



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: Knox County Stormwater Management Program		MS4 Permit Number: TNS075582
Contact Person: Cathy Olsen		Email Address: cathy.olsen@knoxcounty.org
Telephone: (865) 215-5800		MS4 Program Web Address: knoxcounty.org/stormwater
Mailing Address: 205 W Baxter Ave		
City: Knoxville	State: TN	ZIP code: 37917

What is the current population of your MS4? 258,905 (US Census, est. 2019)

What is the reporting period for this annual report? July 1 2020 to June 30 2021

2. Discharges to Waterbodies with Unavailable Parameters or Exceptional Tennessee Waters (Section 3.1)

- A. Does your MS4 discharge into waters with unavailable parameters (previously referred to as impaired) for pathogens, nutrients, siltation or other parameters related to stormwater runoff from urbanized areas as listed on TN's most current 303(d) list and/or according to the on-line state GIS mapping tool ([tdeconline.tn.gov/dwr/](http://tdeconline.tn.gov/dwr/))? If yes, attach a list.  Yes  No
- B. Are there established and approved TMDLs (<http://www.tn.gov/environment/article/wr-ws-tennessees-total-maximum-daily-load-tmdl-program>) with waste load allocations for MS4 discharges in your jurisdiction? If yes, attach a list.  Yes  No
- C. Does your MS4 discharge to any Exceptional Tennessee Waters (ETWs - [http://environment-online.tn.gov:8080/pls/enf\\_reports/f?p=9034:34304:4880790061142](http://environment-online.tn.gov:8080/pls/enf_reports/f?p=9034:34304:4880790061142))? If yes, attach a list.  Yes  No
- D. Are you implementing specific Best Management Practices (BMPs) to control pollutant discharges to waterbodies with unavailable parameters or ETWs? If yes, describe the specific practices: The County considers work within the watershed of ETWs to be priority construction activities. The additional requirements outlined in section 5.4.1 of the TNCGP are applied within the entire watershed.  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

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- 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: The Storm Drain Style-Off initiative educates the public about stormwater infrastructure & keeping green waste, oils / auto fluids & trash out of the storm drain system. The Strong Streams promotional materials and programs encouraged & promoted planting & preserving residential streamside buffers to address excess nutrient / fertilizer (nitrogen / phosphorous) inputs into local waterways from private land uses. The Environmental Stewardship Program targets sediment and nutrients. The 319 Grants address sediment and E coli discharges. Targeted letters to landscaping companies target nutrients, sediment, and dumping of green waste into the stormsewer system. The children's books target sediment, pathogens, and microplastics.  Yes  No
- C. Do you have a webpage dedicated to your stormwater program? If yes, provide a link/URL: www.knoxcounty.org/Stormwater  Yes  No
- D. Summarize how you advertise and publicize your public education, outreach, involvement and participation opportunities: The Stormwater social media accounts, branded as Strong Streams, include Facebook, Twitter, Instagram and YouTube, are scheduled weekly based on events, success stories, green-friendly practices installed through education campaigns. A newsletter promoting upcoming workshops & educational opportunities and other stormwater news is sent via email to 500+ people and posted on the website and Facebook page. Flyers are posted at local coffee shops, grocery stores and libraries. Free and paid listings for events and campaigns are put in local newspapers and in Facebook ads. Staff seek out local journalists to promote events and issues important to residents.
- E. Summarize the public education, outreach, involvement and participation activities you completed during this reporting period: Knox County Stormwater was extremely limited this year in doing many of the ed/outreach and involvement activities/events that are traditionally conducted due to COVID19. Knox County in previous years has conducted water quality lessons for children in several schools and afterschool programs throughout the county through the use of the Enviroscape model and an augmented reality (AR) sandbox that shows how water reacts to topographic changes. School instruction halted in March 2020 due to COVID19 as did various scheduled outreach events for this reporting year. Two e-newsletters were sent out to 500+ people to raise awareness on stormwater. Staff participated the August 2020 Powell Station Flotilla on Beaver Creek which was a large community event involving 150+ boaters floating down the creek. The event had an array of educational booths from the county and other community partners. Knox County has an active Adopt-a-Stream program and eight stream clean-ups were conducted this year. We are currently administering 319 grants from TDA in the Roseberry, Stock, and Beaver Creek watersheds to address bacteria and/or sediment pollution in those watersheds. The grants include funding for septic and ag pollution and ed/outreach activities, as permitted. Knox County participated in the the Water Quality Forum's Rainy Day Brushoff where local artists paint rain barrels and then they are auctioned off in an effort to raise awareness on water quality and conservation. Knox County also participated in the Water Quality Forum's TN River Paddle-Off and Cheers to Clean Water and Water Fest (student education), which was held virtually this year. The goal of all of these events is to educate and bring awareness to the public and students about water pollution, conservation, and ways to prevent all types of pollution.



