



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)

Phase II Small Municipal Separate Storm Sewer System (MS4) Annual Report

1. MS4 Information

Name of MS4: City of Berry Hill		MS4 Permit Number: TNS075167
Contact Person: Joe Baker		Email Address: j baker@berryhilltn.net
Telephone: (615) 292-5531		MS4 Program Web Address: http://www.berryhilltn.org/index.aspx?NID=106
Mailing Address: 698 Thompson Lane		
City: Nashville	State: TN	ZIP code: 37204

What is the current population of your MS4? 963

What is the reporting period for this annual report? July 1 2018 to June 30 2019

2. Discharges to Waterbodies with Unavailable Parameters or Exceptional Tennessee Waters (Section 3.1)

- A. Does your MS4 discharge into waters with unavailable parameters (previously referred to as impaired) for pathogens, nutrients, siltation or other parameters related to stormwater runoff from urbanized areas as listed on TN's most current 303(d) list and/or according to the on-line state GIS mapping tool (tdeconline.tn.gov/dwr/)? If yes, attach a list. Yes No
- B. Are there established and approved TMDLs (<http://www.tn.gov/environment/article/wr-ws-tennessees-total-maximum-daily-load-tmdl-program>) with waste load allocations for MS4 discharges in your jurisdiction? If yes, attach a list. Yes No
- C. Does your MS4 discharge to any Exceptional Tennessee Waters (ETWs - http://environment-online.tn.gov:8080/pls/enf_reports/f?p=9034:34304:4880790061142)? If yes, attach a list. Yes No
- D. Are you implementing specific Best Management Practices (BMPs) to control pollutant discharges to waterbodies with unavailable parameters or ETWs? If yes, describe the specific practices: The City of Berry Hill encourages proper oil and grease handling by talking to business owners and sending pamphlets to restaurants. The City also targets nutrient pollution by educating landscaping companies. Yes No

3. Public Education/Outreach and Involvement/Participation (Sections 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, such as Hot Spots? If yes, describe the specific pollutants and/or sources targeted by your public education program: The City uses targeted emails as well as the Next Door social networking app to educate homeowners and businesses. The City gives new restaurants literature regarding proper oil and grease management. Construction-related stormwater pollution is addressed through the land disturbance permit process. The City began participating in TNSA's social media campaign in July 2019 to inform the public of stormwater-related issues as well. Yes No

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- C. Do you have a webpage dedicated to your stormwater program? If yes, provide a link/URL: <http://www.berryhilltn.org/index.aspx?NID=106> Yes No
- D. Summarize how you advertise and publicize your public education, outreach, involvement and participation opportunities: The City's newsletter and website, which includes City newsletters, Board of Commissioners' meeting agendas, Board of Commissioners' meeting minutes, and other stormwater content.
- E. Summarize the public education, outreach, involvement and participation activities you completed during this reporting period: The City maintained the stormwater section of the City's website, and held pre-construction meetings and pre-application meetings for proposed construction projects.
- F. Summarize any specific successful outcome(s) (e.g., citizen involvement, pollutant reduction, water quality improvement, etc.) fully or partially attributable to your public education and participation program during this reporting period: Due to proper oil and grease handling education, more restaurants are using properly sized traps to effectively collect grease. Pet waste is often picked up and properly disposed of evidenced by the frequency of the City having to restock the "Mutt Mitt" dispensers in several locations in the City near the high density condominium and apartment developments.

