

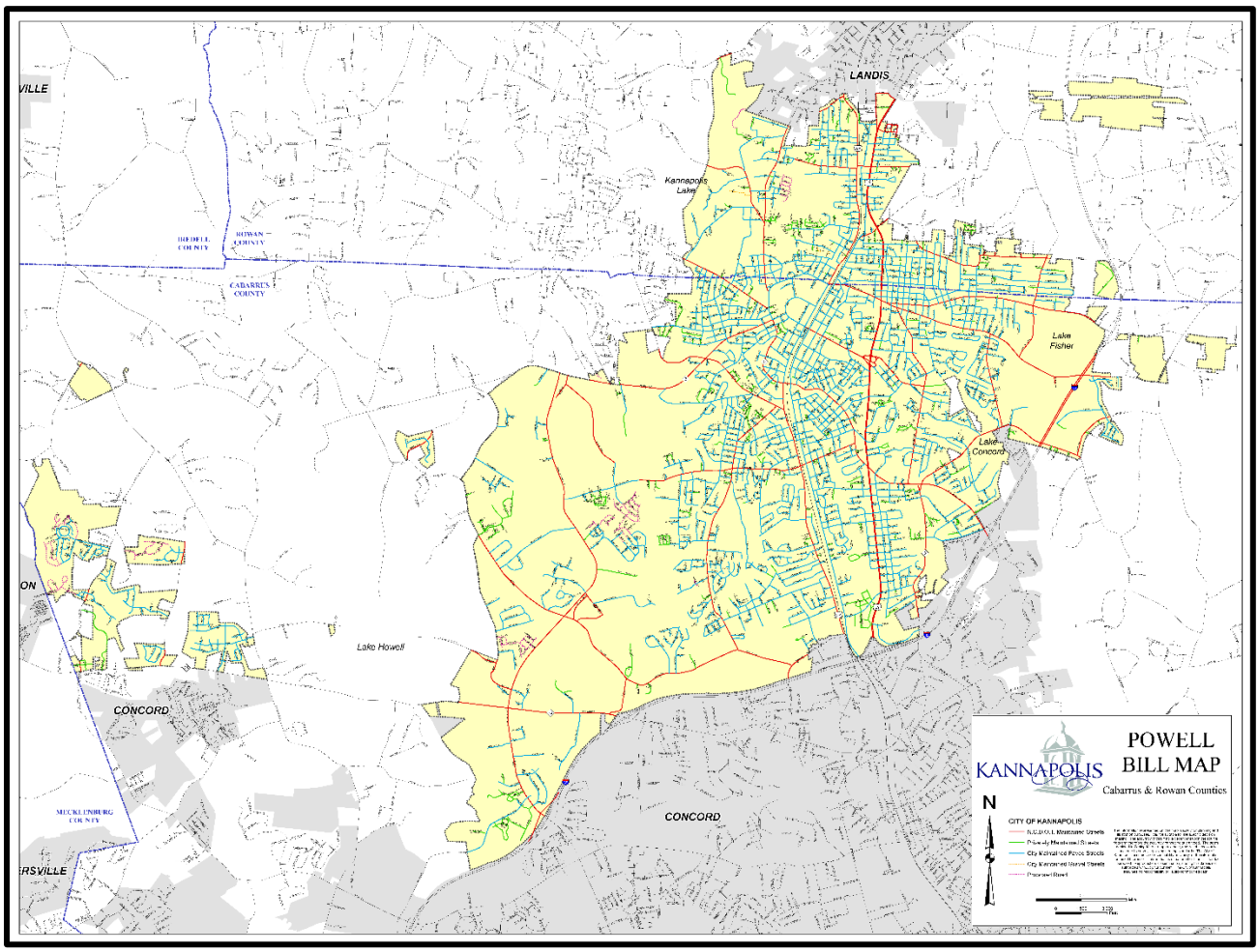


Figure 1: Kannapolis City Limits

3.2 Existing MS4 Mapping

The City of Kannapolis Stormwater System consists of a combination of piping, open vegetative conveyances, and sheet flow. Per the City Unified Development Ordinance, all new City streets constructed by private developers must have curb and gutter stormwater systems, and structural BMPs to handle stormwater runoff for developments over 20,000 square feet of impervious area are required. The Streets and SW Departments maintain the system, which is a function of the Transportation and Environmental Services.

The current MS4 storm drainage system mapping includes inlets, outfalls, manholes, pipes, channels, and culverts, and it includes the direction of flow as well as sizes. It currently spans roughly 75% of the current limits of the City of Kannapolis. The northern area contains the downtown portion of the city where most of the stormwater conveyance system is located. To meet MS4 permit requirements the City has mapped 100% of the major outfalls that discharge into receiving waters.

GIS Links:
City of Kannapolis GIS (www.kannapolisnc.gov/government-departments/planning/gis)
Cabarrus County GIS (location.cabarruscounty.us/mapcabarrus)
Rowan County GIS (www.rowancountync.gov/885/tax-map-gis)

Table 1: Summary of MS4 Stormwater System Inventory Mapping

Percent of MS4 Stormwater System Inventory Mapped	85	%
No. of Major Outfalls* Mapped	~40	total

**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 ≥ 2-acres.*

3.3 Receiving Waters

The City of Kannapolis MS4 is located within the Yadkin Pee-Dee River Basin and discharges directly into receiving waters as listed in Table 3 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
Irish Buffalo Creek (from Kannapolis Water Supply Dam to Rocky River)	13-17-9-(2)	C	N/R
Cold Water Creek (source to 0.5 miles downstream of Rowan SR 1221)	13-17-9-4-(0.5)	WS-IV	N/R
Cold Water Creek (Lake Fisher)	13-17-9-4-(1)	WS-IV;CA	N/R
Cold Water Creek (Dam at Lake Fisher to Irish Buffalo Creek)	13-17-9-4-(1.5)	C	N/R
UT to Cold Water Creek (source to 0.7 miles downstream Rowan/Cabarrus line)	13-17-9-4-2-(1)	WS-IV	N/R
UT to Cold Water Creek (Lake Concord)	13-17-9-4-2-(2)	WS-IV;CA	Chlorophyll a (40 µg/l, AL, NC)
UT to Cold Water Creek (dam at Lake Concord to Cold Water Creek)	13-17-9-4-2-(3)	C	N/R
Three Mile Branch	13-17-9-4-5	C	N/R
Coddle Creek (0.2 miles upstream NC 73 to Rocky River)	13-17-6-(5.5)	C	Benthos (Nar, AL, FW)
Afton Run (source to Coddle Creek)	13-17-6-6	C	N/R

