Tennessee Department of Environment and Conservation
Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243
1-888-891-8332 (TDEC)

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ENVIRONMENT & CONSERVATION
COOKEVILLE FIELD OFFICE

Municipal Separate Storm Sewer System (MS4) Annual Report

1. MS4 INFORMATION

City of Crossville — TNS079987
Name of MS4 — MS4 Permit Number

Heath Blaylock — heath.blaylock@crossvilletn.gov
Name of Contact Person — Email Address

931-456-6947
Telephone (including area code)

392 N. Main St.
Mailing Address

Crossville — TN — 38572
City — State — ZIP code

What is the current population of your MS4? 11,200

What is the reporting period for this annual report? From 2015 to 2016

2. WATER QUALITY PRIORITIES (SECTION 3.1)

A. Does your MS4 discharge into waters listed as impaired on TN's most current 303(d) list and/or according to the on-line GIS mapping tool? ☒ Yes ☐ No

B. If yes, please attach a list all impaired waters within your jurisdictional area.

C. Does your MS4's jurisdictional area contain any waterbodies where a TMDL has been approved for parameters other than pathogens, siltation and habitat alterations? If yes, please attach a list.

D. Does your MS4 discharge to any Exceptional TN Waters (ETWs) or Outstanding National Resource Waters (ONRWs)? If yes, please attach a list. ☒ Yes ☐ No

E. Are you implementing additional specific provisions to ensure the continued integrity of ETWs or ONRWS located within your jurisdiction? ☒ Yes ☐ No

3. PROTECTION OF STATE OR FEDERALLY LISTED SPECIES (SECTION 3.2.1 General Permit for Phase II MS4s)

A. Are there any state or federally listed species within the MS4's jurisdiction? ☒ Yes ☐ No

B. Are any of the MS4 discharges or discharge-related activities likely to jeopardize any state or federally listed species? ☐ Yes ☒ No

C. Please attach any authorizations or determinations by U.S. Fish & Wildlife Service on the effect of the MS4 discharges on state or federally listed species.

4. PUBLIC EDUCATION AND PUBLIC PARTICIPATION (SECTION 4.2.1 AND 4.2.2)

A. Have you developed a Public Information and Education plan (PIE)? ☒ Yes ☐ No

B. Is your public education program targeting specific pollutants and sources of those pollutants, such as Hot Spots? ☒ Yes ☐ No

C. If yes, what are the specific causes, sources and/or pollutants addressed by your public education program? Silt

D. Note specific successful outcome(s) (NOT tasks, events, publications) fully or partially attributable to your public education program during this reporting period. We now receive phone calls on violations by people from the community even before we have a chance to find them. Contractors are even self reporting more and more now. They realize its better to self report so we will work with them on fixing the situation, rather than us find it and send an NOV. There is always going to be a few bad apples though.

E. Do you have an advisory committee or other body comprised of the public and other stakeholders that provides regular input on your stormwater program? ☒ Yes ☐ No

F. How do you facilitate, advertise, and publicize public involvement and participation opportunities? Brochures in water bills and hand outs to contractors. We also give out water bottles and frisbees that have the City of Crossville stormwater logo on them to all kids at every event we attend and do a little demonstration on what tools we use on a daily basis that help impact stormwater.

G. Do you have a webpage dedicated to your stormwater program? ☒ Yes ☐ No

If so, what is the link/URL:
http://www.crossvilletn.gov/index.php/departments/engineering-planning/stormwater-ms4-program

H. Are you tracking and maintaining records of public education, outreach, involvement and participation activities? Please attach a summary of these activities. ☒ Yes ☐ No

5. Illicit Discharge Detection and Elimination (Section 4.2.3)

A. Have you completed a map of all outfalls and receiving waters of your storm sewer system? ☒ Yes ☐ No

B. Have you completed a map of all storm drain pipes of storm sewer system? ☒Yes ☐ No

C. How many outfalls have you identified in your system? 500

D. Have any of these outfalls been screened for dry weather discharges? ☒Yes ☐ No

F. What is your frequency for screening outfalls for illicit discharges? Anually

G. Do you have an ordinance that effectively prohibits illicit discharges? ☒ Yes ☐ No

H. During this reporting period, how many illicit discharges/illegal connections have you discovered (or been reported to you)? 1

