



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: University of Memphis		MS4 Permit Number: TNS076104
Contact Person: Mr. Ron Brooks		Email Address: rbrooks@memphis.edu
Telephone: (901) 678-2539		MS4 Program Web Address: http://www.memphis.edu/ehs/stormwater/
Mailing Address: 3750 Desoto Ave.		
City: Memphis	State: TN	ZIP code: 38152

What is the current population of your MS4? Approximately 23,000 students and employees

What is the reporting period for this annual report? July1 2019 to June 30 2020

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: Please see BMP attachment  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: We are continuing focus on pressure washing effectively and efficiently, while protecting all storm drains from run off related to pressure washing. We began to contract this service, however, we found it less costly to train our employees and complete this task in-house. We have since purchased several products that protect our storm drains from any illicit run off while power washing and these products are also used to response to any emergency involving illicit discharge. We have also improved and will continue to improve interdepartmental communications and transparency involving small construction projects under one acre and the larger construction projects requiring a SWPPP. This allows for additional inspections and a quicker response to improve any BMPs.  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.memphis.edu/ehs/stormwater/>  Yes  No
- D. Summarize how you advertise and publicize your public education, outreach, involvement and participation opportunities: Announcements through U of M email system, U of M stormwater web page, U of M electronic weekly newsletter that goes out to faculty and staff called "This Week," Campus newspaper "The Helmsman," U of M Sustainability and Main U of M Social Media channels and through various campus and community tabling and presentation events and programs.
- E. Summarize the public education, outreach, involvement and participation activities you completed during this reporting period: See Attached PIE Activities Summary
- 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: Training provided to Physical Plant and Grounds employees coupled with having a central stormwater coordinator has resulted in quick reporting and resolution of minor stormwater problems across campus. Also, at every event where we promote and discuss stormwater, it is clear that the information we are providing is new information to the public stopping by our displays, thus increasing stormwater awareness on campus. Communication on construction site SW issues has improved between the contractors, Campus Planning and the MS4 Coordinator. The effects of this improvement can be seen in the record keeping and increased communication between all parties involved. Also, the U of M MS4 webpage has been updated and advertised more, so that the public is aware of the education and involvement available with our MS4 program. We have also began composting at one of our popular dining facilities on campus. For now, the composting is only done in the kitchen area and not in the dining area. Since that program began in December 2019 until March 2020, when the facility shut down due to the pandemic, a total of 8.5 tons of food waste was diverted from the landfill. While this initiative is great for the environment in many ways, we also noticed that there was a significant reduction in illicit discharge caused by food waste in dumpsters at that facility and thereby decreased the need to pressure wash this area as often. This issue is one of our Hot Spots and so this was a very successful outcome that really involves citizen involvement, pollutant reduction, water quality improvement, etc. We have since added two other buildings to our composting program and will be adding another large dining facility this Fall.

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? Approximately 36 outfalls discharging to other MS4 conveyance systems which includes all campuses.
- D. Do you have an ordinance, or other regulatory mechanism, that prohibits non-stormwater discharges into your storm sewer system?  Yes  No

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- 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: U of M Project Managers perform twice-weekly inspections on all active construction projects and meet once a month to discuss the SW Site Audit Checklist. They are responsible for identifying, reporting and addressing any discharges throughout the storm sewer system within a 24 hour period. An illicit discharge complaint form is available on the U of M Stormwater web page to the public, in the event that an illicit discharge is discovered. That form is sent directly to the U of M MS4 Coordinator and will be addressed within a 24 hour period.  Yes  No
- F. How many illicit discharge related complaints were received this reporting period? 2
- G. How many illicit discharge investigations were performed this reporting period? 2
- H. Of those investigations performed, how many resulted in valid illicit discharges that were addressed and/or eliminated? ? All were preemptive in nature and not documented as valid illicit discharges
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
- 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? 4, NOTE: a NOC for 5<sup>th</sup> site (TNR154924) became effective on April 7<sup>th</sup>, 2020, however no ground was broken until August 2020.
- F. How many active priority and non-priority construction sites were inspected this reporting period? 4
- 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

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

Permanent water quality riparian buffers? If yes, specify requirements: N/A  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.)? All projects disturbing one acre or more are required to have professional designers. All design plans will be reviewed by U of M. U of M is in the process of selecting an on call stormwater consultant to help with campus stormwater needs, including stormwater plans review.