4. Illicit Discharge Detection and Elimination (Section 4.2.3)

- A. Have you developed and do you continue to update a storm sewer system map that shows the location of system outfalls where the municipal storm sewer system discharges into waters of the state or conveyances owned or operated by another MS4? Yes No
- B. If yes, does the map include inputs into the storm sewer collection system, such as the inlets, catch basins, drop structures or other defined contributing points to the sewershed of that outfall, and general direction of stormwater flow? Yes No
- C. How many outfalls have you identified in your storm sewer system? 37
- D. Do you have an ordinance, or other regulatory mechanism, that prohibits non-stormwater discharges into your storm sewer system? Yes No
- E. Have you implemented a plan to detect, identify and eliminate non-stormwater discharges, including illegal disposal, throughout the storm sewer system? If yes, provide a summary: Once per permit cycle the outfalls are screened for illicit discharges. Staff have been educated on illicit discharges and inspect them during normal activities. Yes No
- F. How many illicit discharge related complaints were received this reporting period? 0
- G. How many illicit discharge investigations were performed this reporting period? NA
- H. Of those investigations performed, how many resulted in valid illicit discharges that were addressed and/or eliminated? NA

5. Construction Site Stormwater Runoff Pollutant Control (Section 4.2.4)

- A. Do you have an ordinance or other regulatory mechanism requiring:
Construction site operators to implement appropriate erosion prevention and sediment control BMPs consistent with those described in the TDEC EPSC Handbook? Yes No
- Construction site operators to control wastes such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste? Yes No

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Design storm and special conditions for unavailable parameters waters or Exceptional Tennessee Waters consistent with those of the current Tennessee Construction General Permit (TNR100000)? Yes No

B. Do you have specific procedures for construction site plan (including erosion prevention and sediment BMPs) review and approval? Yes No

C. Do you have sanctions to enforce compliance? Yes No

D. Do you hold pre-construction meetings with operators of priority construction activities and inspect priority construction sites at least monthly? Yes No

E. How many construction sites disturbing at least one acre or greater were active in your jurisdiction this reporting period? 2

F. How many active priority and non-priority construction sites were inspected this reporting period? 5

G. How many construction related complaints were received this reporting period? 0

6. Permanent Stormwater Management at New Development and Redevelopment Projects (Section 4.2.5)

A. Do you have a regulatory mechanism (e.g. ordinance) requiring permanent stormwater pollutant removal for development and redevelopment projects? If no, have you submitted an Implementation Plan to the Division? Yes No
 Yes No

B. Do you have an ordinance or other regulatory mechanism requiring:
Site plan review and approval of new and re-development projects? Yes No

A process to ensure stormwater control measures (SCMs) are properly installed and maintained? Yes No

Permanent water quality riparian buffers? If yes, specify requirements: 30 feet for streams with a drainage area less than one square mile and 60 feet for one square mile or greater. Yes No

C. What is the threshold for development and redevelopment project plans plan review (e.g., all projects, projects disturbing greater than one acre, etc.)? 0.5 acre of disturbance or adjacent to stream; 0.25 acre disturbance requires EPSC plan only

D. How many development and redevelopment project plans were reviewed for this reporting period? 3

E. How many development and redevelopment project plans were approved? 1

F. How many permanent stormwater related complaints were received this reporting period? 0

G. How many enforcement actions were taken to address improper installation or maintenance? 0

H. Do you have a system to inventory and track the status of all public and private SCMs installed on development and redevelopment projects? Yes No

I. Does your program include an off-site stormwater mitigation or payment into public stormwater fund? If yes, specify. _____ Yes No

7. Stormwater Management for Municipal Operations (Section 4.2.6)

A. As applicable, have stormwater related operation and maintenance plans that include information related to maintenance activities, schedules and the proper disposal of waste from structural and non-structural stormwater controls been developed and implemented at the following municipal operations:

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- | | | |
|---|---|-----------------------------|
| Streets, roads, highways? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Municipal parking lots? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Maintenance and storage yards? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Fleet or maintenance shops with outdoor storage areas? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Salt and storage locations? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Snow disposal areas? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Waste disposal, storage, and transfer stations? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
|
 | | |
| B. Do you have a training program for employees responsible for municipal operations at facilities within the jurisdiction that handle, generate and/or store materials which constitute a potential pollutant of concern for MS4s? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| If yes, are new applicable employees trained within six months, and existing applicable employees trained and/or retrained within the permit term? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |

