

Metro Nashville/Davidson County Municipal Separate Storm Sewer System Permit TNS068047 Annual Report

December 2024

Reporting Period:

July 1, 2023 – June 30, 2024



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DRAMA

1.0 Introduction

The Metropolitan Government of Nashville Davidson County (Metro) was issued the third cycle of the Municipal Separate Storm Sewer System (MS4) permit effective February 1, 2012. Under this permit, the reporting period for each permit year coincides with Metro's Fiscal Year (FY) (July 1st through June 30th). The reporting period for this report will be referred to as Fiscal Year 2024 (FY24), which represents the period between July 1, 2023, through June 30, 2024.

Each year, there are numerous individuals within different Metro Departments that work toward achieving overall MS4 permit compliance. As a measure to ensure permit compliance within the various facets of Metro government, the National Pollutant Discharge Elimination System Section (NPDES) was created to oversee all MS4 permit compliance activities. NPDES is a section within the Metro Water Services (MWS) Stormwater Division and is responsible for performing specific MS4 permit requirements such as public education activities, illicit discharge investigations, runoff/discharge sampling, construction site inspections, field screening inspections, industrial inspections, etc. In addition, NPDES is responsible for coordinating with various Metro Departments to ensure permit compliance measures are being followed on a Metro-wide basis.

The following table is a list of certain individuals that have contributed directly to specific MS4 permit compliance activities/information during FY24. Any inquiries regarding information represented in this report should be directed to the MWS Stormwater NPDES Office (Attn: Josh Hayes) at 1607 County Hospital Rd, Building A, Nashville, Tennessee, 37218, Phone: 615-880-2420, Email: Joshua.Hayes@Nashville.gov.



The following list is a description of commonly used acronyms throughout the document:

303(d)	State's List of streams with unavailable parameters (Water Quality Criteria for Use Classifications)
CCTV	Closed Circuit Televising
CSS	Combined Sewer System
CWN	Clean Water Nashville Program
EMC	Event Mean Concentration
EPA	Environmental Protection Agency
EPSC	Erosion Prevention and Sediment Control
ERP	Enforcement Response Plan
FY24	Fiscal Year 2024
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System software
LA	Load Allocations for Streams with Approved TMDLs
LID	Low Impact Development
MEP	Maximum Extent Practicable
NDOT	Nashville Department of Transportation
Metro	Metro Nashville Davidson County Government
MNPR	Metro Nashville Parks and Recreation
MNPS	Metro Nashville Public Schools
MS4	Municipal Separate Storm Sewer System
MWS	Metro Water Services
NOV	Notice of Violation
NON	Notice of Noncompliance
NPDES	National Pollutant Discharge Elimination System Section within MWS Stormwater Division
O&M	Operations and Maintenance
OEM	Mayor's Office of Emergency Management
PIE	Public Information/Education Plan
RMCP	Ready Mix Concrete Plant
RMP	Runoff Management Plan
SCM	Stormwater Control Measure (Post-Construction Stormwater Treatment)
SOP	Standard Operating Procedure
SSD	System Services Division
SWMC	Stormwater Management Commission
SWMM	Stormwater Management Manual
SWMP	Stormwater Management Plan
SWO	Stop Work Order
SWPPP	Stormwater Pollution Prevention Plan
TDEC	Tennessee Department of Environment and Conservation
TMDL	Total Maximum Daily Load of Pollutants Allowed within Streams
TMSP	Tennessee Multi-Sector Permit for Industrial Stormwater Discharges
TMI	Tennessee Macroinvertebrate Index
TSS	Total Suspended Solids
WIES	Watershed Improvement Evaluation System
WLA	Waste Load Allocation



Table 1 - Contact List

Name	Agency	Position/Responsibility
Scott Potter	MWS	Director
David Tucker	MWS	Assistant Director, Operations
Tom Palko	MWS	Assistant Director, Stormwater Division
Tony Vlasic	MWS	Assistant Director, Business & Finance
Sonia Allman	MWS	Manager of Strategic Communications
Ricky Swift	MWS	Program Manager, Stormwater Maintenance Section
Roger Lindsey	MWS	Practice Leader – Stormwater and Floodplain Management
Matt Tays	MWS	Project Manager, Stormwater Master Planning
Kimberly Hayes	MWS	Engineer, Development Services Division, Single Family
Steve Mishu	MWS	Assistant Director, Development Services Division
Michael Hunt	MWS	Program Manager, Stormwater NPDES Section
Bonnye Holt	MWS	Office Support Specialist, Stormwater NPDES Section
Howard Jackson	MWS	Office Support Specialist, Stormwater NPDES Permit Group
Dale Binder	MWS	Construction Inspection Manager, Stormwater NPDES Section
Shawn Herman	MWS	Construction Inspection Assistant Manager, Stormwater NPDES Section
Katherine O'Hara	MWS	Construction Site Inspector, Stormwater NPDES Section
Denice Johns	MWS	Construction Site Inspector, Stormwater NPDES Section
Donald Erves	MWS	Construction Site Inspector, Stormwater NPDES Section
Ken Tranter	MWS	Construction Site Inspector, Stormwater NPDES Section
Leigh Nelson	MWS	Construction Site Inspector, Stormwater NPDES Section
Lynda Kelly	MWS	Construction Site Inspector, Stormwater NPDES Section
Anthony Scarbrough	MWS	Construction Site Inspector, Stormwater NPDES Section
Tommy Biggerstaff	MWS	Construction Site Inspector, Stormwater NPDES Section
Hiram Harrison	MWS	Construction Site Inspector, Stormwater NPDES Section
Rebecca Dohn	MWS	Urban Forestry Manager, Stormwater NPDES Section
Eric Kuehler	MWS	ISA Certified Arborist Stormwater NPDES Section
Jennifer Smith	MWS	Horticulturist, Stormwater NPDES Section
Sarah Welz	MWS	Urban Forestry Project Manager, Stormwater NPDES Section
Charles Griffith	MWS	Urban Forestry Arborist, NPDES Section
Josh Hayes	MWS	Permit Group Manager, Stormwater NPDES Section
Kevin Turner	MWS	Permit Group Inspector, Stormwater NPDES Section
Rob Topolski	MWS	Permit Group Inspector, Stormwater NPDES Section
Gretchen Judkins	MWS	Permit Group Inspector, Stormwater NPDES Section
Julie Berbiglia	MWS	Public Education Specialist, Stormwater NPDES Section
Joseph Brown	MWS	Permit Group Inspector, Stormwater NPDES Section
Matthew Lockhart	MWS	Permit Group Inspector, Stormwater NPDES Section
Mary Bruce	MWS	Watershed Group Manager, Stormwater NPDES Section
Veronica Logue	MWS	Watershed Group Inspector, Stormwater NPDES Section
Larry Brown	MWS	Watershed Group Inspector, Stormwater NPDES Section
Jesse Hunter	MWS	Soil Conservationist, Stormwater NPDES Section
Sharon Smith	MWS	Waste Services, Nashville Zero Waste Coordinator
Phillip Jones	NDOT	Assistant Director of the Street Services Division
Ernie Kurgan	NDOT	Street Services Division
J.D. Lane	NDOT	Street Sweeping Services
Anita McCaig	Metro Planning Department	Planner
Christopher Michie	Metro Health Department	Septic System Oversight
Pamela Wilson	Metro Health Department	Restaurant Inspection
Ron Taylor	MWS	Program Manager, Overflow Abatement
Matt Lott	MWS	Program Manager, System Services Overflow Response
Tim Netsch	Metro Parks Department	Assistant Director
Ted Taylor	MWS	Laboratory Superintendent
Andy Welch	MWS	Program Manager, Pre-treatment/FOG
Anna Kuoppamaki	MWS	GIS Analyst, Stormwater Master Planning Section

Note: There are many other personnel that contribute to the overall MS4 compliance program not listed on this table (i.e., Engineers in MWS Development Services, Various Maintenance Workers, etc.).

