



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: Town of Farragut		MS4 Permit Number: TNS075299
Contact Person: Lori Saal		Email Address: Isaal@townoffarragut.org
Telephone: (865) 966-7057		MS4 Program Web Address: http://townoffarragut.org/171/Stormwater-Matters-Program
Mailing Address: 11408 Municipal Center Drive		
City: Farragut	State: TN	ZIP code: 37934

What is the current population of your MS4? 22,676

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/)? 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: Public education (newsletters, social media, website, workshops, brochures, events), stream clean-ups, hot spot identification, dry weather screening, monitoring, construction site inventory and inspections, site plan review, LID requirements for some zoning districts, municipal staff training and facility inspections. 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: pollutants: household wastes, sediment, oil/grease, pesticides, herbicides, detergents, pathogens, fuel, chlorine. Sources: residential neighborhoods, large parking lots, outdoor animal housing/kennels, vehicle maintenance and fueling facilities, food service, golf courses, chemical applicators, chlorinated pools. Yes No

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- D. Summarize how you advertise and publicize your public education, outreach, involvement and participation opportunities: social media, press releases, newspaper articles, public notices, community tv, website, direct mailings, postings/brochures at public spaces (libraries, grocery stores), e-newsletters, web-based volunteer portal
- E. Summarize the public education, outreach, involvement and participation activities you completed during this reporting period: newsletter, annual report insert, 50 social media posts, maintained website, mailed brochure to owners of residential pools, hot spots, and permanent SCMs, participated in multiple events (rain barrel workshops and sales, Waterfest for elementary-school kids, Earthfest, House and Garden show, volunteer recruitment event), watershed-based lessons to elementary and high school students, invasive species removal, stream clean-ups, Stormwater Advisory Committee, tree giveaway
- 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: 825 native trees and shrubs distributed to the community, 4 invasive species work days, 1 rain garden installed, 104 pool brochures mailed, 88 hot spot brochures mailed, 66 permanent stormwater management (detention basin, wet ponds, drainage easements) brochures mailed, engaged 693 people at House and Garden Show, engaged approximately 850 elementary school kids plus chaperones at Waterfest, sold 96 rain barrels, educated 14 on purpose and benefits of rain barrels, managed 51 volunteers, educated 152 through hands-on classroom and project-based outreach, removed over 600 pounds of trash from streams, conducted 7 stream clean-ups

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? 1,227
- 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: conduct dry weather screening of major outfalls within commercially-zoned areas, identify hot spots, respond to reports of suspected illicit discharges Yes No
- F. How many illicit discharge related complaints were received this reporting period? 7
- G. How many illicit discharge investigations were performed this reporting period? 7
- H. Of those investigations performed, how many resulted in valid illicit discharges that were addressed and/or eliminated? 3

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

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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? 19

F. How many active priority and non-priority construction sites were inspected this reporting period? 12

G. How many construction related complaints were received this reporting period? 14

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: _____ 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.)? development or redevelopment projects that require land subdivision (typically residential neighborhoods), commercial, office, institutional, public, semi-public land use, and for any new recreational area associated with a residential development.

D. How many development and redevelopment project plans were reviewed for this reporting period? 14

E. How many development and redevelopment project plans were approved? 17

F. How many permanent stormwater related complaints were received this reporting period? 31

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?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Municipal parking lots?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Maintenance and storage yards?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Fleet or maintenance shops with outdoor storage areas?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Salt and storage locations?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Snow disposal areas?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Waste disposal, storage, and transfer stations?	<input type="checkbox"/> Yes	<input type="checkbox"/> 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. NA

Information (e.g. additional acreage, outfalls, BMPs) on newly annexed areas and any resulting updates to your program. NA