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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: Citizen involvement in our programs, events & activities has resulted in the following reportable metrics in Knox County in FY21:

Adopt-a-Stream Cleanup Events: 8  
Trash Removed (pounds): 2,235  
Rain Gardens Installed: 2  
Permeable Surface: 1 pervious paver sidewalk  
Students Educated: 450  
People educated/Awareness Raised: 750+  
General Public Ed/Outreach and Involvement Events: 3

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? 4041 outfalls
- 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: Knox County is using many methods to detect, identify and eliminate illicit discharges through the current IDDE Plan. One method is through the dry weather screening program, which identifies hot spot areas in the County by utilizing land use maps, zoning maps, complaint tracking and SPAP and TDEC permits. Knox County also issues Special Pollutant Abatement Permits (SPAPs) to "hot spot" businesses, which include automotive and restaurant related businesses as well as businesses with large parking areas. Complaint and spill tracking is also used to determine where there are issues and helps determine what kind of education and outreach needs to be implemented and where it would be most effective. All of these tools are administered through the county's robust GIS applications and maintained in the Cartegraph database. Knox County also applies for and administers 319 watershed grants to help citizens repair failing septic systems or connect to the sewer system, if available. Knox County enforces the illicit discharge ordinance through an enforcement response plan, which allows written Notices of Violation and Civil Penalties up to \$5000 per day/per violation.  Yes  No
- F. How many illicit discharge related complaints were received this reporting period? 70
- G. How many illicit discharge investigations were performed this reporting period? 72
- H. Of those investigations performed, how many resulted in valid illicit discharges that were addressed and/or eliminated? 52

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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? 275
- F. How many active priority and non-priority construction sites were inspected this reporting period? 275
- G. How many construction related complaints were received this reporting period? 52

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: 25 foot minimum and 50 foot average buffer width required to be shown on a recorded plat.  Yes  No
- C. What is the threshold for development and redevelopment project plans plan review (e.g., all projects, projects disturbing greater than one acre, etc.)? All projects that disturb over an acre or projects that add 10,000 square feet or more of impervious area
- D. How many development and redevelopment project plans were reviewed for this reporting period? 95
- E. How many development and redevelopment project plans were approved? 83
- F. How many permanent stormwater related complaints were received this reporting period? 18
- 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



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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 checked="" type="checkbox"/> No
Waste disposal, storage, and transfer stations?	<input checked="" 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 for this reporting period.

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. See Attachment 6  Yes  No

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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	#55	#0	#0	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Written notices	#25	#34	#33	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Citations with administrative penalties	#19	#0	#0	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Stop work orders	#9	#N/A	#0	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Withholding of plan approvals or other authorizations	#6	#0	#N/A	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Additional Measures	#1	#N/A	#N/A	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?

Construction:

1. Temporary sediment controls are not properly installed, functional and/or maintained. 2. Sediment controls are failing to retain sediment on site and sediment is entering waters of the state. 3-Failure to temporarily stabilize non-vegetated areas within 14 days and/or steep slopes within 7 days since location was actively worked.

Illicit Discharges:

1. Failing or leaking sewer/septic systems and grey water discharges 2. Dumping of oils/solvents/chemicals in storm sewer system or stream (Residential) 3. Dumping yard waste in drainageways or storm sewer system (residential)

Permanent Construction:

1. Remove woody vegetation. 2. Remove sediment. 3. Repair leaking Water Quality Unit

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. Knox County continues to monitor streams for pathogens using the indicator E.coli and the 5-in-30 standard method. Samples were collected at nine sampling sites, some of which represent new sites as we work through our impaired stream list and repeat sites that we continue to monitor each year to track for change based on restoration activities in specific watersheds. The results of the analyses are included in attachment 7.
- B. Summarize any non-analytical monitoring activities (e.g., planning, collection, evaluation of results) performed during this reporting period. Knox County is conducting surveys of all streams with Unavailable Parameters requiring non-analytical surveys. The work includes stream surveys that document impacted buffers, severe erosion and trash & debris using the Center for Watershed Protection Unified Stream Assessment method. To date, a total of 203 stream miles have been walked and surveyed using ESRI Collector.