I. Of those illicit discharges/illegal connections that have been discovered or reported, how many have been eliminated? 1

6. Construction Site Stormwater Runoff (Section 4.2.4)

A. Do you have an ordinance or adopted policies stipulating:

Erosion and sediment control requirements? ☒ Yes ☐ No

Other construction waste control requirements? ☒ Yes ☐ No

Requirement to submit construction plans for review? ☒ Yes ☐ No

MS4 enforcement authority? ☒ Yes ☐ No

B. How many active construction sites disturbing at least one acre were there in your jurisdiction this reporting period? 6

C. How many of these active sites did you inspect this reporting period? 6

D. On average, how many times each, or with what frequency, were these sites inspected (e.g., weekly, monthly, etc.)? Twice weekly and after ever rain event

E. Do you prioritize certain construction sites for more frequent inspections? ☒Yes ☐ No

If Yes, based on what criteria? Location to certain water bodies and type of construction

7. PERMANENT STORMWATER CONTROLS (SECTION 4.2.5)

A. Do you have an ordinance or other mechanism to require:

Site plan reviews of all new and re-development projects? ☒ Yes ☐ No

Maintenance of stormwater management controls? ☒ Yes ☐ No

Retrofitting of existing BMPs with green infrastructure BMPs? ☐ Yes ☒ No

B What is the threshold for new/redevelopment stormwater plan review? (e.g., all projects, projects disturbing greater than one acre, etc.)Projects disturbing more than 1 acre and all commercial or industrial no matter the size.

C. Have you implemented and enforced performance standards for permanent stormwater controls? ☐ Yes ☒ No

D. Do these performance standards go beyond the requirements found in Section 4.2.5.2 and require that pre-development hydrology be met for:

Flow volumes ☒ Yes ☐ No

Peak discharge rates ☒ Yes ☐ No

Discharge frequency ☒ Yes ☐ No

Flow duration ☒ Yes ☐ No

E. Please provide the URL/reference where all permanent stormwater management standards can be found.

N/A waiting on the new Stormwater Permit to be issued

F. How many development and redevelopment project plans were reviewed for this reporting period? N/A

G. How many development and redevelopment project plans were approved? N/A

H. How many permanent stormwater management practices/facilities were inspected? N/A

I. How many were found to have inadequate maintenance? N/A

J. Of those, how many were notified and remedied within 30 days? (If window is different than 30 days, please specify) N/A

K. How many enforcement actions were taken that address inadequate maintenance?0

L. Do you use an electronic tool (e.g., GIS, database, spreadsheet) to track post-construction BMPs, inspections and maintenance? ☒ Yes ☐ No

M. Do all municipal departments and/or staff (as relevant) have access to this tracking system? ☒ Yes ☐ No

N. Has the MS4 developed a program to allow for incentive standards for redeveloped sites? ☐ Yes ☒ No

O. How many maintenance agreements has the MS4 approved during the reporting period? 0

8. CODES AND ORDINANCES REVIEW AND UPDATE (SECTION 4.2.5.3)

A. Is a completed copy of the EPA Water Quality Scorecard submitted with this report? ☐ Yes ☒ No

B. Include status of implementation of code, ordinance and/or policy revisions associated with permanent stormwater management.N/A waiting on the New Stormwater Permit to be issued

9. Stormwater Management for Municipal Operations (Section 4.2.6)

A. Have stormwater pollution prevention plans (or an equivalent plan) been developed for:

All parks, ball fields and other recreational facilities	☒ Yes	☐ No
All municipal turf grass/landscape management activities	☒ Yes	☐ No
All municipal vehicle fueling, operation and maintenance activities	☒ Yes	☐ No
All municipal maintenance yards	☒ Yes	☐ No
All municipal waste handling and disposal areas	☒ Yes	☐ No