1.1 Objective of the Program

The objective of the Stormwater Management Program is to implement specific pollution prevention programs designed to improve the quality of Metro's water resources to the Maximum Extent Practicable (MEP), particularly as it relates to improving the quality of discharges from Metro's MS4. This leads to an overall goal of maintaining MS4 permit compliance, while simultaneously achieving water quality improvements in every Metro stream reach, including those listed on the Tennessee Department of Environment and Conservation's (TDEC's) 303(d) list of streams with unavailable parameters. It is Metro's long-term goal to reduce pollutant loadings from the MS4 to remove a majority of the streams from the 303(d) list that are indicated as being impaired by MS4 runoff. As Metro maintains compliance with the current MS4 permit requirements, it is important to evaluate the success of the major pollution prevention programs that have been implemented in the first 3 permit cycles. Over those permit cycles, Metro has made great strides to improve stormwater runoff from construction sites, industrial sites, commercial sites, residential sites, and Metro roadways/properties. Overall, the implementation of these control programs has worked to significantly reduce and minimize pollutants from entering the MS4 drainage system and the receiving streams.

1.2 Major Stormwater Pollution Findings

Each year there are generally fewer major discoveries of pollution to the MS4 drainage system. This can be largely attributed to the long-term implementation of core pollution prevention programs such as Metro's public education efforts, proactive inspections of commercial and industrial properties, increased oversight and permitting requirements on development/construction activities, and continual monitoring of Metro's vast watersheds. The paragraphs below describe some of the more notable investigations and compliance actions performed by Metro that have directly benefited the water quality of the MS4 and Davidson County streams during FY24.

1.2.1 Dry Weather Field Screening Findings

In previous permit years, NPDES performed dry weather field screening inspection on all ½ mile grids with commercial/industrial-zoned properties within Metro's jurisdiction. In FY24, NPDES began to re-screen all the ½ mile grids, which included many of the same businesses that were screened in the first cycle, as well as new businesses that were developed/redeveloped since the first screening. The below paragraphs describe some of the notable issues found during the start of the second round of field screening.

Industrial Glass Cutting Facility

While performing dry weather field screening, an industrial glass cutting facility was found discharging contact cooling water from inside of their facility to a storm ditch routed to the MS4. This facility has previously received enforcement from NPDES for the same discharge. After discovery of this second industrial discharge to the MS4, NPDES issued another Notice of Violation (NOV) with elevated administrative penalty amounts requiring them to stop the discharge or seek proper permit coverage from TDEC for industrial process water discharges. The facility immediately abated the discharge after receiving the NOV, and NPDES routinely monitors the site to ensure the discharge does not reoccur.





Photos of the Unpermitted Industrial Glass Cutting Discharge to the MS4

Commercial Trucking Facility

During a second-round field screening inspection of a local trucking company, NPDES noted large oil puddles underneath and around used oil containers. While the oily product was on the pavement exposed to stormwater runoff, it appeared the material was contained to the site and had not drained into storm drains and off their property. NPDES promptly notified the facility's management of the issue and required them to perform the necessary clean-up before a rain event. As a result, the exposed oil product was cleaned up immediately and did not discharge from the property.



Photos of Exposed Oil Product found during Field Screening



Local Brewery

During a second round of dry weather field screening inspections, a local brewery was noted to have a discharge coming from their spent grain container. This discharge routed to a grassy swale that discharged to a detention pond. This is the second time the discharge has been noted coming from the spent grain trailer at the brewery. NPDES coordinated with the facility to perform the necessary remediation of the spent grain material. NPDES also coordinated with TDEC to determine if breweries were required to obtain Tennessee Multi-Sector Permits (TMSP) for industrial stormwater runoff. As a result of this coordination and findings of stormwater issues at other local breweries, NPDES coordinated with TDEC to organize an educational event for all breweries in Davidson County. The workshop was designed to inform them of proper materials storage at their sites and the need to obtain either TMSP coverage or No Exposure Certification from TDEC.



1.2.2 NPDES Water Quality Investigations

Sewer Issue Discovered from Citizen Complaint:

NPDES received a phone call complaint about sanitary sewer discharging at an apartment complex. Upon investigating, NPDES found a large sanitary sewer discharge from a private sewer grinder pump, operated by the apartment complex. NPDES coordinated with the apartment complex management, requiring them to make repairs to the grinder pump and eliminate the sanitary sewer discharge. While the apartment complex made initial repairs, NPDES continued to monitor, only to find the pump system continually failing. In further coordination with the apartment complex, NPDES became aware that the grinder pump parts needed for complete repair were on backorder and were going to take weeks to receive. NPDES required the apartment complex to routinely pump out the wet well to prevent sanitary sewer discharges while waiting on the proper parts to make the permanent repairs. Since NPDES has noted several instances of failing private sanitary pump systems at apartment complexes over the last few years, a plan has been developed to distribute educational mailouts to apartment complexes within Metro during FY25.



Photos of the Exposed Sewage Material Draining to the MS4



Spill from an Industrial Facility:

NPDES received notification that there was a spill at a local industrial facility. Upon responding, NPDES learned that the facility had a pump fail during a storm in their wastewater collection system that resulted in industrial waste water containing fats, oil, and grease (FOG) material discharging to the MS4. The industrial facility had already hired an environmental remediation company to perform immediate spill containment and all remediation. NPDES coordinated with the environmental remediation company to determine all the necessary remediation actions. As a result, all of the contaminated soil at the facility and within Metro's MS4 was removed and disposed of properly.



Photos of the Contaminated Soil that NPDES Required to be Remediated

Unknown Discharge from Drilling Activities – NPDES received a citizen complaint of an unknown discharge with a strong sulfur odor that started when a fiberoptic company was performing horizontal drilling. The citizen believed the drill operation may have struck a sewer line causing a leak of the sulfurous water. During the investigation NPDES took samples to analyze for *E. coli*. NPDES also performed Polymerase Chain Reaction (PCR) analysis to determine the potential presence of human source bacteria (HuBac). Sample analysis revealed low concentrations of *E. coli* and non-detection levels of HuBac, which indicated the discharge was not from a sanitary sewer leak. NPDES also performed coordination with the MWS System Services Division (SSD) and the Madison Utility District to further inspect the water and sewer lines with video and sounding tools, in which no leaks were detected from the sanitary sewer or water lines in the immediate area. NPDES collected several follow-up samples on several separate occasions for *E. coli*, which continued to show non-detect or very low levels. While NPDES continued to monitor the discharge over weeks, the water was observed to clear up and become less odorous as time went on. NPDES concluded that the discharge was likely caused by the drilling operation piercing a pocket of groundwater that contained concentrated organic matter.





Monitoring Photos of Unknown Discharge of Sulfurous Material from Drilling Activities

1.2.3 NPDES Spill Response Activities

In February of 2024, NPDES received notification from the Office of Emergency Management (OEM) of fuel leaking from a tanker truck at in the parking lot of a local truck wash. NPDES immediately responded to the site and coordinated with the Nashville Fire Department (NFD) Hazardous Materials (HAZMAT) crews that were actively working the scene. The spill was caused when a fuel truck had flipped over while attempting to turn into the truck wash parking lot. Fuel was leaking from several ports on the truck, but the NFD HAZMAT crews had positioned containment measures at several areas downstream from the incident. NPDES investigated further downgradient from the spill. As a result, NPDES found no evidence that any fuel was leaving the site. NPDES performed follow-up inspections to find that the fuel product and deployed containment measures were fully remediated by the responsible party.

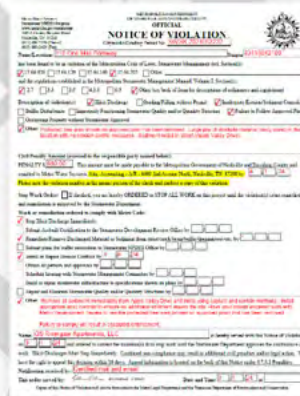


Photos of the Petroleum Spill and Receiving Stream without an Oil Sheen



1.2.4 NPDES Construction Oversight Program

Any development or redevelopment activity involving the disturbance of more than 10,000 square feet requires a Metro grading permit. As part of the grading permit process, NPDES maintained an average of 9 inspector positions dedicated to inspecting construction activity to ensure proper Erosion Prevention and Sediment Control (EPSC) measures are installed and maintained during the project to prevent the discharge of sediment to the MS4 and community waters. Throughout FY24, there was an average of over 900 active grading permit sites that NPDES staff were inspecting on a routine basis. While performing a routine inspection, one of NPDES inspectors found a permitted construction site was not properly maintaining EPSC measures, resulting in the discharge of large amounts of sediment to the MS4. NPDES issued an NOV with an accompanying \$680 administrative penalty to the site for failure to properly maintain controls. As a result of the NOV and administrative penalty, the site remediated the lost sediment to the MS4 and installed new EPSC measures.