- 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. Public Education: Social media still not as strong as we'd like. We are considering more frequent posts and possibly the preparation of short videos that address major pollutants and associated BMPs. More information via print media is needed. We plan to increase the number of newsletter articles. Public Participation: This aspect of the program is relatively strong. The stream clean-up program had increased participation this year. We had a lot of scout groups request conservation hours this year. Next year, we want to contact troop leaders to discuss the possibility of regularly scheduled events to meet their needs. IDDE: Good overall. The special pollution abatement program needs to be updated. Dry weather screening should be more thorough. Will reassess standard procedures for possible changes to screening vicinity. Need to modify/clarify language in ordinance regarding illicit discharges. Construction Site Runoff: BMPs associated with this MCM are being well-maintained. Need to better define "priority site" and utilize new inspection form created to better document issues at priority construction sites. Need to clarify/modify some language in stormwater ordinance regarding requirements for grading permits. Permanent Stormwater: Most of the BMPs for this MCM are on hold pending the results of the permit appeal hearing. Need to improve system of tracking permanent stormwater BMPs. Remaining BMPs are being well-maintained. Municipal Good Housekeeping: Staff training was successful. Annual municipal facility inspections may be inadequate. Will consider additional inspections over the next permit 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. _____ 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	# <u>0</u>	# <u>0</u>	# <u>0</u>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Written notices	# <u>0</u>	# <u>0</u>	# <u>1</u>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Citations with administrative penalties	# <u>10</u>	# <u>0</u>	# <u>0</u>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Stop work orders	# <u>2</u>	# <u>0</u>	# <u>0</u>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Withholding of plan approvals or other authorizations	# <u>10</u>	# <u>0</u>	# <u>0</u>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Additional Measures	# <u>0</u>	# <u>0</u>	# <u>0</u>	Describe: <u>Filing a lien/lawsuits</u>	

- 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?
Construction site-related Inadequate erosion control and sediment leaving site

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. Continued preparation of a watershed plan, collected surface water samples for source tracking analysis, analyzed results of source tracking samples.
- B. Summarize any non-analytical monitoring activities (e.g., planning, collection, evaluation of results) performed during this reporting period. Visual stream assessment of 6.5 miles of streams. The majority of the issues identified were streambank erosion and inadequate riparian buffers.
- 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."

Mayor Ron Pinchock
 Printed Name and Title


 Signature

7/23/18
 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

Additional Information Outline

Appendix A: 303(d) list and TMDLs

- ◆ List of impaired waters
- ◆ List of TMDLs

Appendix B: Public Education & Public Participation

- 1A. PIE Plan
- 1B. Stream Clean-ups
- 1C. Stormwater Advisory Committee
- 1D: Other Projects & Activities
- 1E: Volunteer Management
- 1F: Public Notices

Appendix C: Illicit Discharge Detection & Elimination

- 2A. Stormwater System Mapping
- 2B. Dry Weather Screening
- 2C. Enforcement Response Plan
- 2D. Analytical Monitoring
- 2E. Non-Analytical Monitoring
- 2F. Special Pollution Abatement Program
- 2G. Stormwater Ordinance

Appendix D: Construction Site Runoff

- 3A. Grading Permits
- 3B. Construction Site Inventory
- 3C. Erosion Control Letters of Credit
- 3D. Construction Site Inspections
- 3E. EPSC Certification
- 3F. Pre-Construction Meeting
- 3G. Stormwater Ordinance

Appendix E: Permanent Stormwater Management

- 4A. Ordinance & Policy Review
- 4B. Pre-Development Meetings
- 4C. Permanent Stormwater Inventory
- 4D: Permanent Stormwater Maintenance
- 4E: Off-site Mitigation & Separate Stormwater Fund

Appendix F: Municipal Good Housekeeping

- 5A. SWMP/O&M Plans
- 5B. Staff Training
- 5C. Municipal Facility Inspections

Appendix G: Monitoring Report

- ◆ Analytical monitoring report
- ◆ Non-analytical monitoring summary

Appendix H: NOI Modification Request

Appendix A: Water Quality Priorities

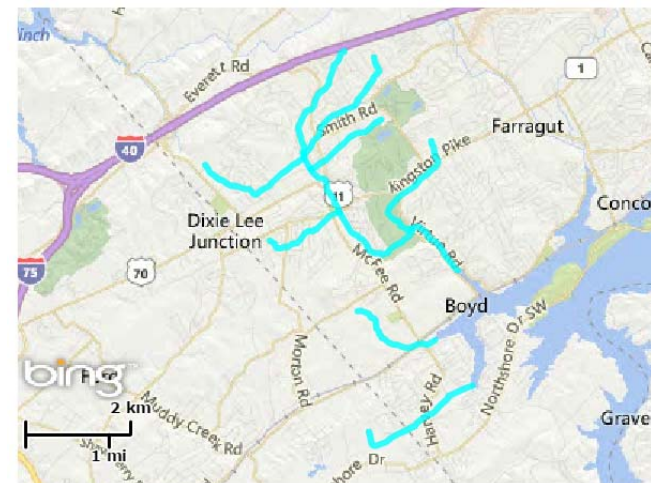
Waters with Unavailable Parameters

Little Turkey Creek (TN06010201037_1000)

Designated Use	Designated Use Group	Status
Fish And Aquatic Life	Fish, Shellfish, And Wildlife Protection And Propagation	Impaired
Irrigation	Agricultural	Good
Livestock Watering And Wildlife	Agricultural	Good
Recreation	Recreation	Good