B. Are stormwater inspections conducted at these facilities? ☒ Yes ☐ No

1. If Yes, at what frequency are inspections conducted? Anually

C. Have standard operating procedures or BMPs been developed for all MS4 field activities? (e.g., road repairs, catch basin cleaning, landscape management, etc.) ☒ Yes ☐ No

D. Do you have a prioritization system for storm sewer system and permanent BMP inspections? ☒ Yes ☐ No

E. On average, how frequently are catch basins and other inline treatment systems inspected? Anually

Street Dept. runs a sweeper truck to clean roads and gutters every night or morning.

F. On average, how frequently are catch basins and other inline treatment systems cleaned out/maintained? As needed.

G. Do municipal employees in all relevant positions and departments receive comprehensive training on stormwater management? ☒ Yes ☐ No

H. If yes, do you also provide regular updates and refreshers? ☒ Yes ☐ No

If so, how frequently and/or under what circumstances? As much as time allows. We have 10 City employees with atleast level 1 Certifaction and two with level 2.

10. Stormwater Management Program Update (Section 4.4)

A. Describe any changes to the MS4 program during the reporting period including but not limited to:

Changes adding (but not subtracting or replacing) components, controls or other requirements (Section 4.4.2.a). We didn't change much this cycle knowing that the new Permit was coming out and there would be major changes after that.

Changes to replace an ineffective or unfeasible BMP (Section 4.4.2.b). No change

Information (e.g. additional acreage, outfalls, BMPs) on program area expansion based on annexation or newly urbanized areas. 8.46 Acres, No new outfalls

Changes to the program as required by the division (Section 4.4.3). Waiting for New Permit.

11. Evaluating/Measuring Progress

A. What indicators do you use to evaluate the overall effectiveness of your Stormwater Management Program, how long have you been tracking them, and at what frequency? Note that these are not measurable goals for individual BMPs or tasks, but large-scale or long-term metrics for the overall program, such as in-stream macroinvertebrate community indices, measures of effective impervious cover in the watershed, indicators of in-stream hydrologic stability, etc.

Indicator	Began Tracking (year)	Frequency	Number of Locations
Example: E. coli	*2003*	*Weekly April–September*	*20*
E. coli	2011	5 Samples July-September	6
Benthics	2011	Every other year	6

B. Provide a summary of data (e.g., water quality information, performance data, modeling) collected in order to evaluate the performance of permanent stormwater controls installed throughout the system. This evaluation may include a comparison of current and past permanent stormwater control practices. Permanent Stormwater is not in place at this time.

12. Enforcement (Section 4.5)

A. Identify which of the following types of enforcement actions you used during the reporting period, indicate the number of actions, the minimum measure (e.g., construction, illicit discharge, permanent stormwater control) or note those for which you do not have authority:

Action	Construction	Permanent Stormwater Controls	Illicit Discharge	Authority?	
Notice of violation	#3	#0	#1	☒ Yes	☐ No
Administrative fines	#0	#0	#1	☒ Yes	☐ No
Stop Work Orders	#0	#0	#0	☒ Yes	☐ No
Civil penalties	#0	#0	#0	☒ Yes	☐ No
Criminal actions	#0	#0	#0	☒ Yes	☐ No
Administrative orders	#0	#0	#0	☒ Yes	☐ No
Other _____	#_____	#_____	#_____		

B. Do you use an electronic tool (e.g., GIS, data base, spreadsheet) to track the locations, inspection results, and enforcement actions in your jurisdiction? ☒ Yes ☐ No

C. What are the 3 most common types of violations documented during this reporting period? No permit, Installing BMP's incorrectly and Stabilization Requirements

13. Program Resources (Optional)

A. What was your annual expenditure to implement the requirements of your MS4 NPDES permit and SWMP this past reporting period? 138,325.00 This budget includes all Budgeted items in Stormwater such as salaries and vehicle maintence, uniforms ect.