Photos of the Pumped Muddy Pit Water and NOV

1.3 Major Stormwater Management Program Accomplishments and Highlights

1.3.1 MWS Stormwater Division

The MWS Stormwater Division has continued to facilitate major accomplishments in the development of the overall Stormwater Management Program. Accomplishments performed in recent years are listed below:

SWMP Implementation/Updates:

In FY24, NPDES continued to implement Metro's MS4 Storm Water Management Plan (SWMP) that was developed during previous permit reporting periods. The SWMP, as required by the current MS4 permit, is a formal document that provides a comprehensive description of Metro's overall Stormwater Management Program. The SWMP describes Metro's methods of achieving each MS4 permit-required activity. The SWMP is an internal program document that is reviewed routinely to determine if improvements or updates are needed. All SWMP updates from previous years are included in the previously submitted Annual Reports. In FY24, NPDES updated the Public Involvement/Education Plan and the Enforcement Response Plan, which is an appendix of the Stormwater Management Manual. The updated Plans are included in Section 4 of this report.

Please note that Metro's permit cycle ended on January 31, 2017, but is currently administratively extended until such time as the permit is reissued by TDEC. With the pending issuance of the 4th iteration of Metro's MS4 permit, Metro believed some changes could be made to improve the efficiency of certain pollution prevention programs. Attachment B includes several communications submitted to TDEC detailing proposed changes to the Stormwater Management Program, which NPDES is currently implementing during the "administrative extension" period between permits. NPDES met with TDEC on November 16, 2017, to discuss these changes, and TDEC approved the testing of certain, slight MS4

program modifications during the transition/“administrative extension” period. On March 30, 2018, NPDES submitted a follow-up letter to TDEC explaining how the modifications have been beneficial to the program. During FY24, NPDES continued to implement the changes detailed in these communications to TDEC since these modifications continue to demonstrate increased pollution prevention effectiveness.

Industrial Inspections


At the beginning of the permit cycle, NPDES created a thorough industrial site database that continues to be comprised of permit-required industries such as those subject to reporting requirements pursuant to SARA Title III, Section 313 and sites not required by the permit such as Tennessee Multi Sector Permits (TMSP), Ready-Mix Concrete Permits (RMCP), and Individual permits for process water discharge. In FY24, NPDES updated the database to include all active Mining Permits, State Operating Permits pertaining to septic systems, and No Exposure Certifications. In FY24, NPDES continued to inspect these newly added permits. Notable FY24 industrial activities are detailed below:

- **Alcohol Manufacturer Education**

NPDES’ IDDE program has encountered many illicit discharges of spent grain from alcohol manufacturers; therefore, in FY24, NPDES completed stormwater education for these facilities. In planning for this educational meeting, it was noted that these facilities would fall into Sector U of the TMSP. Amidst coordination with TDEC and the Tennessee Craft Brewers Guild, NPDES invited 46 alcohol manufacturers to attend a meeting to discuss best management practices in addition to the details of the TMSP and No Exposure Certification, the latter being one that many of these sites could apply for with minor changes to production processes. Sites who were unable to attend the meeting were sent a letter from NPDES detailing the information discussed in the meeting. By the end of FY24, NPDES facilitated in the applications of 39 No Exposure Certifications to TDEC with all newly certified sites inspected by NPDES to ensure compliance with No Exposure requirements. NPDES will continue to coordinate with facilities that have yet to obtain coverage under the TMSP or No Exposure Certification. Refer to Section 4 of this document for meeting sign-in sheets and a copy of the letter sent to alcohol manufacturers in Davidson County.

TMSP	vs	NEC
<ul style="list-style-type: none">• Notice of Intent• SWPPP• Site inspections• Analytical monitoring• TDEC/MWS inspections• Permit fee		<ul style="list-style-type: none">• No Exposure Form• Keep industrial processes/wastes away from stormwater• MWS drive-by inspections• Recertify every five years

Both options prevent stormwater contamination, solving the issue of illicit discharges.



A Screenshot from the Presentation and a Photo of an Illicit Discharge Corrected After Requiring Permitting

- **Permit Education for Permitted Sites**

As NPDES grows its industrial database by finding sites within Davidson County that need to be permitted for stormwater discharges, it continues to educate all facilities regarding their permit requirements. A notable example from FY24 is a wire product facility that has had turnover in the role of Environmental Manager. The company has two TMSPs that were lacking proper documentation such as the Stormwater Pollution Prevention Plans (SWPPP),

site inspections, and analytical monitoring results. While the site had minor exposure issues, several unmonitored outfalls were discovered during the routine inspection. NPDES coordinated with the site to update both SWPPPs, label and partake in representative sampling for the new outfalls, and complete all site inspections as required by Sectors AA and F of the TMSP. NPDES aims to complete an industrial webinar in FY25 to continue to educate all permitted sites about the requirements of their permits.



Before and After Photos of Outfall at Wire Product Site in FY24

- Continuation of Routine Reinspections
According to documentation of site visits in the database, NPDES did not appear to have a set timeframe for reinspecting sites that have been issued letters requesting Corrective Action Plans (CAPs). In FY24, NPDES implemented the plan of reinspecting these sites approximately 6 months from the CAP due date, which involved reinspecting 23 individual industrial facilities. This allowed NPDES to determine if the controls put in place by the CAPs are being maintained beyond initial installation. This timeline has also proven beneficial for newly permitted sites that may require guidance with permit paperwork. A notable site from FY24 was an auto salvage lot that had numerous paperwork and exposure issues noted during their initial TMSP inspection. Upon reinspection, the site had created a new SharePoint to hold all TMSP paperwork, completed all TMSP paperwork from that timeframe, completed maintenance at their storm drains, refreshed the gravel lot, and cleared their detention ponds.



Before and After Photos of Storm Drains at Auto Salvage Yard

Public Education:



As Metro Nashville continues to grow at a record pace as new residents moving here from different parts of the country, NPDES believes public outreach is one of the most important actions of the MS4 program. In FY24, NPDES continued to expand its public outreach activities as opportunities presented themselves, while also using quantitative analysis to ensure each aspect of the program is aligned with the permit goals. The below paragraphs highlight some of the specific public education activities that were conducted during FY24:

Rain Barrel Monthly Giveaway

In FY24, NPDES worked with Rain Water Solutions to provide 858 subsidized rain barrels to Davidson County residents to reduce residential runoff. During that sale, NPDES purchased 24 barrels to use in a monthly giveaway. To enter, Davidson County residents must watch an educational [Youtube video](#) and take a [short quiz](#), both created by NPDES staff. At the beginning of each month, NPDES staff complete a drawing from that month's entries for the free rain barrel. Those who did not win receive information about the upcoming Rain Barrel Sale in FY25 and a guide on how to build their own rain barrel at home to ensure they have access to runoff reduction. In FY24, there were 139 entries from Davidson County residents, and the average score of the quiz was 3.72 out of 4. The quiz consists of four questions focusing on water pollution, the benefits of rain barrels on water quality, and safety concerns relating to rain barrel usage and installation.