Cause of Impairment	Cause of Impairment Group	Designated Use(s)	State TMDL Development Status
Sedimentation/Siltation	Sediment	Fish And Aquatic Life	TMDL completed

Probable Source	Probable Source Group	Cause(s) of Impairment
Discharges From Municipal Separate Storm Sewer Systems (Ms4)	Urban-Related Runoff/Stormwater	Sedimentation/Siltation

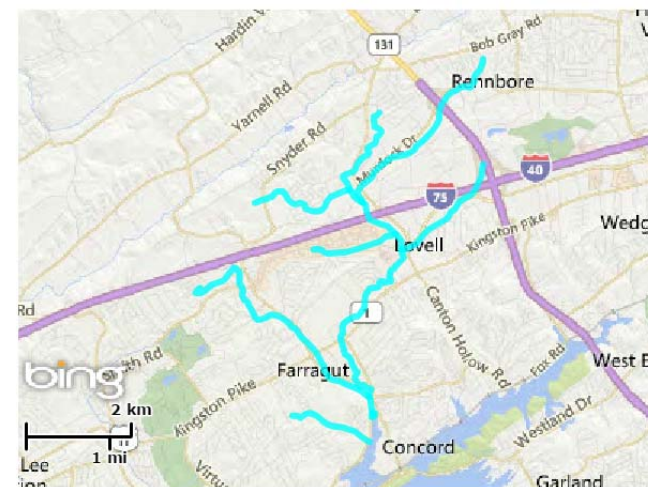


Turkey Creek (TN06010201340_1000)

Designated Use	Designated Use Group	Status
Fish And Aquatic Life	Fish, Shellfish, And Wildlife Protection And Propagation	Impaired
Irrigation	Agricultural	Good
Livestock Watering And Wildlife	Agricultural	Good
Recreation	Recreation	Impaired

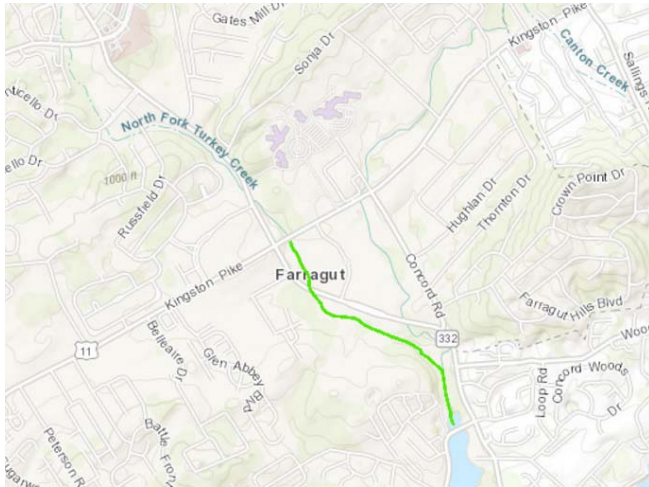
Cause of Impairment	Cause of Impairment Group	Designated Use(s)	State TMDL Development Status
Escherichia Coli (E. Coli)	Pathogens	Recreation	TMDL needed
Sedimentation/Siltation	Sediment	Fish And Aquatic Life	TMDL completed

Probable Source	Probable Source Group	Cause(s) of Impairment
Discharges From Municipal Separate Storm Sewer Systems (Ms4)	Urban-Related Runoff/Stormwater	Escherichia Coli (E. Coli); Sedime



Appendix A: Water Quality Priorities

Exceptional Waters



Turkey Creek from Fort Loudon Lake to Kingston Pike

Reason: State endangered Sweetscent Ladies'-Tresses habitat

Appendix A: Water Quality Priorities

TMDLs

Little Turkey Creek

Waterbody Name	Waterbody ID	Most Current Data Available	Location	Map	Waterbody Type	Size	Unit	Status	State TMDL Development Status
Little Turkey Creek	TN06010201037_1000	2016	Little Turkey Creek From Fort Loudoun Embayment To Headwaters. Ecoregion 67f Knox County	Waterbody Map	River	14.0	Miles	Impaired	TMDL completed

TMDL Document Name	TMDL Date	TMDL Pollutant Description	TMDL Pollutant Source Type	Cause(s) of Impairment Addressed
Tmdl For Siltation And Habitat Alteration In The Ft. Loudoun Lake Watershed (Huc 06010201)	Jan-27-2006	Siltation	Point/Nonpoint Source	Siltation