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- 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."*

Coleen Jacobs, Mayor  
Printed Name and Title

  
Signature

9/28/21  
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

Attachment 1  
Page 1/7 Question 2.A  
Knox County Waters from 2020 303(d) List

(Unavailable Parameters for pathogens, nutrients, siltation, and other parameters related to stormwater runoff from urbanized areas)

Waterbody Name	Waterbody ID	Cause of Impairment (Unavailable Parameter)	Pollutant Source
<b>TIER 1 STREAMS</b>			
High Bluff Branch	TN06010201066_0600	Escherichia coli	Discharges from MS4 area
Hines Branch	TN06010207011_0500	Habitat loss due to other anthropogenic substrate alterations Escherichia coli	Discharges from MS4 area
Meadow Creek	TN06010207011_0800	Escherichia coli	Discharges from MS4 area
Plumb Creek	TN06010207011_0900	Escherichia coli	Discharges from MS4 area
Sinking Creek	TN060102011330_1000	Escherichia coli	Discharges from MS4 area
Willow Fork	TN06010207011_0300	Alteration in streamside or littoral vegetative cover Loss of biological integrity due to siltation Escherichia coli	Discharges from MS4 area

**Tier 1** includes those streams where discharges from the County's public stormwater conveyance system (i.e., the MS4) are considered as the sole source of pollutant(s). Tier 1 streams are of primary focus in the County's water quality program, therefore permit compliance activities target the impairments in these waterbodies. The County's stormwater management program includes activities that target the pollutant(s) causing the impairment(s).

<b>TIER 2 STREAMS</b>			
Waterbody Name	Waterbody ID	Cause of Impairment (Unavailable Parameter)	Pollutant Source
Beaver Creek (segment 1000)	TN06010207011_1000	Phosphate Nitrate and Nitrite Escherichia coli Low Dissolved Oxygen Loss of biological integrity due to siltation Physical Substrate Habitat Alterations	Major Municipal Point Source Pasture Grazing Discharges from MS4 Area
Beaver Creek (segment 2000)	TN06010207011_2000	Escherichia coli Loss of biological integrity due to siltation Physical Substrate Habitat Alterations	Major Municipal Point Source Pasture Grazing Discharges from MS4 Area (multiple MS4s)
Beaver Creek (segment 3000)	TN06010207011_3000	Escherichia coli Loss of biological integrity due to siltation Physical Substrate Habitat Alterations	Major Municipal Point Source Pasture Grazing Discharges from MS4 Area
Bullrun Creek	TN06010207014_1000	Escherichia coli	Discharges from MS4 Area Pasture Grazing
Bullrun Creek	TN06010207014_2000	Escherichia coli	Discharges from MS4 Area Pasture Grazing
Casteel Branch	TN06010201066_0100	Loss of biological integrity due to siltation	Pasture Grazing Discharges from MS4 area
Fourth Creek (in vicinity of Westland Drive)	TN06010201697_1000	Physical Substrate Habitat Alterations Escherichia coli	Discharges from MS4 area (multiple MS4s) Channelization



Attachment 1  
Page 1/7 Question 2.A  
Knox County Waters from 2020 303(d) List

(Unavailable Parameters for pathogens, nutrients, siltation, and other parameters related to stormwater runoff from urbanized areas)