Notes

UT = Unnamed tributary
N/R = None reported

3.4 MS4 Interconnection

The City of Kannapolis MS4 is interconnected with another regulated MS4 and directly receives stormwater from the Town of Landis and City of Concord MS4s. The number of interconnections entering the City of Kannapolis MS4 from the Town of Landis is six (6) and from the City of Concord is seventeen (17), as determined by reviewing the Kannapolis system inventory and counting the number of connections that flow into the City limits border. The City of Kannapolis is currently working on mapping the entire system, so the numbers in this document are based on the information that is currently available.

The City of Kannapolis MS4 is interconnected with another regulated MS4 and directly discharges stormwater into the Town of Landis and City of Concord MS4s. The number of interconnections leaving the City of Kannapolis MS4 to the Town of Landis is four (4) and to the City of Concord is fourteen (14), as determined by reviewing the Kannapolis system inventory and counting the number of connections that flow out of the city limits border. The City of Kannapolis is currently working on mapping the entire system, so the numbers in this document are based on the information that is currently available.

The City of Kannapolis MS4 also borders Mecklenburg County and the Town of Davidson, which are co-permittees for the Mecklenburg County MS4. It has not been determined how many interconnections exist between these MS4s, but as the system inventory for the City of Kannapolis becomes more expansive, these numbers will be updated.

NCDOT maintains multiple roads that pass through the City of Kannapolis limits, however the number of interconnections between the City of Kannapolis and NCDOT was not able to be determined using the data that is currently available.

3.5 Total Maximum Daily Loads (TMDLs)

The TMDL(s) listed in Table 4 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)
N/A	N/A	N/A	N/A

There are currently no approved TMDLs within the MS4 area as determined by the map and list provided above.

3.6 Endangered and Threatened Species and Critical Habitat

Significant populations of threatened or endangered species and/or critical habitat are identified within the regulated MS4 urbanized area, as determined by 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. Of those species listed, Table 5 summarizes the species that may be significantly impacted by the quality of surface waters within their habitat.

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

Scientific Name	Common name	Species Group	Federal Listing Status
Lasmigona decorata	Carolina heelsplitter	Freshwater mussel	Endangered

3.7 Industrial Facility Discharges

The City of Kannapolis MS4 jurisdictional area includes the following industrial facilities which hold NPDES Industrial Stormwater Permits, as determined from the NCDEQ Active NPDES Stormwater Permit List and/or Active Stormwater Permits Map.

Table 5: NPDES Stormwater Permitted Industrial Facilities

Permit Number	Facility Name
NCG060345	Ei Inc Building 5
NCG060396	Amazon.com DEDC, LLC (CLT3)
NCG080185	United Parcel Service – Kannapolis
NCG080698	Kannapolis Public Works Operation Center
NCG140040	Concrete Supply Co – Concord

3.8 Non-Stormwater Discharges

The water quality impacts of non-stormwater discharges have been evaluated by the City of Kannapolis, as summarized in Table 7 below. The unpermitted non-stormwater flows listed as incidental do not significantly impact water quality. The City of Kannapolis has evaluated residential and charity car washing and street washing for possible significant water quality impacts.

The Pavement Management Program in Part 10 of this SWMP addresses street washing activities. The Division does not require that other non-stormwater flows be specifically controlled by the City of Kannapolis.

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 City of Kannapolis to determine whether they may significantly impact water quality. It was determined by the City of Kannapolis that while non-commercial car washing may impact water quality, it occurs at such infrequent intervals that it does not

have to be limited at this time. Part 5 and Part 7 of this SWMP addresses measures to reduce these target pollutants.

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 City of Kannapolis 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 it identifies the associated SWMP program(s) that address each. Also, the City of Kannapolis has evaluated schools, homeowners, and businesses as target audiences that are likely to have significant stormwater impacts.

Pollutant sources targeted in this control measure include those sources or activities that produce trash, floatables, chemicals, waste oils, fecal coliform, and sediment/erosion. Stormwater pollution prevention messages focusing on various groups address the targeted sources. For children, the messages focus on pollutant sources that are easy to see and understand (e.g., litter). There has also been an effort toward helping children understand the nature of the storm sewer system (i.e., the water which goes down the storm drain is not treated before it enters the river). Messages targeting industry focus on good pollution prevention strategies and emphasize that, through the Good Housekeeping/Pollution Prevention Minimum Control Measure; the City is acting as an example to industry. The Utility Bill Inserts target homeowners with messages directed to proper disposal of hazardous waste and proper use of lawn and garden chemicals. Faulty septic systems and related fecal coliform problems will be included as a topic on the Stormwater microsite.