Turkey Creek

Waterbody Name	Waterbody ID	Most Current Data Available	Location	Map	Waterbody Type	Size	Unit	Status	State TMDL Development Status
Turkey Creek	TN06010201340_1000	2016	Turkey Creek From Fort Loudoun To Headwaters. Ecoregion 67f Knox County	Waterbody Map	River	15.8	Miles	Impaired	TMDL needed

TMDL Document Name	TMDL Date	TMDL Pollutant Description	TMDL Pollutant Source Type	Cause(s) of Impairment Addressed
Final Tmdl For E. Coli Fort Loudoun Lake Watershed (Huc 06010201)	Jan-12-2017	Escherichia Coli (E. Coli)	Point/Nonpoint Source	Escherichia Coli (E. Coli)
Tmdl For Siltation And Habitat Alteration In The Ft. Loudoun Lake Watershed (Huc 06010201)	Jan-27-2006	Siltation	Point/Nonpoint Source	Siltation

Appendix B: Public Education & Participation

BMP 1A: PIE Plan

Milestone Goal: Conduct general public education and training on water quality from general housekeeping maintenance/activities. Deliver educational materials and training specific to (1) HOA and operator maintenance of permanent BMPs and (2) municipal employee/contractor awareness of water quality impacts from daily operations.

Actual: Implemented PIE Plan for general public education. Created and mailed a series of permanent stormwater management brochures. Specific SCMs covered include detention basins, wet ponds and drainage easements. Hot spot brochures were also mailed to appropriate businesses. Appropriate Town staff were educated through a two-hour session that included an educational video, stormwater jeopardy, and question/answer session.

BMP	NAME	DOCUMENTATION	DELIVERABLE	RESULTS				
				YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
PIE 1	Newsletter Article	Copy of article	Number of articles	1	1			
PIE 2	Annual Report Insert	Copy of insert	Number of inserts distributed	~9,445	~9,445			
PIE 3	Social Media & New Technology	Screen shot of Facebook insights	Number of unique updates	59	50			
PIE 4	Website	Screen shot of main stormwater page	Brief statistical report showing page visits	755 unique page views	1106 unique page views			
PIE 5	Hot Spot Outreach	Copy of brochure/ Workshop sign-in sheet	Number of brochures distributed/Number of workshop participants	198 brochures distributed	258 brochures distributed			
PIE 6	Collaborate with Partners*	Photos of our involvement at partner events	Number of hours and funds contributed to partner collaborations	80 hours \$3,000	220 hours \$3,078.23			
PIE 7	Town Staff Training**	Sign in sheet acknowledging training	Number of staff trained	5	26			

Appendix B: Public Education & Participation

*** Results for public education due to collaboration with partners:**

- Earthfest: hundreds engaged throughout event via Water Quality Forum booth. Led Earthfest Education sub-committee and had 54 people attend a 25 minute environmental journey that educated attendees on a variety of environmental topics including water conservation and waste management.
- House & Garden Show: 693 people engaged at sponsored booth
- Rain Barrel Initiative: 14 people engaged at Farragut workshop, 96 rain barrels distributed between workshop and truck load sale
- Waterfest: 826 students engaged throughout event
- 13 people educated through Streamside Landscaping Workshop
- School-based education: 58 engaged

**** Town staff training details**

- Three staff members attending training on regenerative stormwater conveyances
- Two staff members attended the annual Tennessee Stormwater Association conference
- 24 staff members received in house training on pollution prevention

BMP 1B: Stream Clean-ups

Milestone Goal: Implement stream clean-up program.

Actual: The Town continued working with partners to implement the Adopt-A-Stream program, a project of the Water Quality Forum. Through this program, seven groups conducted stream clean-ups without Town limits. Five groups continued their participation and two inactive groups reactivated their participation in the program. A total of eight stream clean-ups were completed. Over 623 pounds of trash were removed from Town waterways.

BMP 1C: Stormwater Advisory Committee

Milestone Goal: Hold 4 meetings per year

Actual: The SAC met eight times throughout the year.

BMP 1D: Other Projects & Activities

Milestone Goal: Conduct additional projects and activities, as possible.

Actual: Results summarized in the table below.

Project	Location	Result
Invasive species removals	Wentworth Greenway and Farragut Outdoor Classroom	Approximately 475 lbs of invasives removed
Tree planting	Wentworth Greenway	12 trees planted

Appendix B: Public Education & Participation

Project	Location	Result
Rain garden creation	Farragut Outdoor Classroom	22 plants installed, approximate area 200 sq. ft.
Tree giveaway	Town Hall	825 trees/shrubs distributed
Storm drain labeling	Town-wide	31 labels affixed to storm drains

BMP 1E: Volunteer Management

Milestone Goal: Nurture relationships with active volunteers, encourage reactivation of past volunteers, and build upon existing list of volunteers to increase the number of active program volunteers.