TIER 2 STREAMS			
Waterbody Name	Waterbody ID	Cause of Impairment (Unavailable Parameter)	Pollutant Source
Goose Creek	TN06010201723_1000	Loss of biological integrity due to siltation Other Anthropogenic Habitat Alterations Escherichia coli PCBs	Discharges from MS4 area (multiple MS4s) Collection System Failure RCRA Hazardous Waste
Grable Branch	TN06010207004_0100	Oil & Grease Loss of biological integrity due to siltation Physical Substrate Habitat Alterations	Minor Industrial Point Source Channelization Industrial Permitted Runoff Discharges from MS4 area
Grassy Creek	TN06010207011_0700	Loss of biological integrity due to siltation Escherichia coli	Discharges from MS4 area (multiple MS4s)
Knob Fork	TN06010207011_0600	Nitrate and Nitrite Loss of biological integrity due to siltation Habitat loss due to other anthropogenic substrate alterations Alteration in streamside or littoral vegetative cover Escherichia coli	Discharges from MS4 area (multiple MS4s)
Little Turkey Creek	TN06010201037_1000	Loss of biological integrity due to siltation	Discharges from MS4 area (multiple MS4s)
Love Creek	TN06010104001_0100	Nitrate and Nitrite Loss of biological integrity due to siltation Other Anthropogenic Habitat Alterations Escherichia coli	Discharges from MS4 area (multiple MS4s)
Swanpond Creek	TN06010104001_1400	Escherichia coli	Discharges from MS4 Area (multiple MS4s)
Ten Mile Creek	TN060102011334_0100	Habitat loss due to alteration in streamside or littoral vegetative cover Loss of biological integrity due to siltation Escherichia coli	Discharges from MS4 area (multiple MS4s)
Third Creek	TN06010201067_1000	Nitrate and Nitrite Escherichia coli Loss of biological integrity due to siltation Physical Substrate Habitat Alterations Escherichia coli	Discharges from MS4 area (multiple MS4s) Collection System Failures Land Development or Redevelopment

Attachment 1  
Page 1/7 Question 2.A  
Knox County Waters from 2020 303(d) List

(Unavailable Parameters for pathogens, nutrients, siltation, and other parameters related to stormwater runoff from urbanized areas)

TIER 2 STREAMS			
Waterbody Name	Waterbody ID	Cause of Impairment (Unavailable Parameter)	Pollutant Source
Turkey Creek	TN06010201340_1000	Loss of biological integrity due to siltation Escherichia coli	Discharges from MS4 area (multiple MS4s)
Whites Creek	TN06010201080_0100	Other Anthropogenic Habitat Alterations Escherichia coli	Discharges from MS4 area (multiple MS4s) Streambank Modification

**Tier 2** includes those streams where discharges from the County’s MS4 are one of several sources of pollutant(s). Tier 2 streams are also a strong focus of the County’s water quality program; therefore, permit compliance activities target the impairments in these waterbodies. However, water quality improvements in these waterbodies likely cannot be achieved by the County’s efforts alone.

TIER 3 STREAMS			
Waterbody Name	Waterbody ID	Cause of Impairment (Unavailable Parameter)	Pollutant Source
Flat Creek (segment 1000)	TN06010104019_1000	Phosphorous Escherichia coli	Pasture Grazing Municipal Point Source Collection System Failures
Gun Hollow Branch	TN06010201066_1200	Escherichia coli	Pasture Grazing
Little Flat Creek	TN06010104019_0100	Escherichia coli	Grazing in riparian or shoreline areas
Roddy Branch	TN06010201026_0100	Alteration in streamside or littoral vegetative cover Physical Substrate Habitat Alteration, Loss of biological integrity due to siltation Escherichia coli	Pasture Grazing Channelization
Roseberry Creek	TN06010104001_0500	Escherichia coli	Pasture Grazing Septic Tanks
Stock Creek (Segment 1000)	TN06010201066_1000	Escherichia coli	Pasture Grazing
Stock Creek (Segment 2000)	TN06010201066_2000	Escherichia coli	Pasture Grazing
Grandview Branch	TN06010201066_0400	Escherichia coli	Grazing in Riparian or Shoreline Zones

**Tier 3** includes those streams where discharges from Knox County’s MS4 are NOT considered a source of pollutant(s). Water quality in these waterbodies are addressed by the County’s stormwater management ordinance, general public education/outreach efforts and by other County stormwater program activities (e.g., illicit discharge enforcement), but the County’s stormwater management resources are typically not highly focused on these streams



# TMDLs and HUC-8 Boundaries in Knox County

## Lower Clinch - 0601020

### 2006 TMDL for Siltation/Habitat Alteration

- 06010207004\_0100 Grable Branch
- 06010207011\_0500 Hines Branch
- 06010207011\_0600 Knob Fork
- 06010207011\_0700 Grassy Creek
- 06010207011\_0800 Meadow Creek
- 06010207011\_1000 Beaver Creek
- 06010207011\_2000 & 3000 Beaver Creek
- 06010207014\_0100 Williams Branch
- 06010207014\_0110 Foster Branch
- 06010207014\_1000 Bullrun Creek