D. How many development and redevelopment project plans were reviewed for this reporting period? 5

E. How many development and redevelopment project plans were approved? 5

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

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. 0

Changes to the program as required by the division to satisfy permit requirements. 0

Information (e.g. additional acreage, outfalls, BMPs) on newly annexed areas and any resulting updates to your program. Upon completion of the 4 construction projects, we have rerouted and added additional storm drain structures including additional outfalls and 2 new detention basins. Our storm water map is currently being updated with these changes.

- 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 overall assessment of our stormwater management program is a positive one, given the unique challenge of the COVID-19 pandemic. Because of the pandemic, our ability to carry out some planned outreach and educational activities were unsuccessful. Also, employees sent to work from home as well as energy and resources being diverted to address COVID-19 safety measures, had some adverse effects on training, newly established communication measures and completion of planned projects. It has undoubtedly been a year of new challenges, however, there were still great improvements achieved. One of our Hot Spots, dining facility loading docks, were consistently prone to have leaking dumpsters. A successful composting program was implemented to help alleviate a significant portion of that pollutant discharge at one dining facility and minimized the need for pressure washing as often. And the other dining facility is set to join in the program this Fall. Both outdoor grease traps were also removed from the loading docks this past year and a new indoor collection tank was installed in both facilities. This has eliminated track in and out of employees carrying grease/oil that always ran the risk of spills and overflow onto the loading docks. This initiative coupled with the dumpsters at both facilities being switched to self-containing compactors by Spring 2021, should greatly reduce any illicit discharge from these Hot Spots. BMPs concerning pressure washing have been improved with training and the purchasing of storm drain protection items. This task is now done in-house, thereby reducing the cost as opposed to contracting out the work. Fortunately, the largest public involvement and outreach event was held pre-COVID on Oct. 8<sup>th</sup>, 2019 called Tiger Blue Goes Green. Approximately 1,000 participants or more attended the event. The theme of the event was "Our Rivers' Keeper." Sponsors of the event were City of Memphis MS4, Protect Our Aquifer, NonConnah Creek Conservancy, Sierra Club TN Chapter and our own Uof M Center for Applied Earth Science and Engineering Research (CAESAR). Stormwater was a main highlight of the event. We were also able to conduct a quick survey to most attendees. This survey gave us a better understanding of the general public's knowledge concerning river conservancy and storm water pollution and where we need to focus when it comes to education. For the next reporting period, expectations are to completely resolve and remove the dining facility loading docks as a Hot Spot. We are currently partnering with CAESAR on a Green Fee project called Water Smart Campus. This first phase will provide us with water use data on 5 buildings and 2 irrigation systems. The second phase will be implementation of water saving strategies and tools that can potentially reduced unnecessary runoff from irrigation lines. We are also having discussions with CAESAR on having students improve our stormwater map and assist in developing a labeling system for our storm drains. We will strive to make improvements on our website, so that it is a viable resource for all and push awareness to use the illicit discharge compliant form. More outreach and improvements in our BMPs are also on the agenda for next year.

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. The ERP includes progressive enforcement actions; however fines are not part of the ERP. Financial enforcement includes stop work orders, withholding payments, and severing contracts.  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	#0	#0	#0	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Written notices	#0	#0	#0	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Citations with administrative penalties	#0	#0	#0	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Stop work orders	#0	#0	#0	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Withholding of plan approvals or other authorizations	#0	#0	#0	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Additional Measures	#0	#0	#0	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? leaking dumpsters

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. U of M is exempt from this requirement
- B. Summarize any non-analytical monitoring activities (e.g., planning, collection, evaluation of results) performed during this reporting period. \_\_\_\_\_
- C. If applicable, are monitoring records for activities performed during this reporting period submitted with this report.  Yes  No

11. Certification

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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 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 fine and imprisonment for knowing violations."*

Ron Brooks, VP Physical Plant  
Printed Name and Title

R. G. Brooks  
Signature

9/29/2020  
Date

Annual reports must be submitted by September 30 of each calendar year (Section 5.4) to the appropriate Environmental Field Office (EFO), identified 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) 520-6688
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