Actual: Continued utilizing Volunteer East Tennessee, a web-based volunteer recruitment platform. Capitalized on boy/girl scout requests for service hours, reached out to local private school and past partners. Managed 51 unique volunteers, a handful of which were repeat volunteers. Volunteers assisted with a variety of projects including invasive species removal, Outdoor Classroom maintenance, tree plantings, and stream clean-ups. The total number of volunteer hours dedicated was 117 hours.

BMP 1F: Public Notices

Milestone Goal: Post public notices of applicable meetings in compliance with Local, State, and Federal public notice requirements.

Actual: Public notices were posted for all 8 Stormwater Advisory Committee meetings.

BMP 2A: Stormwater System Mapping

Milestone Goal: Update and maintain map

Actual: The Town continues to partner with another organization to verify mapped locations and collect information on the condition of the Town’s public stormwater infrastructure.

BMP 2B: Dry Weather Screening

Milestone Goal: Inspect priority areas and work with responsible party to eliminate any illicit discharges.

Actual: 15 outfalls greater than 36 inches in diameter were inspected. One potential illicit discharge was observed. Following an investigation, it was determined that the flow observed during dry weather conditions was most likely attributed to an underground spring.

BMP 2C: Enforcement Response Plan

Milestone Goal: Review and modify ERP, as needed.

Actual: Reviewed ERP. Updated contact information. No other revisions warranted at this time.

BMP 2D: Analytical Monitoring

Milestone Goal: Conduct monitoring.

Actual: A draft watershed plan was produced during the first half of the permit year. Additionally, source tracking analysis was conducted at various locations along Turkey Creek/North Fork Turkey Creek in an effort to determine the most likely contributing sources of pathogens causing impairment within the sub-watershed. A more thorough description of the testing and the results of the analyses are attached in Appendix G.

* A request to revise this BMP was submitted to TDEC and approved on 2/12/18. The request is included as Appendix H.

BMP 2E: Non-Analytical Monitoring

Milestone Goal: Conduct visual stream survey of 20% of streams with unavailable parameters (40% complete). Update inventory of streams with unavailable parameters, as needed.

Actual: Six and one half (6.5) miles of stream were visually assessed

Appendix C: Illicit Discharge Detection & Elimination

Out of 113 issues identified while surveying, the top three issues were:

- 💧 Channel alteration (21%)
- 💧 Fish Barrier (21%)
- 💧 Inadequate Buffer (19%)

BMP 2F: Special Pollution Abatement Program

Milestone Goal: Implement SPAP program.

Actual: SPAP program was not implemented as planned. We hope to implement this program in the first half of the 2018-2019 permit cycle.

BMP 2G: Stormwater Ordinance

Milestone Goal: Review and make modifications as necessary

Actual: No modifications have been made.

The Town is waiting to modify the stormwater ordinance pending results of the permit appeal hearing.

Appendix D: Construction Site Runoff

BMP 3A: Grading & Building Permits

Milestone Goal: Track and document grading permits issued.

Actual: 17 grading permits were issued.

BMP 3B: Construction Site Inventory

Milestone Goal: Update inventory as new projects are permitted and projects are completed.

Actual: 19 one acre or greater construction sites were active during the 2017-2018 permit year.

Construction of 4 sites was completed
Construction of 15 sites continued or started

BMP 3C: Erosion Control Letters of Credit

Milestone Goal: Track and document erosion control letters of credit.

Actual: 26 total erosion control letters of credit. 20 active as of 6/30/18

BMP 3D: Construction Site Inspections

Milestone Goal: Conduct, at a minimum, monthly inspections of priority sites and document findings.

Actual: Conducted monthly inspections of 11 sites one acre or greater. At the Town's MBLP Turf field and restroom project, twice weekly inspections were conducted by a sub-contractor.

BMP 3E: EPSC Certification

Milestone Goal: Identify and maintain trained staff

Actual: 6 trained, 18 total active

6 employees were certified/renewed certification for Level 1
16 total employees have Level 1 certification
2 employees also have Level 2 certification

Appendix D: Construction Site Runoff

BMP 3F: Pre-Construction Meetings

Milestone Goal: Document meetings

Actual: 15 pre-construction meetings took place for sites requesting a grading or land disturbance permit (generally one acre or greater). 124 pre-construction inspections were conducted on building sites less than once acre (typically detached, single family residential lots).