Table 7: Summary of Target Pollutants, Potential Sources, Target Audience(s), and SWMP Program Element

Target Pollutant(s)	Potential Source(s)	Target Audience(s)	SWMP Program Addressing Target Pollutant(s)/Audience(s)
Litter	Inappropriate Disposal	Residents, Businesses, Schools	Public Education & Outreach
Pesticides/Herbicides/ Fertilizers/Nutrients	Lawn/Garden Chemicals and Inappropriate Application	Residents, Businesses, Schools	Public Education & Outreach and Pollution Prevention and Good Housekeeping
Bacteria	Faulty Septic Systems, Sanitary Sewer Overflows, Wildlife, and Inappropriate Pet Waste Disposal	Residents, Businesses, Schools	Public Education & Outreach
Sediment	Erosion and Construction Site Runoff	Residents, Businesses, Schools, Contractors/Engineers/ Developers	Construction Site Runoff Control
Household Hazardous Waste	Inappropriate Disposal	Residents, Businesses, Municipal Employees	Illicit Discharge Detection & Elimination
Fats, Oils, and Grease	Inappropriate Disposal	Residents, Businesses (Restaurant and Food Services)	Illicit Discharge Detection & Elimination

PART 4: STORMWATER MANAGEMENT PROGRAM ADMINISTRATION

4.1 Organizational Structure

The City of Kannapolis stormwater program falls under Transportation and Environmental Services. The Kannapolis City Manager is the signing official by resolution of the Kannapolis City Council, February 10, 2003. The Kannapolis Public Works Director is named the authorized representative for program implementation by resolution of the Kannapolis City Council, February 10, 2003. Since then, the Public Works Director position has changed to the Director of Transportation and Environmental Services.

City of Kannapolis Stormwater Program Organizational Chart

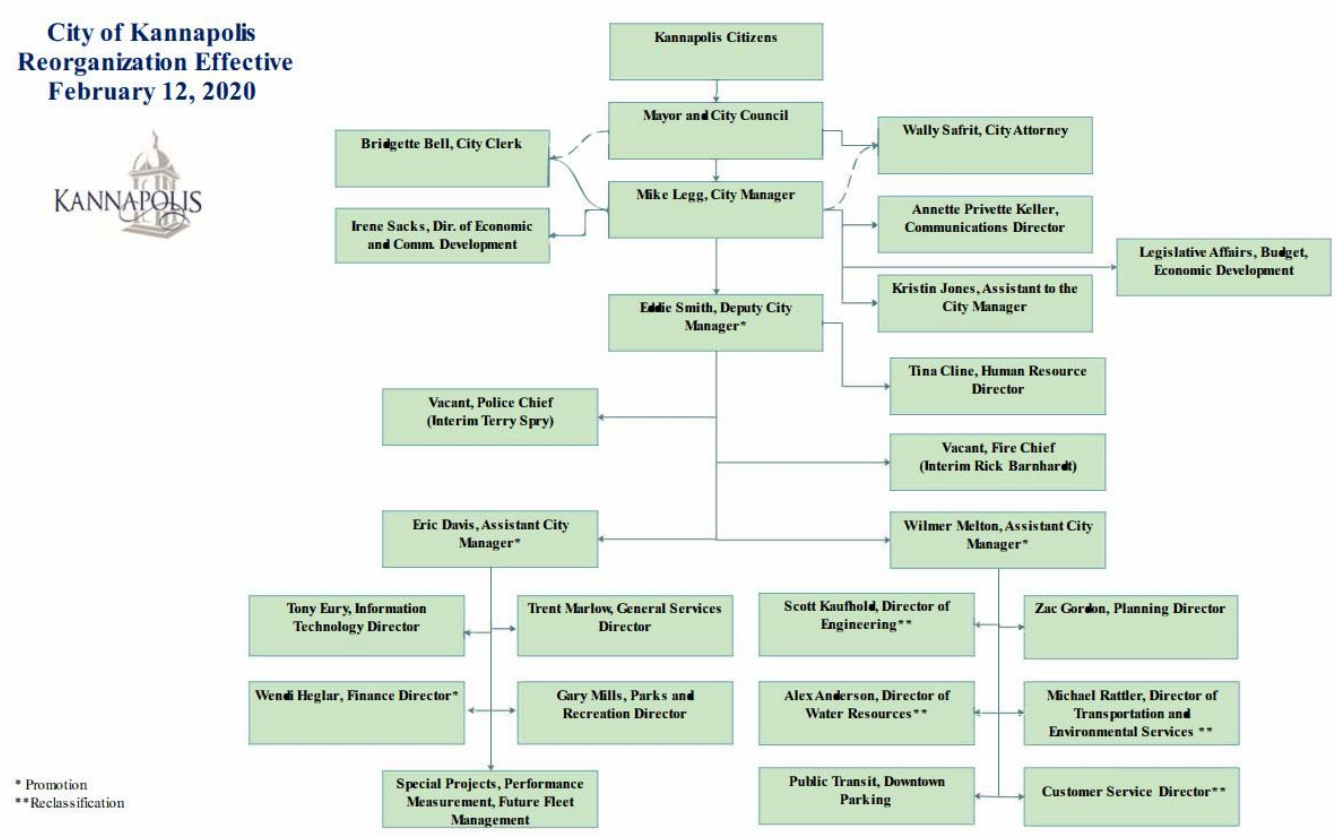


Table 8: Summary of Responsible Parties

SWMP Component	Responsible Position	Staff Name	Department
Stormwater Program Administration	Director of Engineering	Scott Kaufhold	Engineering
SWMP Management	Director of Engineering	Scott Kaufhold	Engineering
Public Education & Outreach	Communications Director	Annette Privette Keller	Communications
Public Involvement & Participation	Communications Director	Annette Privette Keller	Communications
Illicit Discharge Detection & Elimination	Dir. of Transportation & Environmental Services	Michael Rattler	Transportation & Environmental Services
Construction Site Runoff Control	Environmental Senior Specialist	DEMLR Mooresville Regional Office	
Post-Construction Stormwater Management	Director of Engineering	Scott Kaufhold	Engineering
Pollution Prevention/Good Housekeeping for Municipal Operations	Dir. of Transportation & Environmental Services	Michael Rattler	Transportation & Environmental Services
Municipal Facilities Operation & Maintenance Program	Dir. of Transportation & Environmental Services	Michael Rattler	Transportation & Environmental Services
Spill Response Program	Dir. of Transportation & Environmental Services	Michael Rattler	Transportation & Environmental Services
MS4 Operation & Maintenance Program	Dir. of Transportation & Environmental Services	Michael Rattler	Transportation & Environmental Services
Municipal SCM Operation & Maintenance Program	Dir. of Transportation & Environmental Services	Michael Rattler	Transportation & Environmental Services
Pesticide, Herbicide & Fertilizer Management Program	Dir. of Transportation & Environmental Services	Michael Rattler	Transportation & Environmental Services
Vehicle & Equipment Cleaning Program	Dir. of Transportation & Environmental Services	Michael Rattler	Transportation & Environmental Services
Pavement Management Program	Dir. of Transportation & Environmental Services	Michael Rattler	Transportation & Environmental Services
Total Maximum Daily Load (TMDL) Requirements	Director of Engineering	Scott Kaufhold	Engineering

4.2 Program Funding and Budget

In accordance with the issued permit, the City of Kannapolis 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.

