



Tennessee Department of Environment and Conservation
 Division of Water Pollution Control
 Enforcement and Compliance Section
 L&C Annex, 6th Floor, 401 Church Street
 Nashville, TN 37243
 (615) 532-0625

Small Municipal Separate Storm Sewer System (MS4) Annual Report

1. MS4 INFORMATION

Town of Smyrna

Name of MS4

Gregory A. Upham

Name of Contact Person

615-355-5701

Telephone (including area code)

Town Hall, 315 S. Lowry Street

Mailing Address

Smyrna TN 37167

City State ZIP code

What is the current population of your MS4? 39,974

What is the reporting period for this annual report? From 7-1-10 to 6-30-11

2. PROTECTION OF STATE OR FEDERALLY LISTED SPECIES

A. Are any of the MS4 discharges or discharge-related activities likely to jeopardize any state or federally listed species (**Part 3, Special Conditions, General Permit for Phase II MS4s**) Yes No

B. Please attach the determination of the effect of the MS4 discharges on state or federally listed species per sub-part 3.2.1

3. WATER QUALITY PRIORITIES

A. Does your MS4 discharge to waters listed as impaired on the state 303(d) list? Yes No

B. If yes, identify each impaired water, the impairment cause(s), whether a TMDL has been approved by EPA for each, and whether the TMDL identifies your MS4 as a source of the impairment.

Waterbody I.D. #	Cause/TMDL Priority	Approved TMDL	MS4 Assigned to WLA
TN05130203 010-1000	Nitrate + Nitrite L	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Stewart Creek	Total Phosphorus L		
	Loss of biological integrity due to siltation NA		
TN05130203 010-2000	Escherichia coli H		
Stewart Creek (near I-24)			

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TN05130203 010-0300 Harts Branch Creek	Loss biological integrity due to siltation NA	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
TN05130203 010-0310 Rock Springs Branch Creek	Loss of biological integrity due to siltation NA Physical substrate habitat alterations NA				
TN05130203 010-0200 Olive Branch Creek	Physical substrate habitat alterations NA	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
TN05130203 010-0100 Rocky Fork Creek	Loss of biological integrity due to siltation NA Habitat loss due to alteration in stream-side or littoral vegetative cover NA				

C. What specific sources of these pollutants of concern are you targeting? Land development EPSC practices, permanent stormwater controls, free-standing grease receptacles, as well as miscellaneous MS4 discharges are being field inspected on a regular basis, while all violations are being duly enforced.

- D. Do you have discharges to any Exceptional TN Waters (ETWs) or Outstanding National Resource Waters (ONRWs)? Yes No
- E. Are you implementing additional specific provisions to ensure the continued integrity of ETWs or ONRWS located within your jurisdiction? Yes No

4. PUBLIC EDUCATION AND PUBLIC PARTICIPATION

- A. Is your public education program targeting specific pollutants and sources of those pollutants? Yes No

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

1.) Our standard environmental education packet was distributed to the youth volunteers at the; a.) Public Lands Day event held on the Tennessee National Guard Airbase where lake shorelines were cleaned by 15-20 youths and their parents and b.) first stream cleanup event, where 12 youths participated. The packet materials addressed: a.) Land development, which includes construction BMPs as well as detention basin maintenance to control siltation; b.) Proper use of pesticides and protection of Water Quality Buffer Zones and storm drains to control siltation and nutrient loading; and c.) IDDE information to control Escherichia coli and other pollutants. 2.) The recently published 'Discover the Waters of Tennessee', which also addresses the aforementioned issues, was distributed at the following events: a.) The second and third stream cleanups (all three stream cleanups totaled 84 volunteers, who spent 273 hours removing ~3,850 pounds of debris, including 155 bags of litter, five tires, two TV sets, two privacy fence segments, two wheels, and one large hot tub, from 7.03 acres of public lands covering 0.83 miles of stream bank, one drainage way, and one sinkhole); b.) 4th Annual Boat Day and 6th Annual WaterFest, where 118 citizens learned about water quality while enjoying canoeing and kayaking on 'flat' lake water; c.) Cedar Grove Elementary's annual Project WET-based in-stream monitoring of Rocky Fork Branch, where 22 students and five parents learned about stream health in the morning and water pollution and karst topography - ground water pollution in the afternoon from two nationally known DVDs; and d.) Girl Scouts of America Twilight Camp, where 84 1st - 6th graders learned about erosion, pollutants, littering, and how in-stream life and habitat are harmed by pollution. Throughout the year, thirty educational packets and 190 'Discover the Waters of Tennessee' were distributed. 3.) Certificates of Appreciation, signed by Mayor Dover, and t-shirts, funded by a TWRA grant and based on a Gregory Mill dam photo, were presented to 84 stream cleanup volunteers. 4.) Twelve of the 24 stream crossing sites scheduled for paired-stream name signs were installed in an effort to produce awareness and ownership of our water resources. 5.) The five Rutherford County MS4 programs completed their first year of the Project WET Contract with the Discovery Center. Many teacher contacts were made and training workshops will begin teaching these non-cert. teachers how to teach students about the harm of pollution to our streams. 6.) These five MS4 programs, with the Cumberland River Compact, created and funded a new 16-fold Stones River Watershed map/brochure due for late summer distribution.