BMP 3G: Stormwater Ordinance

Milestone Goal: Review and make modifications as necessary

Actual: No modifications have been made.

The Town is waiting to modify the stormwater ordinance pending results of the permit appeal hearing.

BMP 4A: Ordinance & Policy Review

Milestone Goal: Review and make modifications as necessary. Revisions related to permit Section 4.2.5 will be delayed pending a decision regarding the permit appeals.

Actual: Several stormwater-related ordinance amendments were passed.

- Width of grass strips between curb and sidewalk was modified to 6 or 8 feet depending upon street classification
- Approval of a new zoning district that encourages the use of low impact design elements

BMP 4B: Pre-Development Meetings

Milestone Goal: Document meetings held for concept plans, site plans, preliminary plats and final plats.

Actual: 10 pre-development meetings with discussions and public hearings for 23 plans and/or plats

Concept plan	7
Site plan	10
Preliminary plat	4
Final plat	2

BMP 4C: Permanent Stormwater Inventory

Milestone Goal: Update the inventory as permanent stormwater BMPs are installed on new and redevelopment project sites.

Actual: The map was updated with new SCMs added to the map as development occurs.

Values below cover all known SCMs

- Detention basin: 80
- Wet pond: 5
- Bioinfiltration: 11
- Permeable pavement: 7
- Other: 1 (cistern)

BMP 4D: Permanent Stormwater Maintenance Agreement

Milestone Goal: Develop an implementation plan. Begin research and development of a permanent stormwater maintenance agreement program.

Appendix E: Permanent Stormwater Management

Actual: Delayed pending a decision regarding the permit appeals.

BMP 4E: Off-Site Mitigation & Separate Stormwater Fund

Milestone Goal: Research and maintain inventory of potential mitigation sites. Develop implementation plan for off-site mitigation and separate stormwater fund. Execute the implementation plan.

Actual: Delayed pending a decision regarding the permit appeals.

Appendix F: Municipal Good Housekeeping

BMP 5A: SWMP/O&M Plans

Milestone Goal: Conduct annual review of SWMP/O&M plans. Revise as needed.

Actual: Updated annual inspection form used for stormwater-related facility inspections.

BMP 5B: Staff Training

Milestone Goal: Implement employee training program.

Actual: Employee pollution prevention training was conducted for the entire Public Works department and select employees from other departments.

- 24 staff members attending in-house pollution prevention training. The training was two hours long and incorporated a video on municipal pollution prevention, an interactive game, and slideshow of proper vs. improper BMPs.
- Two staff members attended the annual Tennessee Stormwater Association conference.
- Three staff members attended a workshop on regenerative stormwater conveyances.
- The AmeriCorps member attended tree identification and care training with the City of Knoxville Urban Forester.

BMP 5C: Municipal Facility Inspections

Milestone Goal: Conduct inspections of municipal facilities.

Actual: Inspections of seven Town facilities were conducted and documented. The following facilities were inspected.

- Town Hall
- Public Works Facility
- Anchor Park
- Founders Park
- Mayor Bob Leonard Park
- McFee Park
- Outdoor Classroom

