



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: 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 2017 to June 30 2018

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/](http://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](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 stormwater-related articles or pamphlets in the semi-annual City newsletter to educate homeowners and businesses. The City also gives new restaurants literature regarding proper oil and grease management. Construction-related stormwater pollution is addressed through the land disturbance permit process.  Yes  No
- 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

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- 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 publishes a newsletter, updates the stormwater website, and holds 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.

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
  - 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

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- 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? 6
- F. How many active priority and non-priority construction sites were inspected this reporting period? 1
- 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
- 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:
  - Streets, roads, highways?  Yes  No
  - Municipal parking lots?  Yes  No
  - Maintenance and storage yards?  Yes  No
  - Fleet or maintenance shops with outdoor storage areas?  Yes  No
  - Salt and storage locations?  Yes  No

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- Snow disposal areas?  Yes  No
- Waste disposal, storage, and transfer stations?  Yes  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?  Yes  No
- If yes, are new applicable employees trained within six months, and existing applicable employees trained and/or retrained within the permit term?  Yes  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. None
- Changes to the program as required by the division to satisfy permit requirements. N/A
- 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 City had more construction related sediment discharges and other related construction related complaints than usual last reporting period (2016-2017). In response, the City carried out more enforcement actions per the ERP. The City also hired a full-time building/EPSC inspector to address the increased administrative need to oversee the active construction sites. The number of illicit discharge related complaints dropped to zero during this reporting period even though the number of active sites slightly increased - a very good improvement. The City is planning revisions to the PIE plan this coming year as well based on past experience targeting the permit-required audiences. The storm sewer input map is being continually updated as new developments are completed.  Yes  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. N/A
- 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 August 2017**

<b>Waterbody Name</b>	<b>Waterbody Description</b>	<b>Waterbody I.D. #</b>	<b>Cause(s)</b>	<b>Source Name(s)</b>
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
					WWTFs *	Leaking Collection Systems	MS4s	
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	$7.594 \times 10^6 * Q$	$7.594 \times 10^6 * Q$