There are currently 21 staffed stormwater management positions with a total annual budget of $1,033,493 (excluding CIPs) for the NPDES stormwater management program. There has recently been a financial analysis conducted, and the results recommended adding a few additional staff. The City's current stormwater utility is calculated using impervious area based on as-builts.

4.3 Shared Responsibility

The City of Kannapolis will not be sharing the responsibility to implement any minimum control measures.

Table 9: Shared Responsibilities

SWMP BMP or Permit Requirement	Implementing Entity & Program Name	Legal Agreement (Y/N)
N/A	N/A	N/A

4.4 Co-Permittees

The are no other entities applying for co-permittee status under the NPDES MS4 permit number NCS000413 for the City of Kannapolis.

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 Implementation

The City of Kannapolis will manage and report the following Best Management Practices (BMPs) for the implementation of the Stormwater Management Program.

Table 11: Program Administration BMPs

Permit Ref.	**2.1.1: Adequate Program Funding** Measures to maintain adequate funding and staffing to implement and manage provisions of the SWMP and meet all requirements of the permit.			
BMP No.	**A** **Description of BMP**	**B** **Measurable Goal(s)**	**C** **Schedule for Implementation**	**D** **Annual Reporting Metric**
#1	**Maintain Program Funding**			
	Consider a documented analysis to confirm that the program is adequately funded and staffed to take place permit year 1. With an annual reporting metric of adequate/inadequate	1. Include analysis within the Annual Self-Assessment submitted in the first permit year (see BMP #2)	1. Permit Year 1	1. Adequate or Inadequate
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).			
BMP No.	**A** **Description of BMP**	**B** **Measurable Goal(s)**	**C** **Schedule for Implementation**	**D** **Annual Reporting Metric**
#2	**Annual Self-Assessment**			
	Perform an annual evaluation of SWMP implementation, suitability of SWMP commitments and any proposed changes to the SWMP utilizing the NCDEQ Annual Self-Assessment Template	2. Prepare, certify, and submit the Annual Self-Assessment to NCDEQ prior to August 31 each year	1. Annually for Permit Years 1-4	1. Annual Self-Assessment received by NCDEQ no later than August 31 each year
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** **Description of BMP**	**B** **Measurable Goal(s)**	**C** **Schedule for Implementation**	**D** **Annual Reporting Metric**
#3	**Permit Renewal Application**			
	Audit stormwater program implementation for compliance with the permit and approved SWMP and utilize the results to prepare and	1. Participate in an NPDES MS4 Permit Compliance Audit, as scheduled and performed by EPA or NCDEQ	1. TBD – Typically Permit Year 4	1. N/A

Table 11: Program Administration BMPs				
	submit a permit renewal application package.	2. Self-audit and document any stormwater program components not audited by EPA or NCDEQ utilizing the DEQ Audit Template	2. Permit Year 5	2. Submit Self-Audit to DEMLR (required component of permit renewal application package)
		3. Certify and submit the stormwater permit renewal application (NOI, Self-Audit, and Draft SWMP for the next 5-year permit cycle)	3. Permit Year 5	3. Permit renewal application package received by DEQ at least 180 days prior to permit expiration
Permit Ref.	**2.2.2: Written Procedures for Implementing Minimum Measures** Measures to develop procedures for implementing the six minimum control measures.			
BMP No.	**A** **Description of BMP**	**B** **Measurable Goal(s)**	**C** **Schedule for Implementation**	**D** **Annual Reporting Metric**
#4	**Permit Renewal Application**			
	Develop and maintain written procedures for implementing the six minimum control measures. Written procedures shall identify specific action steps, schedules, resources, and responsibilities for implementing the MCMs	1. Develop written procedures for implementing the MCMs	1. Permit Year 1	1. Yes or No
		2. Review all written procedures and update them as needed	2. Permit Years 2 - 5	2. Yes or No

PART 5: PUBLIC EDUCATION AND OUTREACH PROGRAM

The City of Kannapolis 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 13 below. In addition, the City of Kannapolis 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, Potential Sources, & Target Audiences

Target Pollutants	Potential Sources	Target Audience(s)
Litter	Inappropriate Disposal	Residents, Businesses, Schools
Pesticides/Herbicides/ Fertilizers/Nutrients	Lawn/Garden Chemicals and Inappropriate Application	Residents, Businesses, Schools

Bacteria	Faulty Septic Systems, Sanitary Sewer Overflows, Wildlife, and Inappropriate Pet Waste Disposal	Residents, Businesses, Schools
Sediment	Erosion and Construction Site Runoff	Residents, Businesses, Schools, Contractors/Engineers/Developers
Household Hazardous Waste	Inappropriate Disposal	Residents, Businesses, Municipal Employees
Fats, Oils, and Grease	Inappropriate Disposal	Residents, Businesses (Restaurant and Food Services)

The City of Kannapolis will manage, implement and report the following public education and outreach BMPs (see next page).

