



**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)

**Municipal Separate Storm Sewer System (MS4) Annual Report**

**1. MS4 INFORMATION**

Town of Collierville, TN TNS075230

Name of MS4 MS4 Permit Number

Emily Harrell eharrell@ci.collierville.tn.us

Name of Contact Person Email Address

(901) 457-2346

Telephone (including area code)

500 Poplar View Parkway

Mailing Address

Collierville TN 38017

City State ZIP code

What is the current population of your MS4? 48,655

What is the reporting period for this annual report? From July 1, 2014 to June 30, 2015

**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.  Yes  No

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

## Municipal Separate Storm Sewer System (MS4) Annual Report

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

The Town of Collierville's PIE addresses specific pollutants by each source: residential, commercial, construction and municipal. The residential program focuses on educating adults and children on the effects of specific pollutants generated from their homes (pathogens, nutrients, toxins) and how to prevent them from entering our waterways. Commercial sites are targeted if they are considered a "hot spot" such as automotive repair or restaurants. Educational brochures and posters are distributed to these facilities related to illicit discharges common from their type of business. Developers, contractors and municipal employees which oversee construction sites are trained on practices to prevent sediment from leaving the site. Municipal employees also receive general stormwater training pertinent to their type of work as well as general stormwater training

D. Note specific successful outcome(s) (NOT tasks, events, publications) fully or partially attributable to your public education program during this reporting period.

The Town has seen an increase in reporting sources of illicit discharge due to our education efforts. In many cases this has allowed the pollutant to be contained and clean-up to occur before entering our waterways. (1) Municipal: Town staff reported a painting contractor washing out paint brushes and disposal of left over paint in a concrete drainage swale. The contractor was contacted and instructed the proper way to clean the area. (2) Residential: A resident observed a pool contractor discharging water into a storm sewer inlet and reported it to the Town. The contractor was stopped and instructed to discharge into the sanitary sewer. (3) Commercial: A gas station employee contacted the Town after a customer poured gasoline down a storm inlet. The small amount of gas was contained and residue cleaned up.

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?

The Town utilizes a variety of marketing sources including the Town's website, running advertisements in local newspapers, articles in the Town's bi-weekly newsletter, posting flyers in local businesses, ads on local cable channel and emailing local homeowner's associations and churches.

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

If so, what is the link/URL:

<http://collierville.com/departments/development/engineering/stormwater>

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? Approximately 300

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? Monthly

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)? 3

I. Of those illicit discharges/illegal connections that have been discovered or reported, how many have been eliminated? 3

## Municipal Separate Storm Sewer System (MS4) Annual Report

### 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? 163

C. How many of these active sites did you inspect this reporting period? 163

D. On average, how many times each, or with what frequency, were these sites inspected (e.g., weekly, monthly, etc.)? Weekly

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

If Yes, based on what criteria? Sites in sensitive areas, a contractor with a history of noncompliance, or sites with a large area a disturbance are inspected more frequently.

### 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.) All projects greater than 1 acre or part of a larger development

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.

<http://collierville.com/images/stories/engineering/stormwater/strmwtr-ord.pdf>

F. How many development and redevelopment project plans were reviewed for this reporting period? 137

G. How many development and redevelopment project plans were approved? 25

H. How many permanent stormwater management practices/facilities were inspected? 10

I. How many were found to have inadequate maintenance? 0

## Municipal Separate Storm Sewer System (MS4) Annual Report

- 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? N/A
- 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? 6

### 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. The ordinance was revised in 2012 to include the requirements set forth in the MS4 Permit for permanent stormwater management. The ordinance was revised again in 2015 to include the 1 year time extension approved by TDEC.

### 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? Annually
- 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? Monthly or after a major storm event
- F. On average, how frequently are catch basins and other inline treatment systems cleaned out/maintained? Maintenance is conducted on an as needed basis determined from monthly inspections
- 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

## Municipal Separate Storm Sewer System (MS4) Annual Report

If so, how frequently and/or under what circumstances? The Town conducts a stormwater refresher course for employees every 5 years. Employees responsible for plan review and inspections who are TDEC Level 1 certified attend a course every 3 years. Additional classes/seminars on stormwater pollution and prevention are attended annually by employees directly involved in the stormwater program.

### 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). The Town has expanded its education program to include more public involvement activities. During this reporting period, we added a Rain Garden Workshop and a tree planting event (50K Tree Day). We have also been more active in Collierville Schools. Activities include: a tree give-a-way at Crosswind Elementary School and the Collierville High School Environmental Club started a recycling program in their cafeteria as well as conducted an E-Waste Drive.