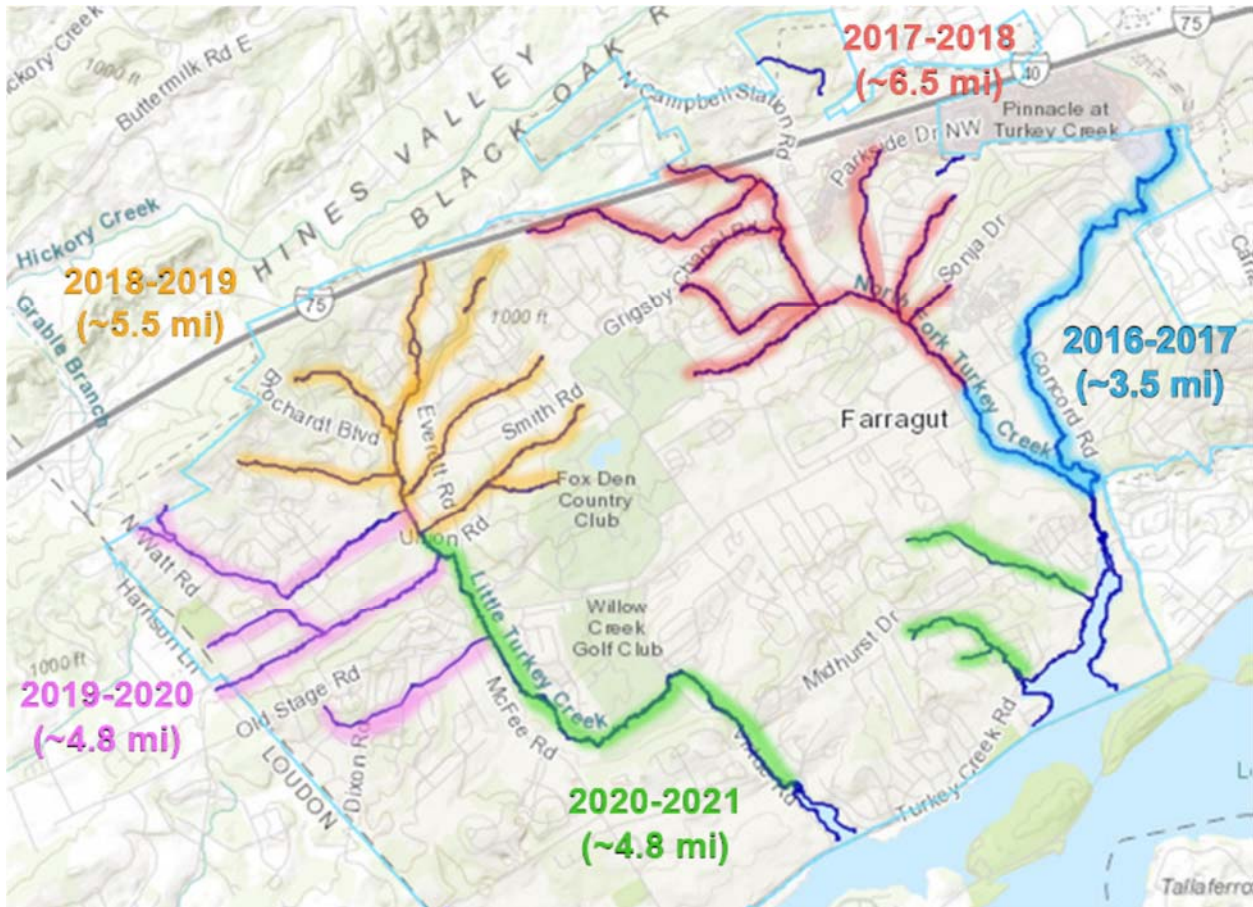
The following conditions were assessed during the inspections.

- Good housekeeping & Spill prevention
- Materials Management
- Lawn Care
- Preventative Maintenance

Appendix G: Monitoring Summary

Non-Analytical Monitoring Summary (Visual Stream Assessment)

The stream sections highlighted in red below were visually assessed following the Maryland Department of Natural Resources Stream Corridor Assessment Survey. Several of the mapped headwater areas shown on the map are actually wet weather conveyances, which were not assessed.



Below is a summary of the issues identified in the stream sections assessed.

Issue	Number identified
Channel alteration	24
Erosion site	10
Exposed pipe	14
Fish barrier	24
Inadequate buffer	21
Trash dumping	4
Unusual condition	16
TOTAL	113