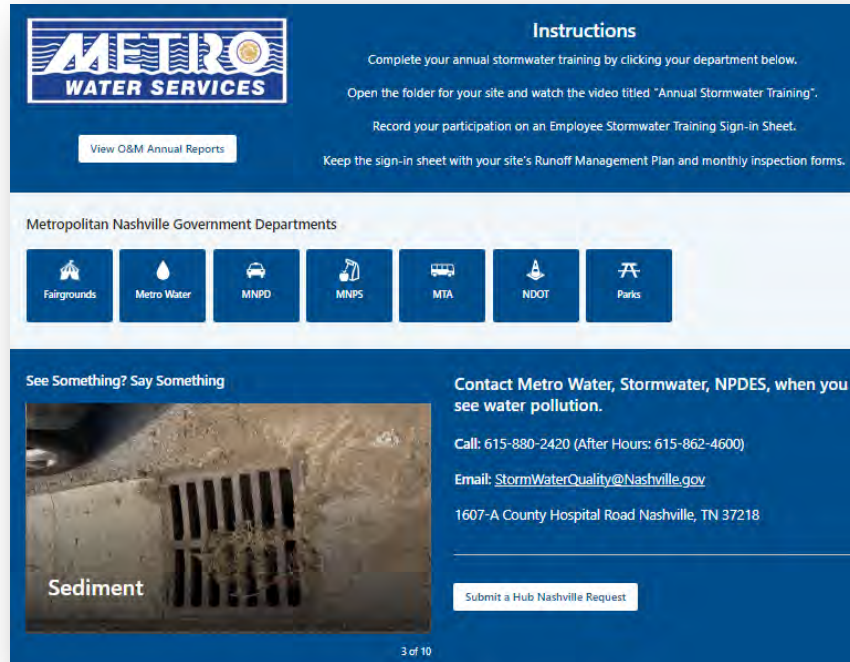


Screenshot from the Educational Rain Barrel Giveaway Video Created in FY24

Metro Operation and Maintenance Facility SharePoint Site

NPDES completes yearly audits at all Metro Operation and Maintenance (O&M) facilities to ensure the sites are following best management practices outlined in their site-specific Runoff Management Plans (RMPs). These 15 facilities are required to complete monthly site inspections in addition to annual employee training on stormwater and pollution prevention during maintenance activities. To aid in ensuring this annual training is completed, NPDES created a SharePoint site in FY24 to share site-specific videos regarding the purpose of the RMP and how to best follow its guidelines, including but not limited, to proper equipment washing procedures and storage of chemicals. NPDES staff completed in-person training for the MWS Stormwater Routine Maintenance (RoM) crews. NPDES staff also coordinated with the Metro Parks Department to present the material to the Centennial Park Maintenance Facility employees whose facility drains to the combined sewer as stormwater knowledge is applicable to their field work in the MS4. Refer to Section 4 of this document for training sign-in sheets.





Screenshot of NPDES SharePoint Site Homepage

Social Media Posts

In FY24, MWS continued to routinely update Facebook, Twitter, Instagram, and NextDoor posts, which has proven to be an effective method in reaching the growing number of citizens who get most of their news from the various social media platforms. A benefit to using social media to distribute public education messages is that actual audience size can be calculated in terms of reach. NPDES continues to track engagement rates (likes, comments, shares, etc.) to distinguish between reach due to passive scrolling versus active engagement, which is a better measurement of knowledge gained. NPDES implemented a new social media plan in FY24 to allow NPDES staff to reach the target audience more effectively while not inundating followers with posts. This plan proved effective as NPDES decreased the number of posts but increased reach and engagement rates compared to the previous year. In January 2024, NPDES learned that metrics from Twitter (X) had to be obtained via looking at each post because metrics previously provided by the platform for free were no longer available, which led to a loss of some engagement metrics. NPDES staff created social media posts that informed the public about pollution prevention tips, events, or workshops offered by NPDES staff, and posts highlighting the different programs within NPDES (SCM inspections, Urban Forestry, etc.). The Urban Forestry social media especially flourished in FY24 with creative posts reaching thousands of people. Refer to Section 4 of this document for the newly implemented social media plan and examples of stormwater-specific posts during FY24.

	Number of Posts	Reach	Total Engagements	Engagement Rate
Facebook	59	86,423	1301	1.51%
Instagram	45	18,705	1242	6.64%
Twitter	77	58,437	971	1.66%
NextDoor	1	943	3	0.32%
Total	182	164,508	3517	2.14%

Table of Metrics from Stormwater Social Media Posts for FY24

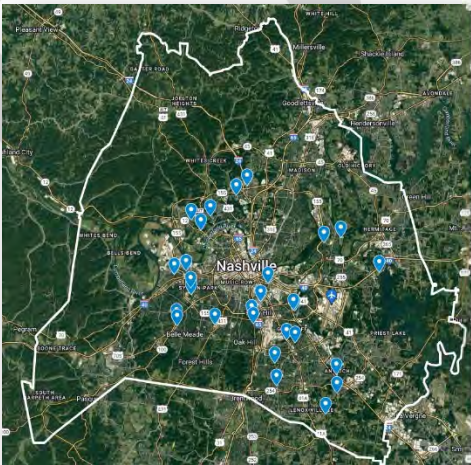




Example Social Media Posts Posted During FY24

Metro’s Adopt-A-Stream Program

For many years, MWS has been coordinating with the Cumberland River Compact (CRC) to facilitate the Adopt-A-Stream program. The program provides an opportunity for local businesses, civic groups, watershed associations, churches, schools, etc. to work together in protecting and enhancing the watershed in which they live or work. Stream adoptions last for a period of 2 years, and adopters are required to do at least one stream clean-up per year. During FY24, the CRC signed up or renewed contracts with 9 new and renewing adopters bringing the total number of stream segments adopted to 25 (17.15 adopted miles), and there were 34 stream cleanups or education events in which 438 volunteers collected 291 bags of trash.

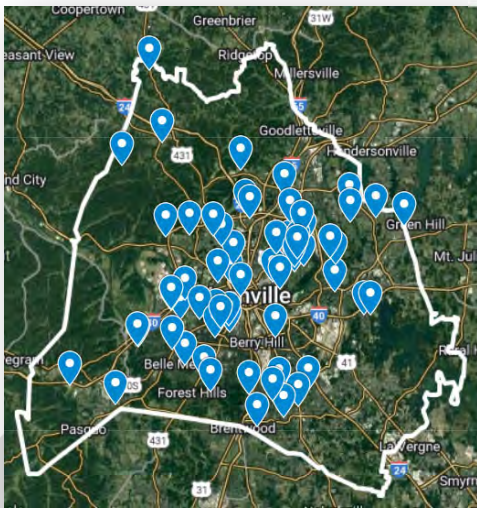


Adopt-A-Stream Locations in Davidson County and a Photograph of One of the Clean-up Activities during FY24



Tennessee Smart Yards Program

In 2021, NPDES adopted the community-driven Tennessee Smart Yards (TNSY) Program that aims to educate and empower residents to create environmentally friendly landscapes that reduce stormwater runoff, prevent erosion, and enhance habitat for native wildlife. TNSY, a partnership between county stormwater agencies and Extension offices, is a free stormwater pollution prevention program that teaches residents specific actions that they can take at home while providing the MS4 with measurable results such as the number of yards certified or actions taken. Through an analysis of participant quotes, recurring themes relating to the impact of TNSY include increased native plantings, reduced stormwater, improved yard management, awareness and education, and community engagement. Certified yards in Davidson County receive a free tree from Root Nashville, a free bag of Music City Gold fertilizer, and a free yard sign to raise awareness and inspire neighbors to follow suit. In FY24, NPDES partnered with the Davidson County Master Gardeners and University of Tennessee Extension Office to organize the first TNSY Festival in Davidson County to increase residential knowledge of the program. The festival had specific booths for most of the principles of TNSY such as “Right Plant, Right Place” and “Protect Water’s Edge”. Attendees were able to learn about the basics of TNSY from Master Gardeners at the booths in addition to four live demonstrations that corresponded to raffle prizes of bird houses, rain gauges, a compost bin, and a rain barrel. NPDES plans to continue this festival in future fiscal years. During FY24, 61 yards were certified through TN Smart Yards bringing the total number of certified yards in Davidson County to 180, over 25% of certified yards across the state. Refer to Section 4 for a list of the certified yards in FY24, the actions taken by these certified yards, and a thematic analysis report of certification quotes from FY24.



