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 Forest Hills		MS4 Permit Number: TN2075302
Contact Person: Amanda Rhinehart, City Manager		Email Address: amanda.rhinehart@cityofforesthills.com
Telephone: (615) 372-8677		MS4 Program Web Address: http://www.cityofforesthills.com/
Mailing Address: 6300 Hillsboro Pike		
City: Nashville	State: TN	ZIP code: 37215

What is the current population of your MS4? 5,040

What is the reporting period for this annual report? July1 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/)? 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: BMP's for new construction with the target being siltation. ☒ 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: Sediment release from construction sites, nuturients and water quality, and runoff reduction through infiltration and proper disposal of hazardous waste. ☒ Yes ☐ No

C. Do you have a webpage dedicated to your stormwater program? If yes, provide a link/URL: http://www.cityofforesthills.com/stormwater.html ☒ Yes ☐ No

D. Summarize how you advertise and publicize your public education, outreach, involvement and participation opportunities: City's website (continuous), email blasts (as-needed), city news letter (quarterly), individual contact.

E. Summarize the public education, outreach, involvement and participation activities you completed during this reporting period: 9/30/2017 & 4/14/2018 Recycle Day: Provided education on proper disposal of hazardous waste.

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: 570 partcipants for Spring and Fall Recycle Day.

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? approx. 83

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: Dry weather screenings of outfalls are performed during routine site visits around the City. ☒ 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? 0

H. Of those investigations performed, how many resulted in valid illicit discharges that were addressed and/or eliminated? N/A

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? 2

F. How many active priority and non-priority construction sites were inspected this reporting period? 2

G. How many construction related complaints were received this reporting period? 5

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 ☒ Yes	☐ No ☐ 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: See supplemental information.	☒ 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.)? Disturbed area greater than 10,000 square feet

D. How many development and redevelopment project plans were reviewed for this reporting period? 102

E. How many development and redevelopment project plans were approved? 102

F. How many permanent stormwater related complaints were received this reporting period? 5

G. How many enforcement actions were taken to address improper installation or maintenance? 5

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. N/A

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. N/A

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. N/A ☐ 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:

Action	Construction	Permanent Stormwater	Illicit Discharge	In Your ERP?	
Verbal warnings	#1	#	#	☒ Yes	☐ No
Written notices	#	#	#	☒ Yes	☐ No
Citations with administrative penalties	#	#	#	☐ Yes	☒ No
Stop work orders	#8	#	#	☒ Yes	☐ No
Withholding of plan approvals or other authorizations	#	#	#	☒ Yes	☐ 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? Inadequate BMPs on active construction sites and unpermitted work.

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. None, The City will be engaging the services of a professional consulting firm.

B. Summarize any non-analytical monitoring activities (e.g., planning, collection, evaluation of results) performed during this reporting period. None, The City will be engaging the services of a professional consulting firm.

C. If applicable, are monitoring records for activities performed during this reporting period submitted with this report. ☐ Yes ☒ No

11. 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 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."

Amanda Rhinehart, City Manager		9/28/2018
Printed Name and Title	Signature	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