Table 13: Public Education and Outreach BMPs				
Permit Ref.	**3.2.2 and 3.2.4: Outreach to Targeted Audiences** Measures to identify the specific elements and implementation of a Public Education and Outreach Program to share educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and how the public can reduce pollutants in stormwater runoff. The permittee shall provide educational information to identified target audiences on pollutants/sources identified in table 12 above, and shall document the extent of exposure of each media, event or activity, including those elements implemented locally or through a cooperative agreement.			
BMP No.	**A** **Description of BMP**	**B** **Measurable Goal(s)**	**C** **Schedule for Implementation**	**D** **Annual Reporting Metric**
#5	**Goals and Objectives**			
	Define goals and objectives of the Public Education and Outreach Program based on community wide issues	1. Document goals and objectives in the Public Education and Outreach Procedures document	1. Permit Year 1	1. Yes or No
		2. Reassess and revise, as necessary, Public Education and Outreach Procedures document to determine if any goals have changed	2. Annually	2. Document date that the Public Education and Outreach Program was reassessed
#6	**Describe Target Pollutants and/or Stressors**			
	Maintain a description of the target pollutants and/or stressors and likely sources	1. Reassess and revise, as necessary, Table 13 of SWMP to determine if any items need to be updated	1. Annually	1. Report any changes
#7	**Describe Target Audiences**			
	Maintain a description of the target audiences likely to have significant stormwater impacts and why they were selected	1. Reassess and revise, as necessary, Table 13 of SWMP to determine if any items need to be updated	2. Annually	2. Report any changes
#8	**Describe Residential and Industrial/Commercial Issues**			
	Describe issues such as pollutants, likely sources of those pollutants, impacts, and the physical attributes of stormwater runoff, in their education/outreach program	1. Reassess to determine if any items need to be updated	1. Annually	1. Report any changes

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**
#9	**City Website**			
	Promote and maintain an internet website designed to convey the program's message	1. Post the City's Stormwater Management Program	1. As updated	1. Yes or No
		2. Promote website on outreach material	2. As appropriate	2. Yes or No
		3. Track the annual number of visits to the site	3. Annually	3. Report on annual number of site visits
Permit Ref.	**3.2.4: Distribute Public Education Materials** Measures for distributing public education materials to identified target audiences and user groups.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#10	**Public Education Material Distribution**			
	Distribute stormwater educational material to identified target audiences and user groups	1. Develop material or utilize public outreach material developed by the state and/or other entities through a cooperative agreement	1. Permit Year 1	1. Yes or No
		2. Distribute public outreach materials and conduct outreach events	2. Annually	2. Include number of outreach materials distributed and the number of outreach events that were held
		3. Continue Public Education social media accounts	3. Annually	3. Number of social media posts

Table 13: Public Education and Outreach BMPs				
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**
#11	**Hotline/Helpline**			
	Promote and maintain a hotline/helpline. An existing hotline/helpline may be utilized so long as it also promotes for stormwater concerns or staff is trained to transfer calls to the stormwater administrator	1. Check phone number annually	1. Annually	1. Yes or No
		2. Train hotline staff on transferring calls	2. As new staff join	2. Report number of newly trained staff
		3. Track the annual number of calls to the hotline	3. Continuous	3. Report on annual number of calls
		4. Promote hotline information on outreach material	4. As materials are developed	4. Yes or No
		5. Clarify hotline information for outreach material on website	5. Continuous	5. Yes or No

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 City of Kannapolis 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** **Description of BMP**	**B** **Measurable Goal(s)**	**C** **Schedule for Implementation**	**D** **Annual Reporting Metric**
#12	**On-Going Public Involvement Activities**			
	Provide and promote a mechanism for public involvement that provides for input on stormwater issues and the stormwater program	1. Conduct an Environmental Stewardship Committee meeting where a portion of the meeting is dedicated to addressing public concerns regarding stormwater issues	1. Annually	1. Yes or No / Date of meeting
Permit Ref.	**3.3.2: Volunteer Opportunities** Measures to provide volunteer opportunities designed to promote ongoing citizen participation.			
BMP No.	**A** **Description of BMP**	**B** **Measurable Goal(s)**	**C** **Schedule for Implementation**	**D** **Annual Reporting Metric**
#13	**Volunteer Community Involvement Program**			
	Include and promote volunteer opportunities as part of the stormwater program designed to promote ongoing citizen participation	1. Publicize, promote, and implement two public involvement events per year (litter cleanup/stream cleanup, storm drain marking activities, etc.)	1. Annually	1. Yes or No / Gauge effectiveness of event(s) (i.e. number of attendees, pounds or bags of trash, number of storm drain markers installed, etc.)

PART 7: ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

The City of Kannapolis 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 16: 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.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#14	**MS4 Mapping**			
	Continue to develop and maintain a current map showing storm sewer system and receiving streams	1. Have entire system mapped by end of permit cycle	1. Continuous	1. Percent of system mapped
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**
#15	**Legal Authorities**			
	Maintain the IDDE ordinances or other regulatory mechanisms that provide adequate legal authority to prohibit illicit connections and discharges and enforce the approved IDDE Program	1. Review the ordinance and make changes as necessary	1. Annually	1. Yes or No

Table 16: Illicit Discharge Detection and Elimination BMPs				
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 Evaluate and assess the IDDE Program.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#16	**Dry Weather Survey**			
	Conduct an outfall dry weather survey and follow suspected sources through the system. Identify and eliminate as many as possible. Follow procedures included in the IDDE Program Procedures Manual	1. Screen 20% of outfalls	1. Annually	1. Annually report percent of outfalls screened
		2. Record number of illicit discharges detected	2. Annually	2. Annually report on the number of illicit discharges detected
		3. Record number of notifications issued	3. Annually	3. Annually report on the number of notifications issued
		4.Record number of connections eliminated	4. Annually	4. Annually report on the number of connections eliminated
#17	**IDDE Program Evaluation**			
	Perform a program evaluation and assessment according to the procedures in the IDDE Program Procedures Manual	1. Hold annual evaluation meeting to discuss IDDE program and procedures	1. Annually	1. Report meeting date
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**
#18	**Documentation of Illicit Discharges**			
	Track investigations and document the date(s) the illicit discharge was observed, the results of the	1. Track investigations	1. Continuous	1. Number of investigations