A Map of TN Smart Yard Certifications in Davidson County during FY24 and a Picture from the TN Smart Yard Festival

School and Youth Education Program

During FY24, school education programs focused on 1) creating a deeper understanding of stormwater concepts with students and teachers through long-term projects and training programs; 2) engaging with high school and college students to develop marketing and assessment tools for the NPDES Public Education Program, and 3) offering hands-on career experiences through field trips and job shadowing. Refer to Section 4 for details regarding summer camps, loaner programs, stormwater experiences, recruitment efforts, and facility tours. Some of the highlights from the FY24 school and youth education program are listed below:

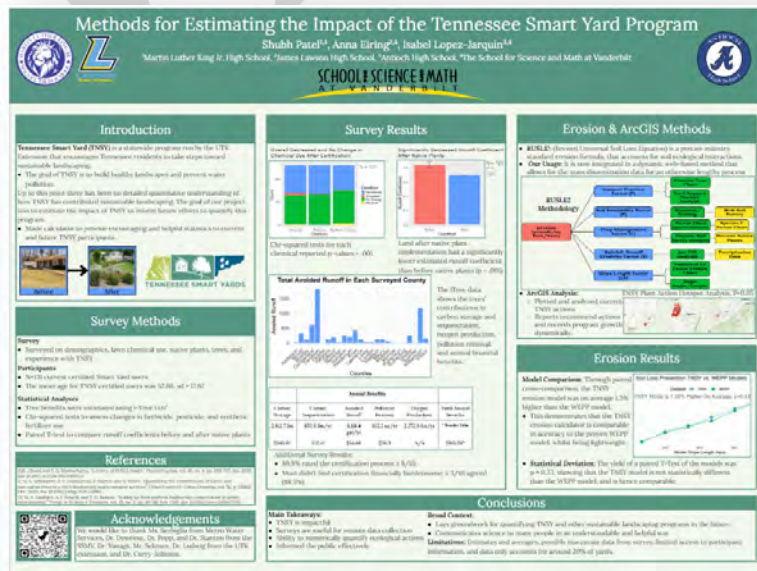
- Stratford High School students in the Interdisciplinary Science Research class conducted a study of dog waste in the Shelby Park dog park and tested the water at three locations below the dog park. This is a multi-year project; the next year will involve developing public education materials about picking up dog waste. NPDES has facilitated the inclusion of the posters from this year’s project phase at the Tennessee Stormwater Association (TNSA) conference in October 2024.



Poster created by Stratford students on dog waste research at Shelby Park.

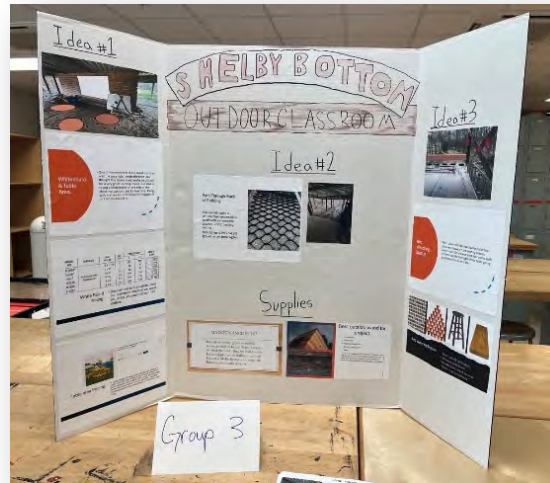
- High school students in the School for Science and Math at Vanderbilt (SSMV) developed an online calculator to determine the impact of certified Smart Yards in the Tennessee Smart Yards (TNSY) program facilitated by NPDES. Students surveyed certified Smart Yards across the state and calculated the following stormwater benefits from the trees planted:
 - There are a total of 231 reported trees planted in TNSY certified yards in Davidson County.
 - The most common species planted were *Amelanchier*, *Cercis*, and *Asimina triloba*.
 - Estimated Benefits: 1818.5 gallons of runoff avoided per year

NPDES also assisted in facilitating presentation of this poster at the Tennessee Stormwater Association (TNSA) conference in October 2024. Other projects in SSMV included an analysis of heavy metals in the Cumberland River, impact of pollutants on plants and planaria, and comparison of an online game to an article for teaching about runoff pollution.



Poster Created by SSMV Students on TNSY Impact Research.

- Overton High School Engineering Academy students learned about pervious building materials and floodplains while designing an outdoor classroom for a nature center in a floodplain



Presentation of Design Plans for Nature Center from Overton High Students.

- College Student Projects and Faculty Assistance
In FY24, NPDES continued to coordinate with local universities to facilitate the expansion of its Public Education Program while educating students about the intricacies of stormwater. Listed below are partnerships from FY24:
 - Belmont University students in the Marketing Management Class created a marketing plan for Tennessee Smart Yards. This plan will be used by NPDES and by the state-wide program.
 - Belmont University students in the Marketing Social Change class created two social marketing plans for Tennessee Smart Yards: "Promoting The Use Of A Rain Gauge To Monitor Rainfall" And "Water Accordingly and A Plan to Encourage Residents" to start sketching their yards as a part of the Tennessee Smart Yards program.
 - Vanderbilt University students in a Program Evaluation course created a program evaluation tool to evaluate the effectiveness of booths and activities for public education and outreach. NPDES has used the tool to collect data and make decisions on which community events to attend with outreach booths.
 - Emily Stutzman, PhD, Director; Assistant Professor of Institute for Sustainable Practice at Davids Lipscomb University consulted with NPDES staff on data collection and analysis for public outreach and education.

Updated NPDES Public Information and Education (PIE) Plan

In FY24, NPDES partnered with a Program Evaluation course at Vanderbilt University to create an evaluation guide for the Public Education program. This guide jumpstarted an ongoing analysis of the program with the goal of using NPDES resources to evoke changes most efficiently in the actions of Davidson County residents regarding reducing water pollution. After an in-depth review of the previously attended events, analysis of surveys completed at events, and discussions with partner organizations such as the Cumberland River Compact (CRC), NPDES has learned that the large community events often attract out-of-town attendees who are not the intended audience of the NPDES Public Education Program. In future fiscal years, NPDES will focus on local community events that allow for a deeper connection to Nashville's residents. In addition, NPDES will attempt to move away from environmentally themed events, such as Earth Day and the Dragonboat Festival, to promote the message of water quality at events where that is not the overarching theme. This redirection will allow NPDES to allocate resources to parts of the county that are not already receiving the message of pollution reduction from partner organizations. As NPDES continues to critically evaluate its public education program, the events



attended are subject to change due to evaluation of booth interactions and receptiveness of audiences. Refer to Section 4 for a copy of the PIE Plan updated in accordance with this program change.

Presentations on Evaluating Public Outreach and Education

NPDES considers it imperative to share the results of its program evaluation with other municipalities to assist other programs in improving their programs as well to accommodate for any future changes to reporting requirements for MS4 permits. Below are the presentations completed specific to NPDES Public Education Program:

- Southeast Stormwater Association Conference, October 2023
- Tennessee Section, American Water Resources Association Symposium, April 2024
- Center for Watershed Protection Conference, April 2024
- Iowa Storm Water Education Partnership, Monthly Meeting, April 2024
- Huron River Watershed Council, meeting on evaluation methods with Marketing Associate, July 2024

NPDES Watershed Group Accomplishments.

Visual Stream Assessments:

Metro Water Services is required to perform visual stream assessments and impairment inventories (streamwalks) on TMDL designated stream reaches (directly upstream and downstream of MWS MS4 outfalls) on a 5-year recurring cycle. In the last ten years, over 236 miles of stream have been assessed. These surveys indicate impairment sources and provide a prioritized list for restoration and remediation efforts. A modified version of the Maryland Protocol Visual Stream Survey is used to collect streamwalk data. Not only does the MWS Streamwalks Program satisfy these MS4 permit requirements, it also provides an opportunity to perform the following activities:

- Ground truthing of the condition of stormwater outfalls and other in-stream infrastructure.
- Identification of environmental impacts such as sewer leaks and other illicit discharges, water line breaks, harmful or detrimental algae, erosion and sedimentation, habitat alteration, illicit dumping, debris blockages impacting fish passage and infrastructure, and trash buildup locations that could be forwarded to Non-Profit Organizations for potential clean-up. Numerous illicit discharges have also been detected and eliminated with this program. Many of these stream segments are out of sight to citizens and discharges would go undetected for much longer periods of time without these visual surveys.
- Incidental observations, which may be of concern to other NPDES sections (i.e. clearing/grading activities with inadequate EPSCs).
- Interaction with community members, which allows NPDES to provide information, answer questions, receive and relay complaints, and project a positive Metro Water presence.

Thermograph Screening Flights:

While not required by the MS4 permit, the Watershed Group partners with the Metro Nashville Police Department (MNPD) to conduct thermography flights with helicopters equipped with Forward Looking Infrared (FLIR) systems. The objective of the thermograph program is to identify illicit discharges to local water bodies through aerial infrared thermography techniques. This allows for the safe and efficient inspection of potentially hard-to-reach areas. FLIR systems provide the crew with night vision (thermal imaging) and digital recording capabilities. Illicit discharges are identified by a warmer contrasting thermal signature relative to the cooler water of streams. Ground truthing investigations of potential illicit discharges are performed by Watershed personnel following each thermography flight.