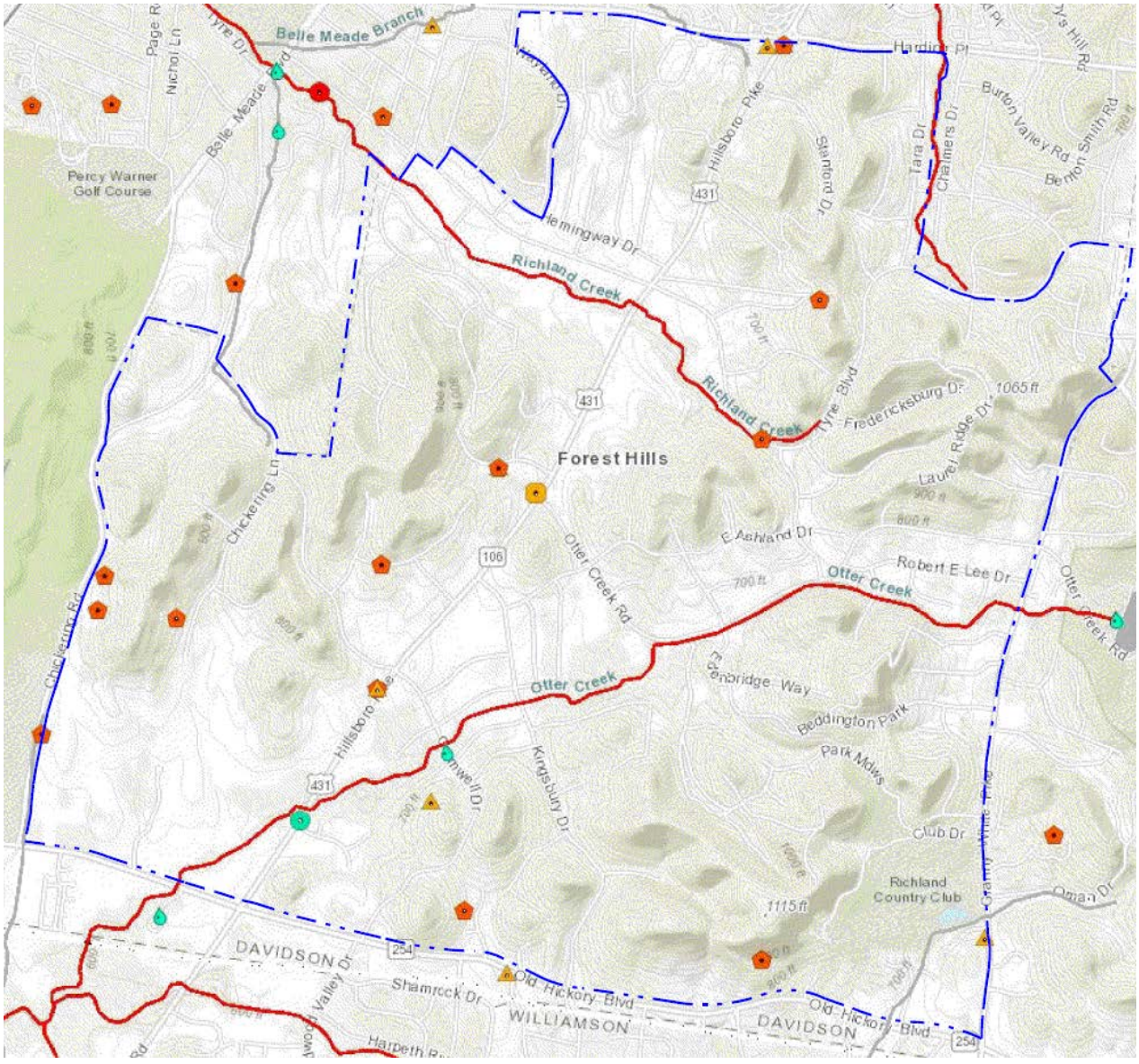
City of Forest Hills
Permit Tracking Number TN2075302
July 1, 2017 to June 30, 2018

Supplemental Information

Section 2. A.
303(d) listed/impaired waters

ID: TN05130204021_0100; Otter Creek:

ID: TN05130202314_1000; Richland Creek:



Source :Water Quality Assessment Viewer

TENNESSEE 2018 FINAL LIST OF IMPAIRED WATERS

CITY OF FOREST HILLS

Permit Tracking Number TN2075302

ID305B	WATER_NAME	LOCATION	WATER_TYPE	WATER_SIZE	CAUSE_NAME	TMDL_PRIORITY	SOURCE_NAME
TN05130204021_0100	**Otter Creek**	DAVIDSON CO	RIVER	4.6	Sedimentation/Siltation	NA	Municipal (Urbanized High Density Area)
TN05130204021_0100	**Otter Creek**	DAVIDSON CO	RIVER	4.6	Low flow alterations	NA	Upstream Impoundments (e.g., Pl-566 NRCS Structures)
TN05130204021_0100	**Otter Creek**	DAVIDSON CO	RIVER	4.6	Alteration in stream-side or littoral vegetative covers	NA	Municipal (Urbanized High Density Area)
TN05130204021_0100	**Otter Creek**	DAVIDSON CO	RIVER	4.6	Phosphorus (Total)	M	Upstream Impoundments (e.g., Pl-566 NRCS Structures)
TN05130204021_0100	**Otter Creek**	DAVIDSON CO	RIVER	4.6	Phosphorus (Total)	M	Municipal (Urbanized High Density Area)
TN05130202314_1000	**Richland Creek**	DAVIDSON CO	RIVER	1.9	Phosphorus (Total)	L	Sanitary Sewer Overflows (Collection System Failures)
TN05130202314_1000	**Richland Creek**	DAVIDSON CO	RIVER	1.9	Nitrate/Nitrite (Nitrite + Nitrate as N)	L	Municipal (Urbanized High Density Area)
TN05130202314_1000	**Richland Creek**	DAVIDSON CO	RIVER	1.9	Sedimentation/Siltation	L	Municipal (Urbanized High Density Area)
TN05130202314_1000	**Richland Creek**	DAVIDSON CO	RIVER	1.9	Other anthropogenic substrate alterations	L	Municipal (Urbanized High Density Area)
TN05130202314_1000	**Richland Creek**	DAVIDSON CO	RIVER	1.9	Escherichia coli	NA	Sanitary Sewer Overflows (Collection System Failures)

Section 3. C.