### 2010 TMDL for PCB's and Clordane

- TN06010207006-1000 Melton Hill Reservoir

## Watts Bar/Fort Loudoun Lake - 06010201026

### 2006 TMDL for Siltation/Habitat Alteration

- 06010201026\_0100 Roddy Branch
- 06010201066\_0100 Casteel Branch
- 06010201066\_0500 McCall Branch
- 06010201066\_1000 Stock Creek
- 06010201067\_1000 Third Creek
- 06010201080-0100 Whites Creek

### 2010 TMDL for PCB's and Clordane

- TN06010201020\_1000 Fort Loudoun Reservoir
- TN06010201020\_2000 Fort Loudoun Reservoir

### 2017 TMDL for E. coli

- 06010201026\_0100 Roddy Branch
- TN06010201066\_0400 Grandview Branch
- TN06010201066\_0600 High Bluff Branch
- TN06010201066\_1000 Stock Creek
- TN06010201066\_1200 Gunn Hollow Branch
- TN06010201066\_2000 Stock Creek
- TN06010201080\_0100 White's Creek
- TN060102011330\_1000 Sinking Creek
- TN060102011334\_0100 Ten Mile Creek
- TN06010201340\_1000 Turkey Creek
- TN06010201697\_1000 Fourth Creek
- TN06010201723\_1000 Goose Creek

## Holston- 06010104

### 2018 TMDL for E. coli

- TN06010104001\_0100 Love Creek
- TN06010104001\_0500 Roseberry Creek
- TN06010104001\_1400 Swanpond Creek
- TN06010104019\_0100 Little Flat Creek
- TN06010104019\_1000 Flat Creek