Table 16: Illicit Discharge Detection and Elimination BMPs				
	investigation, any follow-up, notices of violation or other enforcement actions, and the date the investigation was closed	2. Update IDDE Program Procedures Manual to include provisions for identifying chronic violators and what actions will be taken to reduce noncompliance	2. As needed	2. Yes or No
		3. Identify chronic violators and initiate actions to reduce noncompliance	3. Annually	3. Number of chronic violators
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**
#19	**Employee Training**			
	Using Good Housekeeping seminars and other specific training, staff will be taught methods for recognizing illicit discharges and illegal connections as well as appropriate measures to take upon discovery	1. Train all appropriate employees	1. Annually	1. Provide number of employees trained
Permit Ref.	**3.4.6: IDDE Reporting** Measures for public education and 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**
#20	**IDDE Public Education**			
	Inform public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste	1. Distribute materials to appropriate audience	1. Annually	1. Report annually on number of people reached
#21	**Public Reporting Mechanism**			
	Promote, publicize, and facilitate a reporting mechanism for the public and staff to report illicit discharges	1. Promote reporting mechanism to public through website and outreach materials	1. Continuous	1. Yes or No

Table 16: Illicit Discharge Detection and Elimination BMPs				
	and establish and implement citizen request response procedures	2. Train staff on illicit discharge reporting mechanisms	2. Annually	2. Annually report on dates of staff training and number of people in attendance
		3. Create standard procedures for implementing citizen requests	3. Year 1	3. Yes or No
		4. Respond to complaints	4. As reported	4. Annually report on number of complaints received
		5. Ensure problems have been corrected by responsible party	5. As identified	5. Annually report on number of illicit discharges identified as well as the number corrected

PART 8: CONSTRUCTION SITE RUNOFF CONTROL PROGRAM

In accordance with 15A NCAC 02H .0153, the City of Kannapolis relies upon the North Carolina Sedimentation Pollution Control Act (SPCA) of 1973 and the NCG010000 permit for construction activities as qualifying alternative programs to meet the NPDES MS4 Permit requirements for all construction site runoff control measures to reduce pollutants in stormwater runoff from construction activities that result in land disturbance of greater than or equal to one acre and any construction activity that is part of a larger common plan of development that would disturb one acre or more.

Table 17: Qualifying Alternative Program Components for Construction Site Runoff Control Program

Permit Reference	State or Local Program Name	Legal Authority	Implementing Entity	Meets Whole or Part of Requirement
3.5.1 - 3.5.4	State Implemented SPCA Program	15A NCAC Chapter 04	NCDEQ	Whole

The City of Kannapolis also implements the following BMPs to meet NPDES MS4 Permit requirements.

Table 17: Construction Site Runoff Control BMPs

Permit Ref.	**3.5.1 through 3.5.5: Rely on NC Division of Energy, Mineral, and Land Resources Sediment and Erosion Control Program** Measures to meet the MEP standard for Construction Site Runoff Controls.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#22	**Construction Site Runoff Control**			
	Rely on the NC Division of Energy, Mineral, and Land Resources Sediment and Erosion Control Program to comply with this minimum measure	1. Rely on NCDEMLR and maintain communication, if necessary.	1. Annually	1. N/A
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**
#23	**Public Input**			
	Provide and promote a means for the public to notify the appropriate authorities of observed erosion and sedimentation problems	1. Add the information on the NCDEQ Division of Energy, Mineral, and Land Resources "Stop Mud" hotline to City advertisements and the City website. Continue to notify public of the City's Hotline to notify City of observed problems	1. As necessary	1. Report on documents or advertisements that include this information
#24	**Staff Response**			
	Ensure that staff who receive calls from the public know the protocols for referral and tracking of construction site runoff control complaints and the potential for illicit discharges from construction sites	1. Train municipal staff on proper handling of construction site runoff control complaints	1. Annually	1. Document number of staff trained