B. What is next year's budget for implementing the requirements of your MS4 NPDES permit and SWMP? $10,485

C. Do you have an independent financing mechanism for your stormwater program? ☒ Yes ☐ No

D. If so, what is it/are they (e.g., stormwater fees), and what is the annual revenue derived from this mechanism?

Source: Stormwater/ Land Disturbance Fees. Amount $3,650

Source: N/A Amount $

E. How many full time employees does your municipality devote to the stormwater program (specifically for implementing the stormwater program vs. municipal employees with other primary responsibilities that dovetail with stormwater issues)? 2

F. Do you share program implementation responsibilities with any other entities? ☐ Yes ☒ No

Entity	Activity/Task/Responsibility	Your Oversight/Accountability Mechanism
N/A		
N/A		
N/A		

G. Please attach a copy of your Organizational Chart

14. Certification

This report must be signed by a ranking elected official or by a duly authorized representative of that person. See signatory requirements in sub-part 6.7.2 of the permit.

"I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury."

James S. Mayberry, Mayor — Printed Name and Title

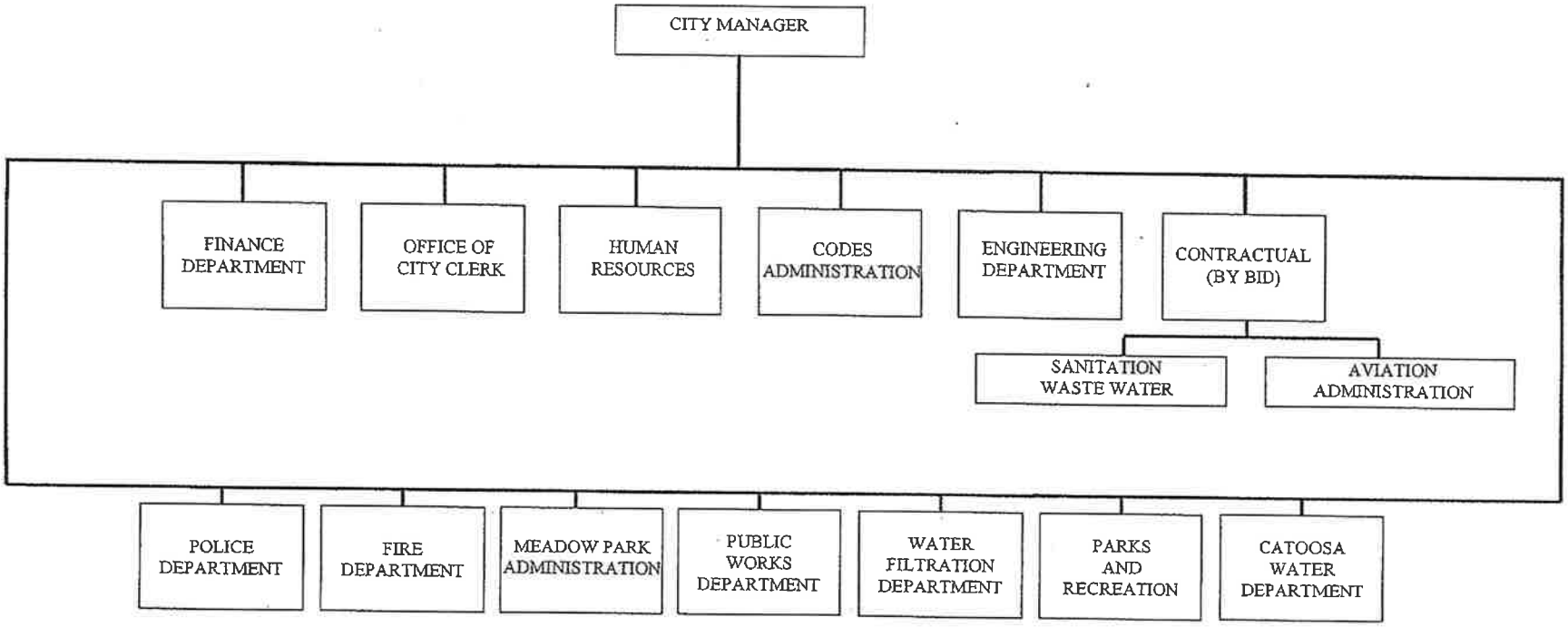
Signature

9-15-16 — Date

Annual reports must be submitted in accordance with the requirements of Section 5.4. (Reporting) of the permit. Annual reports must be submitted to the appropriate Environmental Field Office (EFO) by September 30 of each calendar year, as shown in the table below:

EFO	Street Address	City	Zip Code	Telephone
Chattanooga	1301 Riverfront Pkwy, Suite 206	Chattanooga	37402	(423) 634-5745