Changes to replace an ineffective or unfeasible BMP (Section 4.4.2.b). N/A

Information (e.g. additional acreage, outfalls, BMPs) on program area expansion based on annexation or newly urbanized areas. N/A

Changes to the program as required by the division (Section 4.4.3). N/A

### 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
<i>Example: E. coli</i>	2003	<i>Weekly April–September</i>	20
Macroinvertebrate and Bacteriological Stream Sampling for Nonconnah Creek (TN0801021100720-2000)	2011	Once every 5 years	1
Stream Corridor Assessment Survey for Nonconnah Creek (TN0801021100720-3000)	2014	Once every 5 years	28

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. The Town has not performed these types of tests in the past so there is no historical data to use in the evaluation. Testing will be performed again in the next permit cycle and an evaluation comparing the results will be performed at that time. Currently, the Town evaluates permanent stormwater controls through annual inspections and maintenance.

## Municipal Separate Storm Sewer System (MS4) Annual Report

### 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	# <u>2</u>	# _____	# _____	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Administrative fines	# _____	# _____	# _____	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Stop Work Orders	# <u>1</u>	# _____	# _____	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Civil penalties	# _____	# _____	# _____	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Criminal actions	# _____	# _____	# _____	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Administrative orders	# _____	# _____	# _____	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> 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? EPSC devices not installed and maintained, EPSC's not functioning correctly, EPSC's not functioning correctly at ingress/egress points

### 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? \$1,600,198.06

B. What is next year's budget for implementing the requirements of your MS4 NPDES permit and SWMP? \$1,811,004.90

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 System Analysis Fee Amount \$5,061

Source: Stormwater User Fee Amount \$35,981

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)? 1

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

Entity	Activity/Task/Responsibility	Your Oversight/Accountability Mechanism

G. Please attach a copy of your Organizational Chart

## Municipal Separate Storm Sewer System (MS4) Annual Report

### 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."*

\_\_\_\_\_  
Printed Name and Title

\_\_\_\_\_  
Signature

\_\_\_\_\_  
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:**

<b>EFO</b>	<b>Street Address</b>	<b>City</b>	<b>Zip Code</b>	<b>Telephone</b>
Chattanooga	540 McCallie Avenue STE 550	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

# ATTACHMENT SECTION 2B

TOWN OF COLLIERVILLE  
LIST OF IMPAIRED WATERWAYS  
(based on Proposed Final Version of 2014 303(d) List)

WATERBODY ID	IMPACTED WATERBODY	CAUSE/TMDL PRIORITY	APPROVED TMDL	MS4 SOURCE
TN0801021100720-0300	Unnamed Trib to Nonconnah Creek	Total Phosphorus (M) Loss of biological integrity due to siltation (L)	NO	NO
TN0801021100720-0400	Unnamed Trib to Nonconnah Creek	Total Phosphorus (M) Loss of biological integrity due to siltation (L) Escherichia coli (NA)	YES	NO
TN0801021100720-0410	Unnamed Trib to Nonconnah Creek	Low Dissolved Oxygen (L) Total Phosphorus (M) Loss of biological integrity due to siltation (L) Escherichia coli (NA)	YES	NO
TN0801021100720-2000	Nonconnah Creek	Total Phosphorus (M) Low Dissolved Oxygen (L) Loss of biological integrity due to siltation (L) Physical Substrate Habitat Alterations (L) Escherichia coli (NA)	YES	YES (MS4 does not have an outfall on this stream segment)
TN0801021100720-3000	Nonconnah Creek	Total Phosphorus (M) Physical Substrate Habitat Alterations (L)	NO	YES

# ATTACHMENT SECTION 2C

TOWN OF COLLIERVILLE  
LIST OF TOTAL MAXIMUM DAILY LOADS  
(based on Final Version approved by EPA 6/17/2011)

HUC-12 Subwatershed	WATERBODY ID	IMPACTED WATERBODY	TMDL PRIORITY	APPROVED TMDL [CFU/day]	MS4 SOURCE
80102110101	TN0801021100720-0400	Unnamed Trib to Nonconnah Creek	Escherichia coli (NA)	$2.30 \times 10^{10} \times Q$	NO
80102110101	TN0801021100720-0410	Unnamed Trib to Nonconnah Creek	Escherichia coli (NA)	$2.30 \times 10^{10} \times Q$	NO
80102110102	TN0801021100720-2000	Nonconnah Creek	Escherichia coli (NA)	$2.30 \times 10^{10} \times Q$	YES (MS4 does not have an outfall on this stream segment)

# ATTACHMENT SECTION 3C



**Town of Collierville  
Department of Development  
Engineering Division**

## **Protection of State and Federally Listed Species 2015 Evaluation**

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The state and federally listed species for Shelby County were reviewed by Emily Harrell of the Town of Collierville Engineering Division. The review was completed in order to evaluate whether or not the Town's stormwater discharges, allowable non-stormwater discharges, and discharge-related activities are likely to jeopardize the continued existence of any species that are listed as endangered or threatened under the ESA or result in the adverse modification or destruction of habitat that is designated as critical under the ESA. An evaluation was conducted based on the Small MS4 General Permit Section 3.2.1 Criterion B which included correspondence between US Fish and Wildlife Service and Tennessee Wildlife Resources Agency. The Town recognizes there are threatened and endangered species listed to be within the Town of Collierville's jurisdiction, but based upon the review of current discharges and discharge-related activities, we do not have reason to believe these will jeopardize the continued existence of any state or federally listed species or result in the adverse modification or destruction of critical habitat.