PART 9: POST-CONSTRUCTION SITE RUNOFF CONTROL PROGRAM

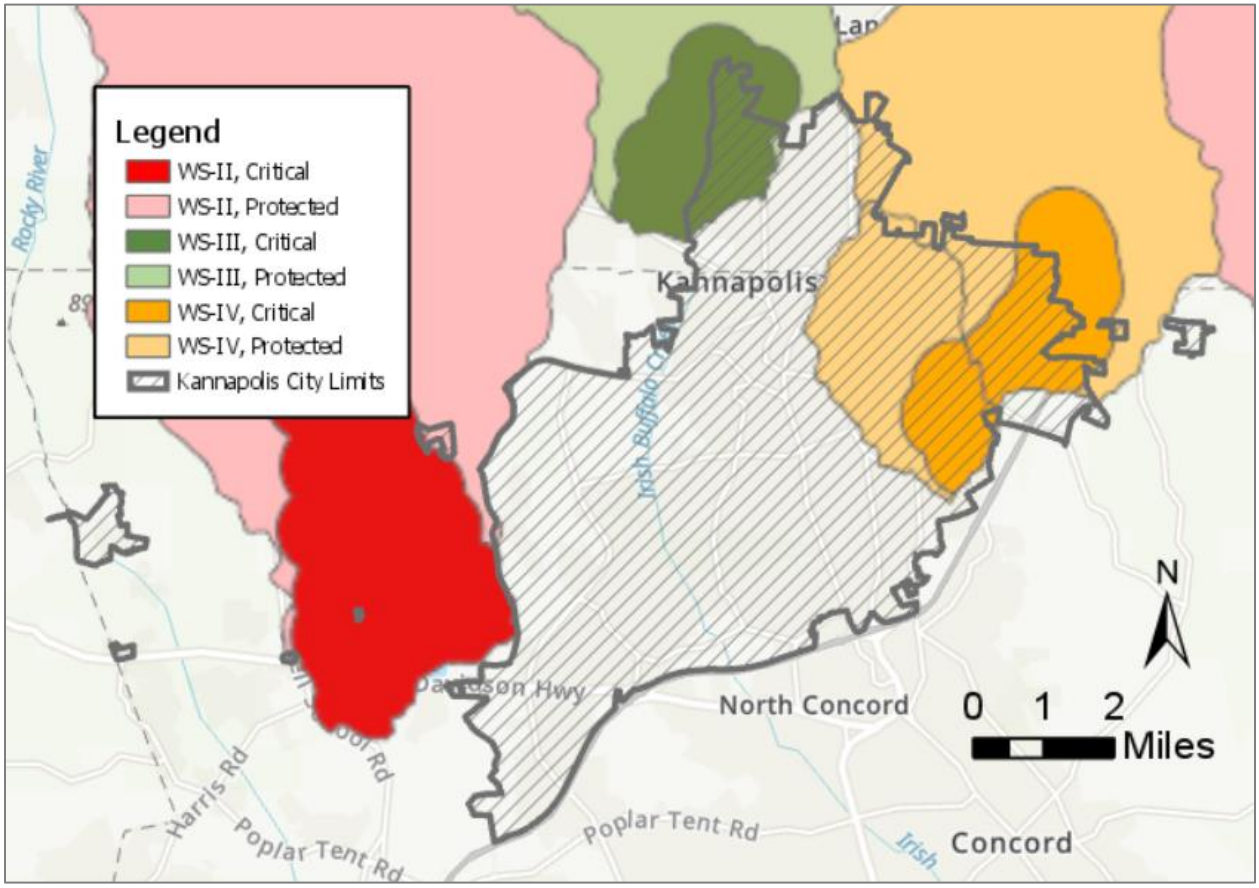
This SWMP identifies the minimum elements to develop, implement and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that are located within the City of Kannapolis 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 City of Kannapolis 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	UDO, Section 4.16
Water Supply Watershed (WS-III)	15A NCAC 2B .0620 - .0624	UDO, Section 4.16
Water Supply Watershed (WS-IV)	15A NCAC 2B .0620 - .0624	UDO, Section 4.16

Figure 2: Water Supply Watershed Areas within City of Kannapolis Limits



The City of Kannapolis has existing requirements other than Qualifying Alternative Programs for implementation of the NPDES Phase II MS4 post-construction program requirements. These existing requirements are codified in local ordinances, and implementation is further defined in guidance, manuals, and/or standard operating procedures as summarized in Table 20 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	UDO Article 9, Section 9.1.2	12/09/2019
3.6.3(a) & 15A NCAC 02H.0153(c) Federal, State & Local Projects	UDO Article 9, Section 9.1.5	12/09/2019
3.6.3(b) Plan Review	UDO Article 3, Sections 3.2.7 and 3.6	1/22/2018
3.6.3(c) O&M Agreement	UDO Article 9, Section 9.4.2	12/09/2019
3.6.3(d) O&M Plan	UDO Article 9, Section 9.4.2	12/09/2019
3.6.3(e) Deed Restrictions/Covenants	UDO Article 3, Section 3.4.7	1/22/2018
3.6.3(f) Access Easements	UDO Article 9, Section 9.4.8	12/09/2019
Permit Requirements for **Inspections and Enforcement**	Municipal Ordinance/Code Reference(s) and/or Document Title(s)	Date Adopted
3.6.2(b) Documentation	UDO Article 9, Section 9.2.1	12/09/2019
3.6.2(c) Right of Entry	UDO Article 9, Section 9.4.2(A)	12/09/2019
3.6.4(a) Pre-CO Inspections	UDO Article 9, Section 9.2.3(C)	12/09/2019
3.6.4(b) Compliance with Plans	UDO Article 9, Section 9.2.3(C)	12/09/2019
3.6.4(c) Annual SCM Inspections	UDO Article 9, Section 9.4.1(B)	12/09/2019
3.6.4(d) Low Density Inspections	UDO Article 9, Section 9.3.2	12/09/2019
3.6.4(e) Qualified Professional	UDO Article 9, Section 9.4.1(B)	12/09/2019
Permit Requirements for **Fecal Coliform Reduction**	Municipal Ordinance/Code Reference(s) and/or Document Title(s)	Date Adopted
3.6.6(a) Pet Waste	City Ordinance Section 6(i)	February 2001
3.6.6(b) On-Site Domestic Wastewater Treatment	UDO Article 9, Section 9.3.12	12/09/2019

The annual reporting metrics for the post construction program are provided in Table 21: 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.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#25	**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	1. Track number of low density and high density plan reviews performed.	1. Continuously	1. Number of plan reviews performed for low density and high density.
		2. Track number of low density and high density plans approved.	2. Continuously	2. Number of plan approvals issued for low density and high density.

Table 20: Post Construction Site Runoff Control BMPs				
	being implemented as listed in Tables 18 and 19.	3. Maintain a current inventory of low density projects and constructed SCMs including SCM type or low density acreage, location and last inspection date.	3. Continuously	3. Summary of number and type of SCMs added to the inventory; and number and acreage of low density projects constructed.
		4. Track number of SCM inspections performed.	4. Continuously	4. Number of SCM inspections.
		5. Track number of low density inspections performed.	5. Continuously	5. Number of low density inspections.
		6. Track number and type of enforcement actions taken.	6. Continuously	6. Number and type of enforcement actions taken.
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** **Description of BMP**	**B** **Measurable Goal(s)**	**C** **Schedule for Implementation**	**D** **Annual Reporting Metric**
#26	This permit requirement is fully met by the existing post-construction program, see references provided in Table 19.			
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** **Description of BMP**	**B** **Measurable Goal(s)**	**C** **Schedule for Implementation**	**D** **Annual Reporting Metric**
#27	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				
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** **Description of BMP**	**B** **Measurable Goal(s)**	**C** **Schedule for Implementation**	**D** **Annual Reporting Metric**
#28	This permit requirement is fully met by the existing post-construction program, see references provided in Table 19.			
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** **Description of BMP**	**B** **Measurable Goal(s)**	**C** **Schedule for Implementation**	**D** **Annual Reporting Metric**
#29	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 City of Kannapolis 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 City of Kannapolis will manage, implement and report the pollution prevention and good housekeeping BMPs as specified in Table 22 below for each required program.