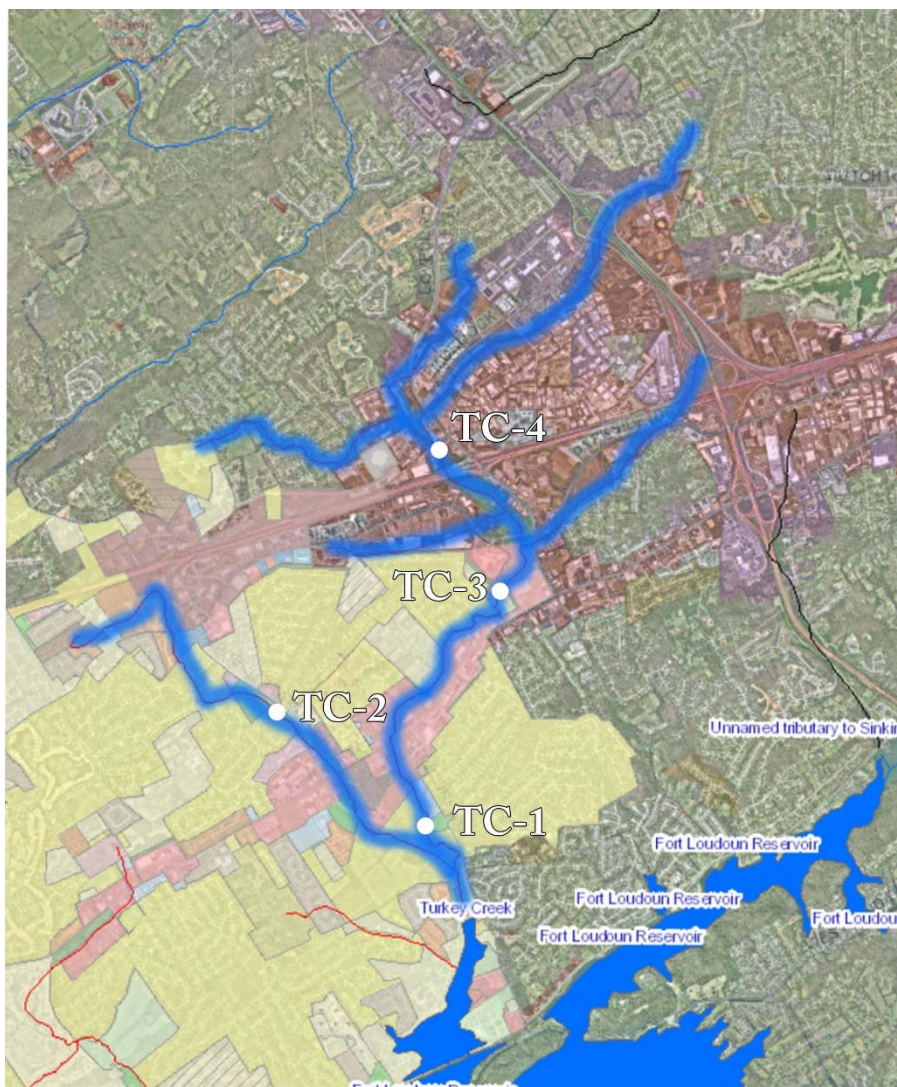
Appendix G: Monitoring Summary

Analytical Monitoring Summary

During preparation of the watershed plan, it was recognized that a better understanding of the source of pathogen impairment would enable us to better target remediation projects and education/outreach efforts. Source tracking analysis was conducted at various locations along Turkey Creek/North Fork Turkey Creek to determine the most likely contributing sources of pathogens causing impairment within the sub-watershed. One set of samples was collected during dry weather and another set was collected following a rain event that produced about 0.8” of rainfall. The rain event occurred after several days of relatively dry weather.

Based on watershed demographics, the samples were analyzed for gene copies from the following sources: human, dog, goose, and gull. Dry weather samples resulted in no gene copies being detected above the quantification limit for any of the four sites. Wet weather samples resulted in human, dog, and gull being identified, in some combination, at three of the four sites.

A map showing the sampling locations are shown in the map below. Results of the analyses are included in the following pages of this appendix.





To: Christie Renfro and Valerie McFall
TDEC EFO - Knoxville

From: Lori Saal

Date: February 7, 2018

Regarding: NOI Modification Request
NPDES General Permit for Discharges from Small Municipal Separate Storm Sewer Systems

Request: I would formally like to request modification of the Town of Farragut's NOI for permit TNS075299. Specifically, I am requesting modification of BMP 2D: Analytical Monitoring.

In the original NOI, the Town proposed to utilize Option 2 for analytical monitoring. We request that be modified to Option 1 as shown below. Proposed changes are shown in yellow.

Original BMP Description: Analytical monitoring will be conducted to identify problem areas within Town streams. A monitoring plan will be prepared in accordance with Option 2 in Section 5.1.

Proposed BMP Description: Analytical monitoring will be conducted to identify problem areas within Town streams. Monitoring will be conducted according to Option 1 in Section 5.1.

BMP Goals and Milestones

	Original	Proposed
Year 1	Begin development of a monitoring plan.	Begin development of a monitoring plan.
Year 2	Finalize monitoring plan and begin implementation of the monitoring plan.	Conduct monitoring.
Year 3	Implement monitoring plan.	Conduct monitoring
Year 4	Implement monitoring plan.	Conduct monitoring
Year 5	Implement monitoring plan.	Conduct monitoring

Justification: While Option 2 allows permittees to eliminate stream segments from monitoring with proper justification, the Town does not intend to eliminate a stream segment from monitoring during this permit cycle as TMDLs are in place for both Town streams. Therefore, the flexibility of Option 2 is not needed.

Additionally, Town staff was hoping to utilize partners to extend its resources and monitoring capabilities. However, at this time, we have been unable to confirm partners crucial to successful implementation of a jurisdiction-specific monitoring plan.

Utilizing the minimum requirements of Option 1, the Town will continue to conduct monitoring that meets permit requirements and enables Town staff to measure BMP effectiveness and document progress towards water quality goals. Supplemental sampling may be conducted as resources allow. Town staff will continue to pursue partnerships with other organizations to expand its monitoring capabilities.