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- C. Note specific successful outcome(s) (NOT tasks, events, publications) fully or partially attributable to your public education program during this reporting period. None
- D. 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
- E. Provide a summary of all public meetings required by the permit. The Storm Water Advisory Committee, a.k.a. SWAC, is quite functional and comprised of seven Smyrna citizens (three civil engineers, one town council member/former mayor, one farmer, one homebuilder, and one professional photographer) who meet: a.) monthly to review Storm Water Use fee issues, if any exist; b.) quarterly to review MS4 program progress reports and review and approve any policy changes; and c.) annually to hold elections of officers and review and approve Annual Reports to TDEC. All SWAC reviews and approvals of policy changes and Annual Reports to TDEC are then reviewed and approved by the Smyrna Town Council before official submittal to TDEC.

5. CODES AND ORDINANCES REVIEW AND UPDATE

- 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 Town of Smyrna Storm Water Management Ordinance was approved by the Town Council on 01-11-05, while the Water Quality Buffer Zone and Dry Detention Basin policies were both approved by the Town Council on 10-12-04. The Stormwater BMP Selection Guide Manual and TDEC Manual for Construction were both adopted by the Town of Smyrna and incorporated into the Stormwater Management Ordinance in 2007. In addition, all projects less than one acre are required to contain the Land Disturbance Management Guidelines, created by the town's engineer of record and approved by the SWM Program, on plans as a surrogate to a SWPPP. All of these are still implemented and available on the SWM Program website.

6. CONSTRUCTION

- A. Do you have an ordinance or adopted policies stipulating:
- | | | |
|--|---|-----------------------------|
| Erosion and sediment control requirements? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Other construction waste control requirements? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Requirement to submit construction plans for review? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| MS4 enforcement authority? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
- B. How many active construction sites disturbing at least one acre were there in your jurisdiction this reporting period? 36
- C. How many of these active sites did you inspect this reporting period? 36
- D. On average, how many times each, or with what frequency, were these sites inspected monthly (e.g., weekly, monthly, etc.)?
- E. Do you prioritize certain construction sites for more frequent inspections? Yes No
If Yes, based on what criteria? 1.) Previous Notice of Violation citations 2.) Both active and inactive sites are inspected on a monthly basis, unless violations are found (see #1).

7. ILLICIT DISCHARGE ELIMINATION

- 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? 957
- D. How many of these outfalls have been screened for dry weather discharges? 957
- E. How many of these have been screened more than once? None
- F. What is your frequency for screening outfalls for illicit discharges? Non-existent
- 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)? 13

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- I. Of those illicit discharges/illegal connections that have been discovered or reported, how many have been eliminated? 13

8. STORMWATER MANAGEMENT FOR MUNICIPAL OPERATIONS

- A. Have stormwater pollution prevention plans (or an equivalent plan) been developed for:

All parks, ball fields and other recreational facilities	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
All municipal turf grass/landscape management activities	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
All municipal vehicle fueling, operation and maintenance activities	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
All municipal maintenance yards	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
All municipal waste handling and disposal areas	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

- B. Are stormwater inspections conducted at these facilities? Yes No

1. If Yes, at what frequency are inspections conducted? Officially monthly to bi-annually, although daily inspections are the common practice/BMP among most of the facilities.

- 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? Annually

- F. On average, how frequently are catch basins and other inline treatment systems cleaned out/maintained? As needed, while much of the roads are swept monthly.

- 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

If so, how frequently and/or under what circumstances? TDEC Level I EPSC training certification and re-certification are required for Street, Utilities, and SWM Program staff, who work with stormwater issues, such as, but limited to land disturbance.