URS: http://www.cityofforesthills.com/stormwater.html

CITY OF FOREST HILLS

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Stormwater Management in Forest Hills

Zoning ordinance overlay protects hills of the City

The tree-covered hills throughout Forest Hills neighborhoods represent the essence of the area's natural beauty. Even more importantly, trees play an essential role in holding the ground together on the hillsides, ridgetops, and steep slopes throughout the City.

Much of the soil in Forest Hills is colluvial, which naturally washes away over time anyway. When trees on a steep slope are cut, it may further destabilize the soil because the trees' roots were helping to hold the soil onto the hillside.

Because so much of the land in Forest Hills lies on hillsides and steep slopes, the City's Zoning Ordinance includes passages aimed especially at preserving and protecting trees and steep slopes. It defines Hillside Protection Overlay districts and provides guidelines for development in higher elevations. Maps of the protected districts are available **HERE**.

The guidelines were established to protect the natural beauty and topography of the land in the face of development. As an "overlay" district, any development or land disturbance within the area must comply with the technical and development standards outlined in the Zoning Ordinance. Without guidelines, development can increase the amount of runoff after a rainstorm, which leads to greater erosion and the potential for the slope to become destabilized.

Trees play an important role in enhancing the visual quality of life and protecting property values in the City. Portions of the Zoning Ordinance stress the need for planting, maintaining, and preserving trees in an effort to limit the destruction and ensure the survival of mature trees. That's because mature trees contribute significantly to reducing stormwater impact and reducing erosion through their extensive root systems.

If you plan to make any changes to parts of your property that lie on hillsides or steep slopes, be sure to consult with City Manager Amanda Rhinehart. She will work with you to develop a plan than minimizes the loss of trees and lessens the impact on the environment.

Stormwater Pollution Solutions

This stormwater management information is provided as part of the City's education requirement under its state permit. **More tips**

How to protect our watershed

The City's hills are part of the headwaters of five different streams. Clean stormwater is essential to protecting the sources of our drinking water and maintaining our enjoyment of rivers, streams, and creeks.

Stormwater can pick up pesticides, fertilizer, oil products, pet waste, and construction debris and deposit them in its final destination, the bodies of water from which we get our drinking water.

Here's how you can help keep our watershed clean.

- Plant a rain garden. Building a rain garden using native trees and grasses lets runoff soak into the ground to alleviate erosion and flooding.
- Limit fertilizer. Avoid fertilizing your lawn, and choose a non-phosphorous solution to protect waterway nutrients.
- Service your septic system every three years.
- Avoid pesticides. Storms can wash them into nearby streams.
- biological pest control.
- Pick up pet waste.
- Buffer streams. Plant native trees and plants to filter stormwater runoff.
- Use commercial car washes that filter their water.

Plant native trees, shrubs, and grasses

Planting native perennials, trees, and shrubs is an effective, natural way to prevent erosion, especially on sloping terrain. Long-term studies show that a hillside with a well-designed garden planted in natives has little measurable erosion. **MORE**

Reduce stormwater runoff

Reducing stormwater run-off from your yard helps the environment and reduces unsightly ground erosion. **MORE**

Plant more trees

The floodwaters of 2010 brought new understanding of the importance of reducing the water runoff from rainstorms. One effective way of mitigating stormwater threats is by planting trees. **MORE**

Keep drainage ditches clear

Do not rake loose leaves into the City's streets, ditches, culverts, or wherever water runs. **MORE**

Use rain barrels

Rain barrels are an effective and low-cost method of managing rain running off from rooftops. **MORE**

Build rain gardens

Rain gardens, also called bioretention areas or bioinfiltration cells, are shallow depressions used to improve the absorption and infiltration of stormwater runoff. **MORE**

Use permeable paving

Using paving tiles that allow water to seep in between them is an excellent way to mitigate stormwater runoff from driveways and parking areas. **MORE**

Prevent agricultural contamination

Lack of vegetation on stream-banks can lead to erosion. Overgrazed pastures can also contribute excessive amounts of sediment to local waterbodies. **MORE**

Control construction debris

Erosion controls that aren't maintained can cause excessive amounts of sediment and debris to be carried into the stormwater system. Construction vehicles can leak fuel, oil, and other harmful fluids that can be picked up by stormwater and deposited into local waterbodies. **MORE**

Clean up pet waste

Pet waste can be a major source of bacteria and excess nutrients in local streams and waterways. **MORE**

FOREST HILLS
Cultural and Natural Resources

Restore Richland Creek Initiative

Resources

Stormwater Factsheet

Stormwater Ordinance

Richland Creek Watershed Map

Section 3. E.

9/30/2017 & 4/14/2018: The City of Forest Hills hosts Recycle Day. The public is educated on the disposal of hazardous materials.

Illicit Discharge Education: Plans review for pools, provide for education, and notes on plans regarding the release of unchlorinated and desalinated pool water as being an Illicit Discharge. The focus group is engineers, architects, contractors, home owners.