Table 21: Pollution Prevention and Good Housekeeping BMPs

Permit Ref.	**3.7.1: Municipal Facilities Operation and Maintenance Program** Measures to manage facilities that are owned and operated by the permittee and have the potential for generating polluted stormwater runoff. The permittee shall maintain a current inventory of municipal facilities; perform facility inspections and routine maintenance; establish specific frequencies, schedules, and standard documentation; provide staff training on general stormwater awareness and implementing pollution prevention and good housekeeping practices.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#30	**Maintain a Maintenance Program for Municipal Facilities**			
	Maintain and implement an Operation and Maintenance program for municipal owned and operated facilities with the potential for generating polluted stormwater runoff. In this plan, specify the frequency of inspections and routine maintenance requirements	1. Develop O&M Plan for each City facility identified in BMP #29	1. Permit Year 1	1. Yes or No
		2. Review and maintain O&M Plans and evaluate	2. Annually	2. Yes or No
		3. Inspect municipal owned and operated facilities with the potential for generating polluted stormwater runoff	3. Annually	3. Number of inspections performed

Table 21: Pollution Prevention and Good Housekeeping BMPs				
#31	**Inventory of Municipally Owned or Operated Facilities**			
	Develop and maintain an inventory of facilities and operations owned and operated by the City with the potential for generating polluted stormwater runoff	1. Maintain inventory of municipal facilities	1. Annually	1. Number of municipal facilities identified
#32	**Staff Training**			
	Implement an employee training program for employees involved in implementing pollution prevention and good housekeeping practices	1. Train all employees	1. Annually or as necessary	1. Report the date of training and number of attendees
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**
#33	**Spill Response Procedures**			
	Develop and implement written spill response procedures for municipally owned or operated facilities	1. Develop spill response procedures	1. Permit Year 1	1. Yes or No
		2. Review and update spill response procedures document, as needed	2. Annually	2. Yes or No
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**
#34	**Number of staff trained**			
	Develop of identify a staff training program for general stormwater pollution prevention and provide to public works department employees	1. Develop or identify appropriate training program	1. Permit Year 2	1. Yes or No
		2. Provide initial training for all employees	2. Annually, beginning in Permit Year 3	2. Number of staff members trained and topics from training
		3. Provide training for new hires	3. Annually, beginning in Permit Year 3, as necessitated by staffing changes	3. Number of new hires trained and topics from training

Table 21: Pollution Prevention and Good Housekeeping BMPs				
#35	**MS4 System Inspections and Maintenance**			
	A proactive plan for MS4 system maintenance, requiring regular inspections and maintenance	1. Develop a SOP that includes proactive inspection schedules, standard documentation, staff responsibilities, and proper maintenance training	1. Permit Year 2	1. Yes or No
		2. Perform regular inspections in accordance with the SOP	2. Permit Year 3 and annually afterward	2. Number of inspections
		3. Verify, document, and prioritize maintenance activities identified by inspections or citizen complaints	3. Continuously, as potential maintenance activities are identified	3. Number of maintenance activities performed
		4. Develop inspection and maintenance tracking system to be used in accordance with the SOP and to identify "hot spot" locations for system maintenance	1. Permit Year 2	1. Yes or No
Permit Ref.	**3.7.4: Municipal SCM Operation and Maintenance Program** Measures to manage municipally-owned, operated, and/or maintained structural 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**
#36	**Structural Control Inventory**			
	Maintain a current inventory of municipally-owned or operated structural stormwater controls installed for compliance with the permittee's post-construction ordinance	1. Maintain an inventory of the appropriate structural controls	1. Continuously	1. Number of municipally owned SCMs
#37	**O&M Program for Stormwater Sewer System**			
	Maintain and implement an O&M program for the stormwater sewer system including catch basins and conveyance systems that it owns and maintains	1. Inspect and maintain 20% of the stormwater sewer system	1. Annually	1. Report percent of system inspected and maintained

Table 21: Pollution Prevention and Good Housekeeping BMPs				
#38	Develop an O&M Plan to define stormwater sewer system related resources and organization, responsibilities, policies, and general procedures	1. Develop written O&M Plan for stormwater sewer system program	1. Permit Year 1	1. Yes or No
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**
#39	**Evaluation of Materials and Methods**			
	Ensure municipal employees and contractors are properly trained and all permits, certifications, and other measures for applicators are followed	1. Ensure that proper training has been received and licenses are current	1. Annually	1. Report the date of training and number of attendees and number of licensed applicators
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**
#40	**Vehicle and Equipment Cleaning**			
	Describe and implement measures to prevent or minimize contamination of the stormwater runoff from all areas used for vehicle and equipment cleaning	1. Develop and implement measures to minimize contamination of stormwater runoff	1. Permit Year 1	1. Yes or No

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**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#41	**Stormwater Collection System Maintenance**			
	Evaluate existing and new BMPs that reduce polluted stormwater runoff from municipally-owned streets, roads, and public parking lots within their corporate limits	1. Perform a minimum of one evaluation each year which includes a summary of the effectiveness of the BMPs based on the estimated quantity of pollutants removed	1. Annually	1. Number of evaluations
#42	**Street Sweeping**			
	Street sweeping will follow a regular schedule to reduce pollutants from City owned and maintained pavement areas	1. Conduct street sweeping per MS4 O&M SOP	1. Annually	1. Number of tons of debris removed
#43	**Yard Waste Collection**			
	Periodically collect leaves and debris from streets, roads, and parking lots to reduce pollutants and clogging of storm sewer inlets	1. Continue to collect yard trimmings and loose leaves	1. Seasonally, per current City procedures	1. Tons of debris collected