**Holston  
06010104**

**Lower French Broad  
06010107**

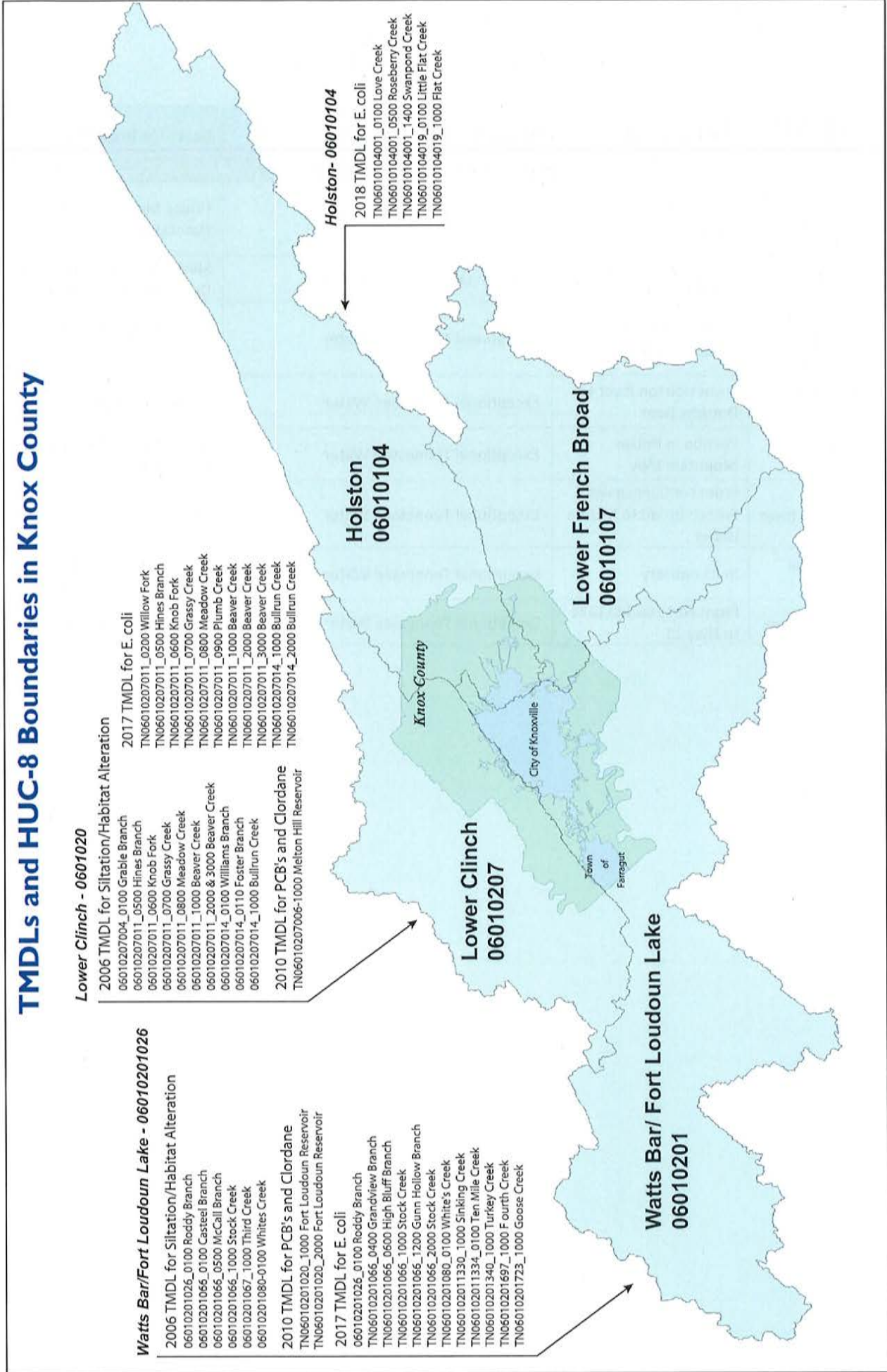
**Lower Clinch  
06010207**

**Watts Bar/ Fort Loudoun Lake  
06010201**

*Knox County*

City of Knoxville

Town of  
Farragut



Attachment 3  
Page 1/7 Question 2C  
Exceptional Tennessee Waters in Knox County

Waterbody Name	Start and End points	Designation	Basis for Inclusion
<b>Exceptional Tennessee Waters (ETW)</b>			
Brice Branch Unnamed Tributaries	Portion in House Mountain SNA	Exceptional Tennessee Water	House Mountain State Natural Area
Clinch River	From Melton Hill Dam to Pellissippi Parkway	Exceptional Tennessee Water	State Scenic River (Class III Developed River Area)
Flat Creek Unnamed Tributary	Portion in House Mountain SNA	Exceptional Tennessee Water	House Mountain State Natural Area
French Broad River	From Holston River to Douglas Dam	Exceptional Tennessee Water	Endangered Species
Hogskin Branch	Portion in House Mountain SNA	Exceptional Tennessee Water	House Mountain State Natural Area
Holston River	From confluence with French Broad to McBee Island	Exceptional Tennessee Water	Endangered Species
Tuckahoe Creek	In its entirety	Exceptional Tennessee Water	State Scenic River (Class III Developed River Area)
Turkey Creek	From Fort Loudon Lake to Hwy 11	Exceptional Tennessee Water	Endangered Species



Attachment 4  
 In support of Question 3E Impacts to Outreach and Education Events Listed in P.I.E Plan

Event	Target Audience	Scheduled Date	Explanation
UT Grounds Management and Stormwater Short Course	Chemical applicators	January 2021 IMPACTED	This was conducted virtually due to COVID. We were unable to participate due to technical difficulties.
EnviroScape and AR Sandbox demonstrations	Youth	Multiple Events IMPACTED	Event sizes and frequency of events reduced due to COVID.
EPW Campus Cleanup	Municipal Employees	Fall 2020 IMPACTED	Event size reduced due to COVID
Halls Outdoor Classroom Celebration	Youth General Public	Spring 2020 CANCELED	Canceled due to COVID
Rain Garden, Riparian Buffer, Sustainable Landscaping Presentations	Homeowners	Multiple Events CANCELED	Canceled due to COVID
SWPPP Training for EPW Employees	Municipal Employees	Two events annually CANCELED	Canceled due to COVID
John Sevier Day	Youth General Public	Fall 2020 CANCELED	Canceled due to COVID
Bonny Kate Family Night	Youth	CANCELLED	Canceled due to COVID

CDC Guidance as of 5/2021

**Gatherings**

**CDC continues to recommend avoiding large events and gatherings. Currently, CDC does not provide numbers to define small and large events.**

Attachment 5  
In support of Questions 3E and F  
Outreach Public Participation 7/1/20 through 6/30/21