8. Reviewing and Updating Stormwater Management Programs (Section 4.4)

- A. Describe any revisions to your program implemented during this reporting period including but not limited to:
- Modifications or replacement of an ineffective activity/control measure. The City experimented with electronic communication (i.e. Next Door app, website, targeted emails) with residents versus two paper newsletters this permit year. The City just added participation in TNSA's Facebook advertising campaign in July 2019 as well.
- Changes to the program as required by the division to satisfy permit requirements. Follow up to an MS4 audit this year resulted in a revised stormwater ordinance to clarify that all land disturbing activity of one acre or more must adhere to the Construction General Permit requirements and including an update to the plan submittal checklist.
- Information (e.g. additional acreage, outfalls, BMPs) on newly annexed areas and any resulting updates to your program. None - annexation is not applicable for the City due to Metro Nashville charter
- B. In preparation for this annual report, have you performed an overall assessment of your stormwater management program effectiveness? If yes, summarize the assessment results, and any modifications and improvements scheduled to be implemented in the next reporting period. The number of illicit discharge related complaints stayed at zero during this reporting period. The City made revisions to the PIE plan this year based on past experience targeting the permit-required audiences. The storm sewer input map is being continually updated as new developments are completed.
- | | | |
|--|---|-----------------------------|
| | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
|--|---|-----------------------------|

9. Enforcement Response Plan (Section 4.5)

- A. Have you implemented an enforcement response plan that includes progressive enforcement actions to address non-compliance, and allows the maximum penalties specified in TCA 68-221-1106? If no, explain. _____ Yes No
- B. As applicable, identify which of the following types of enforcement actions (or their equivalent) were used during this reporting period; indicate the number of actions, the minimum measure (e.g., construction, illicit discharge, permanent stormwater management), and note those for which you do not have authority:

<u>Action</u>	<u>Construction</u>	<u>Permanent Stormwater</u>	<u>Illicit Discharge</u>	<u>In Your ERP?</u>	
Verbal warnings	# _____	# _____	# _____	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Written notices	# _____	# _____	# _____	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Citations with administrative penalties	# _____	# _____	# _____	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Stop work orders	# _____	# _____	# _____	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Withholding of plan approvals or other authorizations	# _____	# _____	# _____	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Additional Measures	# _____	# _____	# _____	Describe: _____	

- C. Do you track instances of non-compliance and related enforcement documentation? Yes No
- D. What were the most common types of non-compliance instances documented during this reporting period? NA - no non-compliance instances occurred during the reporting period.

10. Monitoring, Recordkeeping and reporting (Section 5)

- A. Summarize any analytical monitoring activities (e.g., planning, collection, evaluation of results) performed during this reporting period. Benthic samples were collected in June 2019 in Browns Creek and East Fork Browns Creek.
- B. Summarize any non-analytical monitoring activities (e.g., planning, collection, evaluation of results) performed during this reporting period. N/A
- C. If applicable, are monitoring records for activities performed during this reporting period submitted with this report. Yes No

11. Certification

**Section 2.A. - List of Waters with Unavailable Parameters in Jurisdiction Based on TDEC Viewer
as of September 2019**

Waterbody Name	Waterbody Description	Waterbody I.D. #	Cause(s)	Source Name(s)
East Fork Browns Creek	Browns Creek to headwaters	TN05130202023_0100	Other anthropogenic substrate alterations	Municipal (Urbanized High Density Area)
			<i>Escherichia coli</i>	Discharges from Municipal Separate Storm Sewer Systems (MS4)
			Phosphorus (Total)	Discharges from Municipal Separate Storm Sewer Systems (MS4)
			Oil and Grease	Industrial Point Source Discharge
			Nitrate/Nitrite (Nitrite + Nitrate as N)	Industrial Point Source Discharge
			Nitrate/Nitrite (Nitrite + Nitrate as N)	Discharges from Municipal Separate Storm Sewer Systems (MS4)
Browns Creek	From Confluence of Middle Fork Browns Creek and West Fork Browns Creek to Approximately 0.2 Miles Upstream of Confluence with Cumberland River	TN05130202023_2000	<i>Escherichia coli</i>	Discharges from Municipal Separate Storm Sewer Systems (MS4)
			Phosphorus (Total)	Discharges from Municipal Separate Storm Sewer Systems (MS4)
			Phosphorus (Total)	Industrial Point Source Discharge
			Other anthropogenic substrate alterations	Municipal (Urbanized High Density Area)
			Oil and Grease	Industrial Point Source Discharge
			Nitrate/Nitrite (Nitrite + Nitrate as N)	Discharges from Municipal Separate Storm Sewer Systems (MS4)