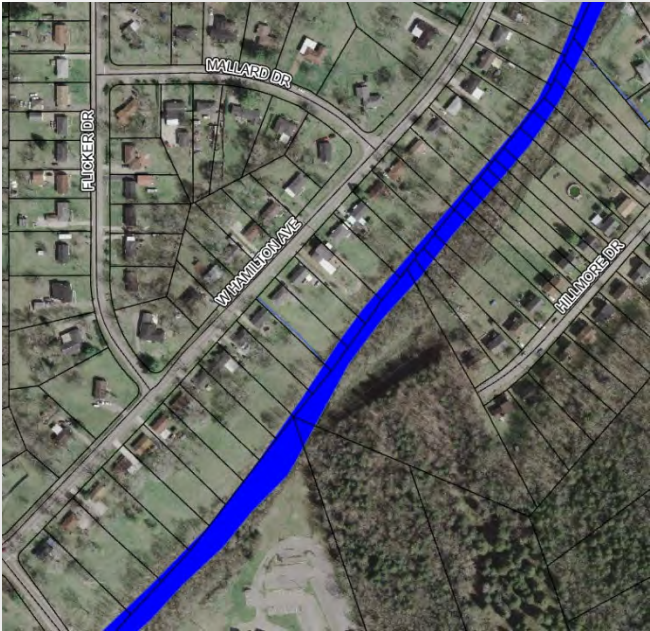




Example Image from FY24 Aerial Thermograph Flights

Floodplain Buyout Properties

The MWS Stormwater Division has been participating in the Federal Emergency Management Agency (FEMA) home buyout program for more than 25 years to restore floodplain storage and riparian habitat in various watersheds within Metro. Since MWS began participating in the home buyout program, Metro has purchases/assumed ownership of 516 floodplain properties (over 239 acres) in which structures and other impervious surfaces, such as driveways, have been removed. In FY24, MWS staff coordinated the purchasing and/or home removal of 22 floodplain properties. For many of the restored floodplain parcels, Metro has ceased mowing areas directly adjacent to streams, allowing riparian buffers to naturally reestablish. MWS Stormwater has also coordinated the plantings of hundreds of native trees and shrubs within many of these floodplain properties. Many of the buyout sites are adjoining parcels within the same floodplain, resulting in the restoration of large continuous tracks of riparian floodplain. Some of these floodplain properties also provide recreational value to local neighborhoods as they are now managed and protected by the Metro Parks Department.



Comparison Aerial Photos Buyout Property from 2008 and 2022 on Whites Creek after the Properties were Purchased and the Floodplain was Restored

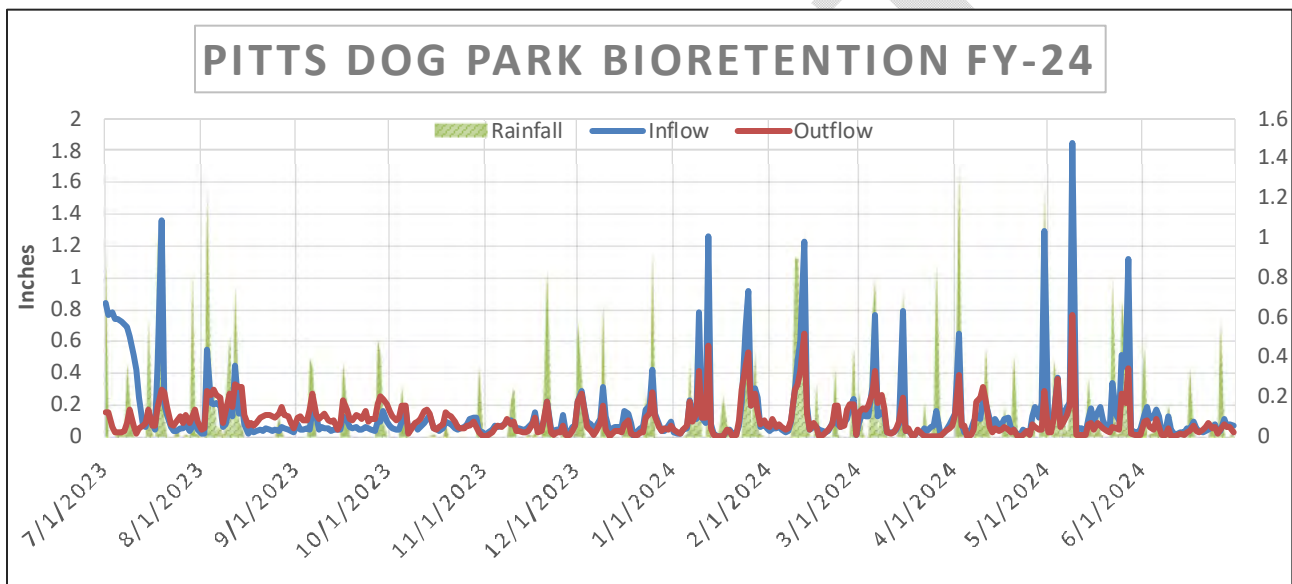


Watershed Improvement Fund

One of the most proactive elements of Nashville's MS4 permit compliance programs is the implementation of the Watershed Improvement Fund (WIF), which is a dedication of certain stormwater user fee funds to implement projects that are specifically designed to improve the quality of stormwater runoff in various watersheds.

In previous permit years, Metro Nashville completed the following large-scale water quality projects:

- Pitts Dog Park Bioretention Basin - This basin is specifically designed to capture as much runoff as possible to reduce the elevated levels of *E. coli* and nutrients discharging into nearby Sorghum Branch, which is listed as being impaired for pathogens on the Tennessee 303(d) list. After construction was completed, NPDES purchased ADS ECHO flow monitoring devices and placed them in upstream and downstream junction boxes to measure the success of runoff captured/contained. Over the past few years, NPDES made alterations to the bioretention basin by capping the underdrains. As a result, a substantial decrease in flow volume from the basin during rain events has been observed. This reduction in volume will certainly also correlate to a reduction of pollutants such as *E. coli* and nutrients.



Graph of Flow Reduction Monitored during FY24

- Whites Creek Bank Stabilization – NPDES worked with a local landowner and the National Resources Conservation Services (NRCS) Emergency Watershed Protection program (EWP) to receive partial reimbursement grant funding to stabilize approximately 100 linear feet of Whites Creek that was suffering from severe erosion that threatened a MWS Sanitary Sewer main.





Photographs of the Whites Creek Bank Stabilization Project Before and After Construction

- Manskers Creek Bank Stabilization** – NPDES also completed a bank stabilization project on approximately 320 linear feet of Mansker Creek along the northern boundary of Davidson County. The project also involved partial reimbursement through the NRCS EWP and Tennessee Department of Agriculture (TDA) 319 program. The project involved the utilization of an innovative engineering articulated concrete product that provided hard armoring, while allowing vegetation to establish along the bank. In FY24, NPDES developed and installed a public education sign at the location of the project explaining the causes and impact of streambank erosion and the overall goals of the project. Thousands of residents will pass by this site and educational sign each year.





Mansker Creek Bank Stabilization

In 2021, Metro Water Services' Stormwater NPDES Program completed a stream bank stabilization project along 320 feet of Mansker Creek.

Before Construction




Due to the threat to public infrastructure, MWS sought supplemental reimbursement funding from the National Resources Conservation Services Emergency Watershed Program and the Tennessee Department of Agriculture Section 319 Non-Point Source Program. Over half of the construction costs were reimbursed to Metro through these programs.

During Construction



This stabilization project involved utilizing innovative bio-engineering products, such as articulated concrete blocks, which provide the hard-armoring necessary to withstand erosive forces of the creek waters during heavy rains, while also allowing vegetation to grow along the banks.



The design for this project included a small channel at the bottom of the banks that will allow sediment and gravel to deposit over time, as creek levels rise and fall. This sediment deposition will provide more long-term stabilization to the stream banks.



Completed/Stabilized Bank



The vegetation has been allowed to grow up within the articulated concrete block, which improves the water quality of Mansker Creek by filtering stormwater runoff. Additionally, the vegetation provides friction to slow down fast flowing waters during storm events to help minimize downstream erosion.