Event/Outreach/Education	# Students	# general public	Eng/ contractor	#brochures	lbs of trash	Comments
Knox County Stormwater Strong Streams Newsletter - Summer		500.00				Strong Streams newsletter was created and delivered successfully to 500 unique email addresses.
Knox County Construction Services Newsletter						Did not do one this reporting year.
Powell Station Flotilla 2020		150.00				Tabled event
South Doyle Middle School Classroom Teaching						All in-class teaching was cancelled due to Covid19.
John Sevier Days						Cancelled due to Covid19.
Adopt-A-Stream Clean-Up - KGMC		12.00			375.00	
Knox County Strong Streams Newsletter - Fall		478.00				
Apple Festival						Cancelled due to Covid19.
UT Sustainability Symposium						Cancelled due to Covid19.
11th Annual Farmers' Banquet						Cancelled due to Covid19.
Adopt-A-Stream Clean-Up - KSOC		9.00			50.00	Cancelled due to Covid19.
Classroom lessons						Cancelled due to Covid19.
Annual EPW Clean Up						Cancelled due to Covid19.
Adopt-A-Stream Clean-Up - AmeriCorps		7.00			475.00	All in-class teaching was cancelled due to Covid19.
Adopt-A-Stream Clean-Up - AmeriCorps		8.00			525.00	Very few people attended due to Covid19.
Brochure Mailing - Flooding/Drainage Maintenance		9.00		18.00		One each of Flooding brochure and Drainage Maint. Brochure
Adopt-A-Stream Clean-Up - Riggs		18.00			260.00	
Adopt-A-Stream Clean-Up - Riggs		20.00			140.00	
Adopt-A-Stream Clean-Up - Gresham Smith		5.00			210.00	
Adopt-A-Stream Clean-Up - Knoxville KSOC		7.00			200.00	
Dogwood Home and Garden Show						Cancelled due to Covid19.
Water Fest	450.00					Water Fest was held virtually this reporting year.
TN River Paddle-Off and Cheers to Clean Water		75.00				
<b>totals</b>	<b>450</b>	<b>1298</b>	<b>0</b>	<b>18</b>	<b>2235</b>	



**NPDES Small MS4 Permit for Knox County**

**Annual Assessment: Milestone Year 5 (July 1, 2020-June 30, 2021)**

This is the annual assessment of the Stormwater Management Plan, NOI and policy/procedures for Milestone Year 5 by Knox County EPW. This exercise is required by permit section 4.4.1. Comments are listed below the applicable BMP. If a BMP is not listed, then staff considered the activity on track or completed. The permit also requires a plan and schedule to address the modifications and improvements identified by the assessment. Targets for completion of each modification or improvement is noted.

Public Education and Public Participation

**1B Knox County (KC) will create a PIE plan that details specific goals and specific public information events/activities that will occur over the permit cycle as per permit requirements.**

- Due to Covid-19, some of the activities and events listed in the PIE Plan had to be postponed or cancelled. The table below describes the actions we took in response to the international pandemic. See Attachment 3 of the Annual Report.

**1D KC will continue to support, participate in and maintain documentation for programs such as River Rescue, WaterFest, EarthFest, and other partnership programs, events, workshops and trainings as long as those programs and events remain in existence.**

- See above.

**1F KC SW Management staff will continue to require that staff attend at least 12 hours of continuing education annually. Continuing Education Units (CEUs) will be tracked using our database system.**

- COVID-19 impacted our ability to gather in groups for Continuing Education this reporting year.

Permanent Stormwater Management Program

**4B KC will submit an implementation plan within 90 days of January 1, 2018 (or later date if notified by TDEC).**

- Action pending new implementation plan deadline by TDEC (waiting on new Stormwater Rule).

**4C KC will continue to operate and enforce in accordance with the current stormwater program, ordinance adopted January 2008, which addresses permanent stormwater management from new development and re-development projects that disturb one or more acres, or add more than 10,000 sf of imperviousness. In 2016, KC accepted the extension to permanent stormwater provisions of the 2010 NPDES small MS4 permit and therefore did not modify the program or ordinance under the 2010 permit. The program will be modified, through ordinance revisions, as necessary to meet the Program Requirements, Permanent Stormwater Standards, Site- Specific Limitations and Water Quality Treatment Volume permit conditions per the implementation plan in 4B.**

- Action pending new implementation plan deadline by TDEC (waiting on new Stormwater Rule).