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Report Attachments

Section 2.B. TMDLs with Waste Load Allocations for MS4 Discharges

Summary of TMDLs, WLAs, & LAs expressed as daily loads for Impaired Waterbodies in the Lower Cumberland Watershed (HUC 05130202)

HUC-12 Subwatershed (05130202__) or Drainage Area (DA)	Impaired Waterbody Name	Impaired Waterbody ID	TMDL	MOS	WLAs			LAs			
					[CFU/day]	[CFU/day]	[CFU/day]		[CFU/day]	[CFU/day/acre]	[CFU/day/acre]
0101	Cooper Creek	TN05130202209 – 1000	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$8.862 \times 10^{6*} Q$	$8.862 \times 10^{6*} Q$			
	Dry Creek	TN05130202027 – 1000	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$3.826 \times 10^6 * Q$	$3.826 \times 10^6 * Q$			
	Gibson Creek	TN05130202212 – 1000	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$7.727 \times 10^6 * Q$	$7.727 \times 10^6 * Q$			
	Neeleys Branch	TN05130202212 – 0100	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$1.526 \times 10^7 * Q$	$1.526 \times 10^7 * Q$			
0102	Lumsley Fork	TN05130202220 – 0100	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$1.008 \times 10^7 * Q$	$1.008 \times 10^7 * Q$			
	Manskers Creek	TN05130202220 – 1000	$1.20 \times 10^{10} * Q$	$1.20 \times 10^9 * Q$	NA	0	$3.697 \times 10^5 * Q$	$3.697 \times 10^5 * Q$			
	Manskers Creek	TN05130202220 – 2000	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$1.200 \times 10^6 * Q$	$1.200 \times 10^6 * Q$			
	Slaters Creek	TN05130202220 – 0300	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$4.374 \times 10^6 * Q$	$4.374 \times 10^6 * Q$			
	Walkers Creek	TN05130202220 – 0200	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$2.979 \times 10^6 * Q$	$2.979 \times 10^6 * Q$			
0103	Browns Creek	TN05130202023 – 1000	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$2.070 \times 10^6 * Q$	$2.070 \times 10^6 * Q$			
	Browns Creek	TN05130202023 – 2000	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$2.150 \times 10^6 * Q$	$2.150 \times 10^6 * Q$			
	East Fork Browns Creek	TN05130202023 – 0100	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$1.810 \times 10^7 * Q$	$1.810 \times 10^7 * Q$			
	West Fork Browns Creek	TN05130202023 – 0300	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$9.526 \times 10^6 * Q$	$9.526 \times 10^6 * Q$			
	Pages Branch	TN05130202202 – 1000	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$1.072 \times 10^7 * Q$	$1.072 \times 10^7 * Q$			
	Pages Branch	TN05130202202 – 2000	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$1.707 \times 10^7 * Q$	$1.707 \times 10^7 * Q$			
0105	Cummings Branch	TN05130202010 – 0600	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$1.433 \times 10^7 * Q$	$1.433 \times 10^7 * Q$			
	Drakes Branch	TN05130202010 – 0200	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$1.663 \times 10^7 * Q$	$1.663 \times 10^7 * Q$			
	Dry Fork	TN05130202010 – 0300	$2.30 \times 10^{10} * Q$	$2.30 \times 10^9 * Q$	NA	0	$7.594 \times 10^6 * Q$	$7.594 \times 10^6 * Q$			