Columbia	1421 Hampshire Pike	Columbia	38401	(931) 380-3371
Cookeville	1221 South Willow Ave.	Cookeville	38506	(931) 432-4015
Jackson	1625 Hollywood Drive	Jackson	38305	(731) 512-1300
Johnson City	2305 Silverdale Road	Johnson City	37601	(423) 854-5400
Knoxville	3711 Middlebrook Pike	Knoxville	37921	(865) 594-6035
Memphis	8383 Wolf Lake Drive	Bartlett	38133	(901) 371-3000
Nashville	711 R S Gass Boulevard	Nashville	37216	(615) 687-7000

ORGANIZATIONAL CHART - EXECUTIVE BRANCH
CROSSVILLE CITY GOVERNMENT



Level 1 Erosion and Sediment Control Certified 2016

Jeff Brewer	Maintenance Lead Worker
Tom Turner	Engineering Assistant
Steve Powell	Maintenance Supervisor
Tim Bolin	Street Department Lead Worker
Stuart Hale	Street Maintenance
Zach Goss	Engineering Tech Assistant
Heath Blaylock	Stormwater Coordinator
Tim Begley	Director of Engineering
Kevin Oakes	Engineering Technician
Kevin Dean	GIS Admin

Level 2 Certified

Heath Blaylock

Tim Begley

City of Crossville Stormwater Department

E. Coli Testing Method – Idexx Colilert

	8/2/16	8/3/16	8/4/16	8/8/16	8/9/16
Byrd Creek	51/100mL	43/100mL	12/100mL	16/100mL	67/100mL
Little Obed	40/100mL	187/100mL	62/100mL	210/100mL	167/100mL
Obed River	210/100mL	31/100mL	>2420/100mL	160/100mL	126/100mL
One Mile Creek	82/100mL	16/100mL	22/100mL	260/100mL	155/100mL
Spiers Branch	>2420/100mL	125/100mL	261/100mL	457/100mL	358/100mL
Town Branch	1120/100mL	488/100mL	1553/100mL	285/100mL	479/100mL

Note: Gulf Coast Construction was working on sewer system improvement project in the areas of Obed River and Spiers Branch installing CIP Liner and bypass pumping which may have elevated levels during the sampling period.