Thank you to our partners:










Mansker Creek Bank Stabilization Project Educational Signage Deployed in FY24



In FY24, NPDES worked diligently to finalize accounting approvals and execute a contract with TDEC to receive a percentage of reimbursement funding for the construction of the Stormwater Retrofit Project at the Metro Nashville Police Department (MNP) Impound Lot. In particular, Metro was approved to receive grant funding from the Sewer Overflow and Stormwater Reuse Municipal Grant Program administered through TDEC from the EPA. The stormwater retrofit project involves removing over 9,000 square feet of impervious asphalt and installing grass swales to intercept stormwater sheet flows from the asphalt parking lot and route it through check dams and stormwater detention basins before draining into a small intermittent tributary to the Cumberland River. Metro received all permitting and accounting approvals in the fall of FY24 and began actual construction in March of 2024.

During the initial excavation, NPDES discovered a layer of buried household trash, which halted the project until further coordination and design changes could be performed to ensure the project did not impact the buried trash layer. Through coordination with TDEC Solid Waste, it was determined that there was no record of a historical landfill operation in this area, but the project should be able to move forward as long as design changes could occur to ensure the grass swales and detention basin were installed above the clay layer protecting this buried trash. Once design changes were performed and TDEC approved them, NPDES released the contractor to finalize construction. At the time this report was compiled, the construction has been completed, and NPDES is in the process of submitting reimbursement invoices to the TDEC grant program.



Photos of the Police Impound Lot Stormwater Retrofit Project During and After Construction



Stormwater Control Measure Inspection and Maintenance Compliance Program:

At the time this report was compiled, Nashville had inventoried 7,668 post-construction stormwater control measure structures (SCMs) that have been built to treat stormwater runoff from the developed environment as required by Metro grading permit regulations. These structures include older dry detention ponds, wet retention ponds, water quality vaults, and the relatively new “green features”, such as bioretention basins, infiltration trenches, and pervious pavement. NPDES began expanding its program personnel to devote more resources to SCM inspection services in 2017. NPDES’s current work plan will include four personnel dedicated to inspecting SCMs and coordinating with property owners to ensure these structures are being properly maintained in addition to one supervisor that oversees the work done by the inspectors and coordinates with Metro/Non-Metro entities to advance the SCM oversight program. NPDES also has one administrative staffer receiving and documenting owner-submitted annual maintenance reports. In FY24, NPDES continued the second cycle of proactive SCM inspections under the expanded program. The second cycle still focuses on priority sites that have not been inspected since the projects have been completely constructed or have not been inspected by Metro within the last 5 years.

During the second year of the second cycle of the expanded NPDES SCM oversight program, NPDES performed inspections and/or re-inspections of nearly 2,390 SCM structures. The increased number of SCMs inspected were due partly to the changes made to notification and re-inspection process. This new process increased the number of initial inspections, while still allowing equivalent numbers of notifications/enforcements as seen in previous years. As a result of the inspection findings, NPDES issued 609 notices to property owners informing them of neglected maintenance needs. While some notices are in verbal or email form, the majority of the 609 notices issued were detailed letters that include inspection findings, a copy of the engineering plans/maintenance agreements, and photographs of the compliance issues. During FY24, eleven enforcement notices were issued when SCMs were discovered to have been intentionally altered or when SCMs were found to be non-functional with property owners failing to respond to previous notification letters. NPDES received an additional 136 owner-submitted annual inspection reports, which has dramatically increased from previous years. Since NPDES expanded the SCM oversight program in 2017, the list of private companies that specialize in SCM inspection and maintenance in the Metro area has grown from 18 to close to 40, which has allowed our increased notifications to properties requiring SCM maintenance actions to be more easily resolved.

During FY24, coordination meetings occurred with MWS Development Services staff to promote low-maintenance SCMs for newly developed sites. These meetings included discussions of the difficulties noted during inspections of filter/media water quality units and proposed methods to address these difficulties on future developed sites. NPDES also held virtual meetings with manufacturers of filter/media water quality units to further their knowledge on the inspection and maintenance processes of these devices.

NPDES continues to inspect all the Metro-owned SCMs once a year between January and March. NPDES now inspects over 330 grading permit-installed SCMs on Metro properties once a year and coordinates with each department on the maintenance needs of each SCM. In FY24, NPDES implemented a new process requiring departments to submit an action plan within 90 days for SCMs they manage with major maintenance needs. NPDES also held a SCM education/maintenance workshop on two separate occasions for Metro Properties to relay the importance of the continue functionality of these structures.

NPDES continues to grow the expanded SCM oversight program to ensure SCMs are maintained and operating efficiently to sustain/improve water quality within Davidson County. Some of measures being undertaken in FY25 include the following:

- Possible re-implementation of an enforcement officer for non-compliant and violation sites.
- Implementation of an inspection/enforcement policy for buffer zone regulations,
- Continued coordination with Development Services staff to ensure sites can maintain SCM compliance and are aware of the structures on their properties,



- Determining a legal path forward to address maintenance concerns for SCMs on properties with dissolved ownerships, and
- Research to determine “inspect and maintain” strategies on green roof structures.

Each year, the follow-up coordination with property owners on SCM inspection and maintenance requirements results in hundreds of previously un-maintained SCMs being restored to functional conditions. Some of the successful SCM rehabilitations in FY24 are shown in the photos below:



Photographs of SCMs Before and After Maintenance as a Result of NPDES Coordination



Urban Forestry Program within MWS Stormwater

In 2018, Metro Nashville launched Root Nashville, a campaign to plant 500,000 trees by 2050. Root Nashville is a public-private partnership between the City of Nashville and the Cumberland River Compact, a local water quality-based non-profit that manages the daily operations of the campaign. To date, over 50,000 trees have been planted and counted towards the campaign. In order to help meet Root Nashville's goals and improve the management of Nashville's urban forest, the Mayor placed the responsibility for the coordination of urban forestry efforts within the Metro Water Services, Stormwater NPDES Section. The responsibilities of this program involve overseeing a street tree inventory and interdepartmental tree meetings, managing the Emerald Ash Borer response, assisting Metro Council with tree legislation, and helping Metro lead by example in tree planting and management on their own properties. In addition to planting on public properties, Nashville has allocated \$1.5M a year to its non-profit partners for tree planting on private property.

In addition to maintaining a street tree inventory in urban areas, Nashville conducted an urban tree canopy assessment this past year. The study was to determine the percentage of existing canopy and compare it to previous years to assess trends. Metro Nashville's 2021 canopy (the most recent year that the required imagery was available) is at 56% and has overall increased by 1.6% since 2011, despite a recent decline of 674 acres since 2016. This study will be repeated every five years to track changes and help identify areas for planting.

Metro Water's urban forestry staff added an arborist in 2020, a horticulturalist in 2021, and two additional arborists in 2022. Another arborist will be added this year. They planted over 2,700 trees in FY24 and are planning continued plantings in the right-of-way (ROW) and at Metro schools this fiscal year. The cyclical maintenance cycle for ROW trees has continued, and over 950 trees were pruned and/or fertilized last fiscal year. Metro's Water's urban forestry group is concentrating on street trees to help mitigate stormwater runoff from Nashville's streets and sidewalks. NPDES is planning to expand their urban forestry efforts and capacity over the next few years to increase the stormwater quality and quantity benefits provided by Nashville's trees.

Davidson County Soil and Water Conservation within MWS Stormwater

The Davidson County Soil and Water Conservation District was established in 1946 as a subdivision of the state government. The mission of the Davidson County Soil and Water Conservation District has been to provide conservation planning, education, information, and technical assistance to landowners, groups, and units of government, so they can enhance and benefit from the proper management of our natural resources. In 2018, this program was moved to the MWS Stormwater NPDES Office due to the common goals of the programs and operational efficiencies.

The Soil and Water Conservation Program is complimentary to the NPDES program as they perform various functions such as educating local landowners on soil and water conservation practices including livestock management processes that reduce impacts to water resources and local watersheds from certain landowner farming activities. In addition, the program also provides technical assistance to landowners on conservation techniques, specifically by offering cost share funds allocated from Tennessee Department of Agriculture and USDA/NRCS for best management practices for Davidson County Watersheds. The Conservation programs reduce soil erosion, enhance water supply, improve water quality, increase wildlife habitat, and reduce damages caused by floods and other natural disasters. This program is unique in that it promotes the installation of best management practices that can directly benefit water quality runoff from private property.