9 PERMANENT STORMWATER CONTROLS

- A. Do you have an ordinance or other mechanism to require:

Site plan reviews of all new and re-development projects?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Maintenance of stormwater management controls?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Retrofitting of existing BMPs with green infrastructure BMPs?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

- B. What is the threshold for new/redevelopment stormwater plan review? (e.g., all projects, projects disturbing greater than one acre, etc.) 1.) All plans received by the Town Planner are reviewed once by the SWM Program and engineer of record, during a staff plan review meeting, before their submittal for approval by the Planning Commission then again, under closer scrutiny, before issuance of the grading permit. 2.) The SWM Program staff does conduct plan reviews for sites less than one acre and has developed a SWAC-approved Land Disturbance Management Guideline that serves the role of the TDEC-required SWPPP for one acre and larger projects. This Guideline must be included on all approved plans. 3.) Once all reviews are successfully completed, all project contractors must successfully complete a preconstruction meeting with SWM Program staff and the engineer of record before a grading permit is issued.

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- 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 paragraph 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.
The Storm Water Management Ordinance as well as the Water Quality Buffer Zone and Dry Detention Basin policies were posted on the Town of Smyrna website (to find: go to Departments then Public Works then Storm Water then look in the lower right quadrant of page one) in January 2005. The Land Disturbance Management Guidelines for Areas under One Acre, as well as Grading Permit Requirements, Grading Permit Application, and Site Inspection Requirements can also be found at this same site.
- F. How many development and redevelopment project plans were reviewed for this reporting period? 23
- G. How many development and redevelopment project plans were approved? 15
- H. How many permanent stormwater management practices/facilities were inspected? 175, once/per yr.
- I. How many were found to have inadequate maintenance? 3
- J. Of those, how many were notified and remedied within 30 days? (If window is different than 30 days, please specify) 0
- K. How many enforcement actions were taken that address inadequate maintenance? 3
- 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? None

10. ENFORCEMENT

- 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>4</u>	# <u>4</u>	# <u>6</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Administrative fines	# <u>0</u>	# <u>0</u>	# <u>0</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Stop Work Orders	# <u>0</u>	# <u>0</u>	# <u>0</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Civil penalties	# <u>0</u>	# <u>0</u>	# <u>0</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Criminal actions	# <u>0</u>	# <u>0</u>	# <u>0</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Administrative orders	# <u>0</u>	# <u>0</u>	# <u>0</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Other <u>N/A</u>	# <u>0</u>	# <u>0</u>	# <u>0</u>	

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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?

- 1.) Improper maintenance of construction entrances, 2.) Improper maintenance of construction silt fences, and 3.) Improper disposal practices at free-standing grease receptacles.

11. PROGRAM RESOURCES

- A. What was your annual expenditure to implement the requirements of your MS4 NPDES permit and SWMP this past reporting period? 864,000
- B. What is next year's budget for implementing the requirements of your MS4 NPDES permit and SWMP? 975,000
- 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 User Fees Amount \$1,200,000
 Source: N/A Amount \$0
- 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)? 3
- F. Do you share program implementation responsibilities with any other entities? Yes No

Entity	Activity/Task/Responsibility	Your Oversight/Accountability Mechanism
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12. 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
Example: E. coli	2003	Weekly April–September	20
TSS, DO, Conductivity, T	2010	Once as a baseline data set	14
Total coliforms and E-coli	2010	Once as a baseline data set	14
Chlorde, Nitrate, Nitrite, Sulfate, and Phosphate	2010	Once as a baseline data set	14

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 aforementioned monitoring was done during the previous permit year and should have been submitted with that Annual Report to TDEC.

13. STORMWATER MANAGEMENT PROGRAM UPDATE

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 per **paragraph 4.4.2.a of the permit.** No changes of this kind were made during this permit year.

Changes to replace an ineffective or unfeasible BMP **per paragraph 4.4.2.b of the permit.** No changes or replacements of BMPs occurred during this permit year.

Information (e.g. additional acreage, outfalls, BMPs) on program area expansion based on annexation or newly urbanized areas. No annexation occurred during this permit year, while no outfalls were installed.

Changes to the program as required by the division. No TDEC-required changes were made during this permit year because none were required.

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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 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.”

Printed Name and Title

Signature

Date

Annual reports must be submitted in accordance with the requirements of subpart 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:

EFO	Street Address	City	Zip Code	Telephone
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