**4F KC will research, develop and implement an SCM owner/operator inspection program that meets the permit requirements.**

- This BMP has not been implemented. This action is also pending implementation due to the litigation and proposed Stormwater Rule.



Attachment 7  
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Geometric Mean of E. Coli

2016 303 d list	Station ID	Fall 2016 Geometric Mean 5 samples in 30 days	Recreation Criteria (Coliform)
impaired	BULLR007.2AN	79	meets standard
unassessed	CONNE000.1KN	493	impaired
unassessed	CONNE001.7KN	1608	impaired
Supporting	COX000.2KN	70	meets standard
impaired	FLAT000.4KN	210	impaired
impaired	HOGSK000.1KN	332	impaired
impaired	LFLAT000.3KN	327	impaired
impaired	LFLAT005.9KN	1673	impaired
impaired	ROSEB000.6KN	672	impaired
impaired	ROSEB002.4KN	1093	impaired
impaired	ROSEB006.2KN	924	impaired
impaired	STOCK002.0KN	158	impaired
impaired	WHITE000.1KN	356	impaired
impaired	WHITE003.2T000.3KN	693	impaired
impaired	WHITE003.5KN	408	impaired

2017 303 d list	Station ID	Fall 2017 Geometric Mean 5 samples in 30 days	Recreation Criteria (Coliform)
impaired	FLAT000.4KN	135	impaired
impaired	HBLUF000.1KN	310	impaired
impaired	STOCK002.0KN	198	impaired
impaired	TMILE000.3KN	256	impaired
impaired	SINKI000.2KN	233	impaired
unassessed	CONNE000.1KN	196	impaired
impaired	WILLO000.5KN	404	impaired
impaired	HINES000.2KN	606	impaired
impaired	KNOB000.3KN	237	impaired
impaired	MEADO000.2KN	233	impaired
impaired	PLUMB000.3KN	251	impaired
impaired	GRASS000.3KN	335	impaired

2018 303 d list	Station ID	Fall 2018 Geometric Mean 5 samples in 30 days	Recreation Criteria (Coliform)
impaired	FLAT000.4KN	250	impaired
impaired	FLAT005.6KN	381	impaired
impaired	LFLAT000.3KN	297	impaired
impaired	LFLAT005.9KN	747	impaired
impaired	BULLR016.2KN	258	impaired
impaired	BEAVE024.7KN	337	impaired
impaired	BEAVE037.0KN	1020	impaired

Attachment 7  
Page 7/7 Question 10A  
Geometric Mean of E. Coli

2018 303 d list (cont.)	Station ID	Fall 2018 Geometric Mean 5 samples in 30 days	Recreation Criteria (Coliform)
impaired	GOOSE000.8KN	1146	impaired
impaired	SWANP000.8KN	172	impaired
impaired	GRAND000.5	195	impaired
impaired	SINK1002.1KN	85	meets standard
Unassessed	CONN000.1KN	212	impaired
impaired	BEAVE003.5KN	142	impaired

2019 303 d list	Station ID	Fall 2019 Geometric Mean 5 samples in 30 days	Recreation Criteria (Coliform)
impaired	BEAVE037.0KN	482	impaired
impaired	FLAT000.4KN	340	impaired
impaired	FLAT005.6KN	374	impaired
impaired	GUNN_GO.5KN	934	impaired
impaired	HOGSK000.1KN	441	impaired
impaired	LFLAT000.3KN	512	impaired
impaired	LFLAT005.9KN	823	impaired
impaired	RODDY000.6BT	420	impaired
impaired	ROSEB000.6KN	434	impaired
impaired	ROSEB002.4KN	499	impaired
impaired	ROSEB006.2KN	1249	impaired

2020 303 d list	Station ID	Fall 2020 Geometric Mean 5 samples in 30 days	Recreation Criteria (Coliform)
impaired	FLAT000.4KN	128	impaired
impaired	FLAT005.6KN	287	impaired
impaired	LFLAT000.3KN	313	impaired
impaired	LFLAT005.9KN	1038	impaired
impaired	TURKE004.5KN	237	impaired
meets standard	HICKO003.4KN	119	meets standard
impaired	BEAVE003.5KN	108	meets standard
impaired	BEAVE036.7KN	269	impaired
impaired	BEAVE037.0KN	291	impaired