Tennessee Exceptional waters within the City limits of Crossville

6010208	Emory	Stillhouse Creek	Cumberland	Portion in Cumberland Mountain State Park.	Cumberland Mountain State Park	35.894	35.8914	-85.0328	-85.0343
6010208	Emory	Threemile Creek including tributaries	Cumberland	Entirety including tributaries and headwater branches.	Cumberland Mountain State Park, exceptional biological diversity. Evaluation worksheet completed by Brandon Chance, biologist,	35.9177	35.9105	-84.9902	-85.0461
6010208	Emory	Byrd Creek including unnamed tributaries in Cumberland Mountain State Park	Cumberland	Portion in Cumberland Mountain State Park including unnamed tributaries.	Cumberland Mountain State Park	35.8934	35.9094	-85.0419	-84.9922
6010208	Emory	Byrd Lake	Cumberland	Within Cumberland Mountain SP.	Cumberland Mountain SP	35.8948	35.9005	-85.0075	-85.9997
6010208	Emory	Coon Hollow Branch	Cumberland	Portion in Cumberland Mountain State Park.	Cumberland Mountain State Park	35.897	35.004	-84.9994	-85.004
6010208	Emory	Little Obed River	Cumberland	Approximately 0.3 mile upstream Genesis Road to origin.	State threatened Zigzag Bladderwort and Brown Bog Sedge.	35.9684	35.9771	-85.0125	-84.9985
6010208	Emory	Lake Holiday Unnamed Tributary	Cumberland	From northwest corner of Lake Holiday to origin.	State threatened Brown Bog Sedge	35.9559	35.9554	-85.0735	-85.0793
6010208	Emory	Little Obed RIver	Cumberland	Approximately 0.3 mile upstream Genesis Road to origin.	State threatened Zigzag Bladderwort and Brown Bog Sedge.	35.9684	35.9771	-85.0125	-84.9985

WaterBody ID	**TN06010208015 – 0900**
WaterBody	**BYRD CREEK**
County	Cumberland
Miles/Acres Impaired	32.01
Cause/TMDL Priority	Low Dissolved Oxygen (L)
Polluntant Source	Upstream Impoundment
Comments	Category 5 (impaired for one or more uses).

WaterBody ID	**TN06010208015 – 0930**
WaterBody	**ONE MILE CREEK**
County	Cumberland
Miles/Acres Impaired	8.5
Cause/TMDL Priority	Loss of biological integrity due to siltation (NA) Escherichia coli(M)
Polluntant Source	Land Development Collection System Failure
Comments	Category 5. EPA approved a siltation TMDL that addresses some of the known pollutants.

WaterBody ID	**TN06010208013 – 2000**
WaterBody	**OBED RIVER**
County	Cumberland
Miles/Acres Impaired	1.48
Cause/TMDL Priority	Flow Alteration (NA) Physical Substrate Habitat Alterations (NA)
Polluntant Source	Discharges from MS4 area Upstream Impoundment
Comments	Below Lake Holiday near Crossville. Category 4A, but flow alteration is 4c (impact not caused by a pollutant). EPA approved a habitat alteration TMDL that addresses the known pollutant.

WaterBody ID	**TN06010208013 – 1000**
WaterBody	**OBED RIVER**
County	Cumberland
Miles/Acres Impaired	14.5
Cause/TMDL Priority	Nitrate+Nitrite (M) Total Phosphorus (M)
Polluntant Source	Municipal Point Source Discharges from MS4 area
Comments	Category 5. Federally-listed species have been documented downstream of this section, in the Wild and Scenic River section.

WaterBody ID	**TN06010208013 – 0200**
WaterBody	**LITTLE OBED RIVER**
County	Cumberland
Miles/Acres Impaired	7.96
Cause/TMDL Priority	Total Phosphorus Nitrate+Nitrite (M) Loss of biological integrity due to siltation (NA) Escherichia coli (M)
Polluntant Source	Discharges from MS4 area Collection System Failure
Comments	Category 5. EPA approved a siltation TMDL that addresses some of the known pollutants

WaterBody ID	**TN06010208013-0400**
WaterBody	**DROWNING CREEK**
County	Cumberland
Miles/Acres Impaired	13.1
Cause/TMDL Priority	Loss of biological integrity due to siltation (NA)
Polluntant Source	Pasture Grazing
Comments	Category 4A. EPA approved a siltation/habitat alteration TMDL that addresses the known pollutants.

Public Education and Outreach

Sponsored Cumberland Mtn State Park Trail Run

Online Weather Stations for Public and Schools

Crossville Sustainability Fair

WaterFest at Meadow Park Lake

Joined WATE 6 News in getting a weather camera on top of City Hall

GIS project must be saved in the same location as the images folder to allow the dynamic hyperlink to work.