# TOWN OF COLLIERVILLE

Development Department  
Engineering Division

*Emily Harrell, E.I.*  
*Sr. Civil Engineer*



500 Poplar View Parkway • Collierville, TN 38017 • (901) 457-2300 • FAX (901) 457-2354

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August 24, 2015

*Chief, Endangered Species*  
U.S. Fish and Wildlife Service  
1875 Century Blvd., Suite 200  
Atlanta, GA 30345

To Whom It May Concern,

The Town of Collierville is in the process of completing its Municipal Separate Storm Sewer System (MS4) Annual Report for the Tennessee Department of Environment and Conservation (TDEC). The Town must evaluate the effects if its stormwater discharges, allowable non-stormwater discharges, and discharge related activities on state and federally listed species and critical habitat.

A response is requested from your organization determining that the discharge or discharge related activities will or will not jeopardize the continued existence of any state or federally listed species or result in the adverse modification or destruction of critical habitat. If you determine that there is a potential impact on a state or federally listed species or critical habitat, please include suggested measures to mediate the impact.

If you need further information, please contact me at [eharrell@ci.collierville.tn.us](mailto:eharrell@ci.collierville.tn.us). Thank you for your time and cooperation.

Sincerely,

A handwritten signature in cursive script that reads "Emily Harrell".

Emily Harrell, E.I. CPESC  
Sr. Civil Engineer/Stormwater Coordinator

# TOWN OF COLLIERVILLE

Development Department  
Engineering Division

*Emily Harrell, E.I.*  
*Sr. Civil Engineer*



500 Poplar View Parkway • Collierville, TN 38017 • (901) 457-2300 • FAX (901) 457-2354

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August 24, 2015

Tennessee Wildlife Resources Agency  
440 Hogan Road  
Nashville, TN 37220

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A response is requested from your organization determining that the discharge or discharge related activities will or will not jeopardize the continued existence of any state or federally listed species or result in the adverse modification or destruction of critical habitat. If you determine that there is a potential impact on a state or federally listed species or critical habitat, please include suggested measures to mediate the impact.

If you need further information, please contact me at [charrell@ci.collierville.tn.us](mailto:charrell@ci.collierville.tn.us). Thank you for your time and cooperation.

Sincerely,

Emily Harrell, EI CPESC  
Sr. Civil Engineer/Stormwater Coordinator

# ATTACHMENT SECTION 4H

## TOWN OF COLLIERVILLE FY2015 PUBLIC EDUCATION, OUTREACH, PARTICIPATION, AND INVOLVEMENT

### FY2015 PUBLIC EDUCATION AND OUTREACH

LOCATION	MATERIAL	TOTAL DISTRIBUTED	TARGETED AUDIENCE
Burch Library	Stormwater Pollution Prevention	20	Residential
Suggs Dog Park	Pet Waste Poollutes	1 (Poster)	Residential
Collierville Parks Department	Pet Waste Poollutes	50	Residential
Collierville Animal Shelter	Pet Waste Poollutes	50	Residential
New Resident Packets	TN Homeowners Guide to Cleaner Water	250	Residential
	Pet Waste Poollutes	250	Residential
Water Bill Insert		5,500	Residential/Commercial
TN Association of Broadcasters	Radio Advertisements		Residential/Commercial
Residential Mailer	Stormwater Pollution Prevention	60	Residential/Illicit Discharge
New Employee Training	Video	45	Municipal Good Housekeeping

### FY2015 PUBLIC PARTICIPATION AND INVOLVEMENT

EVENT	DATE
Collierville Elementary Wolf River Field Trip	10/17/2014
Collierville Business Expo	10/23/2014
Collierville High Environmental Club	1/23/2015
Crosswinds Tree Give-a-way	3/10/2015
50K Tree Day	3/14/2015
E-Waste Drive	3/28/2015
Tennessee Smart Yards Workshop	4/2/2015
Fair on the Square	5/2/2015
Sustainable Schools	5/15/2015

# ATTACHMENT SECTION G

Town of Collierville Engineering Division  
Organizational Chart  
July 1, 2015