This realignment of departments paid dividends, as the Soil and Water Conservation Program identified the potential for the NPDES program to qualify some of the WIF projects for NRCS EWP funding when critical infrastructure is being protected. As mentioned earlier, NPDES utilized this new knowledge to implement the design and construction coordination on two streambank stabilization projects on Whites Creek and Mansker Creek. By seeking partial reimbursement of funds, NPDES will be able to leverage more of the WIF funds toward other water quality improvement projects.



Water Quality Improvement Project (WQIP) Cooperation with the Cumberland River Compact:

In 2020, MWS entered into a new cooperative agreement with the non-profit organization Cumberland River Compact (CRC) to perform a variety of water quality improvement projects throughout various Metro sub-watersheds. This relationship with CRC started eleven years ago when MWS entered into an agreement with them to assist in performing Supplemental Environmental Projects (SEP) as required from the EPA Consent Decree for MWS' sanitary sewer collections system. MWS extended this agreement even after the consent decree and SEP as it has been identified as having a huge benefit for water quality.

The WQIP agreement gives MWS the ability to leverage work being performed on private land to improve water quality and provides for even more engagement and education opportunities for Nashville citizens in water stewardship activities. With MWS' agreement commitment of \$375,000 in funding, the following bullets include just some of the deliverables that will be accomplished each year of the 5-year agreement:

- 1,500 trees planted on floodplain buyout properties.
- Converting approximately 4,000 square feet of turf to stormwater infiltration zones
- Planting 500 trees in Davidson County in support of the Root Nashville Program
- Conducting one neighborhood de-paving project to promote stormwater infiltration.
- Constructing 10 rain garden builds
- Stabilize 50 linear feet of stream banks per year.
- Reach over 2,000 citizens with direct education on water quality and green infrastructure.

Specific WQIP accomplishments to-date can be found in Section 4 of this document.

1.3.2 Other Metro Department Activities:

In addition to MWS Stormwater Division activities, many other Metro Departments perform critical roles in promoting improved stormwater quality runoff throughout Metro government.

Metro Parks and Recreation Department

Metro Nashville Parks and Recreation Department (MNPR) has been a key player in improving stormwater runoff and riparian habitat on Metro properties. Below are some of the major MNPR activities that have either been performed or are planned that serve to improve the quality of stormwater runoff:

Environmental Education Programs - Metro Parks Nature Centers have a direct and valuable positive impact on water quality and conservation through its environmental education programs, interpretive exhibits, green facilities, and watershed protection. Approximately 1,000 visitors directly participated in water-themed programs, field trips, or other educational events at various Parks Nature Centers. In addition, more than an estimated 200,000 park visitors were exposed to water resources education through educational exhibits at the four Metro Parks nature centers. Each of these nature centers also feature amenities that conserve water resources and provide passive education opportunities to visitors. These include green roofs, water chains, rain barrels, teaching ponds, stream bank restoration areas, pervious paving materials, rain gardens and cisterns.



Parks Land Conservation - The majority of Parks and Recreation Department's 14,000 plus acres and over 60 miles of greenway corridor have continued to be maintained in a natural condition, providing vitally important protections to our watersheds, including many critical headwater streams. Each year MNPR plants many trees on a variety of parks properties. In FY24, Parks continued to convert many previously-mowed areas to no-mow zones that will allow increased stormwater treatment on many acres of Parks-owned lands.

Dog Waste Bags - During the reporting year, approximately 392,000 dog waste bags were distributed at MNPR dog park properties. Based on the amount of dog waste bags distributed, it is estimated that approximately 90,000 pounds of dog waste were collected for proper disposal that would have otherwise impacted stormwater runoff.

Nashville Planning Department:

Nashville's Planning Department focuses on sustainable development as described in the Community Character Manual, which encourages sustainable development and preservation in Nashville/Davidson County's fourteen community plans that guide future land use entitlements and infrastructure decisions. A foundational principle of the Community Character Manual is the commitment to create sustainable communities through sustainable development. Key strategies include actions to address each property's unique location and geographic features while avoiding sensitive environmental features. This benefits the community by protecting water quality as well as reducing the impact of development on surrounding infrastructure and the community through the use of best practices in stormwater and wastewater management. In addition, the Community Character Manual includes objectives of the EPA and Metro Nashville's Stormwater Management Program, such as incorporating green infrastructure, protecting steep slopes and headwater areas, minimizing and/or recovering floodplain loss, and retaining or re-creating natural stream buffers. The Community Character Manual also includes a section of general principles which highlights the importance of minimizing the impact of development on the natural environment, especially air and water quality, and of integrating green space in developments for preservation, recreation, and healthy lifestyles.

In 2015, the Planning Department completed the city's update to Nashville's General Plan, which was created with city-wide community involvement and input. The process is referred to as NashvilleNext and is the vision and priorities for Nashville/Davidson County for the next 25 years. NashvilleNext includes a Growth & Preservation Concept Map that encourages additional development along the city's corridors and in mixed use centers, while preserving rural areas and areas of sensitive natural features.

One of the four foundations of the plan is a healthy environment. In addition, one of the seven principles in NashvilleNext is to champion the environment. NashvilleNext discusses the importance of how we as a city:

- Build a community founded on land and water conservation, preservation of sensitive environmental conditions, and sustainable development practices.
- Promote efficient transportation and well-designed neighborhoods to achieve healthy living, preserve the natural environment, and encourage resiliency and safety in the face of natural and manmade disasters.
- Sustain the ecological function, resource value, and character of sensitive environmental and rural lands.
- Bring nature into the city through parks, greenways, a healthy urban forest, and clean streams, creeks and rivers.
- Leave future generations an environment that is healthier than today's.

On a day-to-day basis, having quality natural areas betters the quality of life for people, plants, and animals. Nashville's current and projected population growth could degrade the current quality of life and jeopardize Nashville's natural and built environment. In addition to the pressure of sheer growth, demographic changes—such as the growth of Baby Boomer and Millennials seeking more compact, walkable communities and the increase of single-person households and different household



composition—will also drive new locations and forms of development in our communities. A renewed emphasis on public outreach, education, and personal responsibility will activate new stewardship to conserve energy, eliminate and reduce waste, preserve land, build high performance buildings, and create a culture of sustainability. Meanwhile, public policies, incentives, and private decision-making must provide a clear direction on what to preserve and how to build and grow our city in a more sustainable fashion than we do today. This will enable us to secure the best Nashville for current and future generations.

NashvilleNext contains seven plan elements. Nashville/Davidson County's natural resources area discussed in three elements—Natural Resources & Hazard Adaptation; Health, Livability & the Built Environment; and Land Use, Transportation & Infrastructure. Each element discusses goals, policies, and actions that guide Nashville's future. Relevant Element goals, policies, and actions include to:

- Conserve natural resources in order to mitigate floods and other natural hazards, ensure clean air and water, raise food locally, provide outdoor recreation, and preserve Nashville's culture and character.
- Invest in and increase Nashville's natural environment for beauty, biodiversity, recreation, food production, resiliency, and response to climate change through mitigation and adaptation strategies.
- Preserve Nashville's existing tree canopy, including urban trees, street trees, groves of mature trees, and larger tracts of forested lands.
- Enjoy (all communities) equally high levels of environmental protection, equitable access to nature, and opportunities to improve their health and quality of life.
- Conserve and efficiently use land, energy, water, and resources while reducing waste and pollution.
- Establish a wide-ranging green education campaign that focuses on the "why" and "how" for water conservation, energy efficiency and reductions, recycling and waste reduction, natural resources preservation, and outdoor activity.
- Ensure all communities have access to parks, green areas, cultural amenities, and recreation opportunities that support mental and physical well-being.
- Optimize sewer, water, stormwater, and other infrastructure within Nashville's centers and corridors to prepare for or coordinate with redevelopment. Use green infrastructure to reduce the need for upgrades and to improve streetscapes.
- Reduce the impact of construction on surrounding infrastructure and community through use of best practices in stormwater management, wastewater management, and reducing heat island effect and light pollution.
- Expand programs and institute more complete regulations to protect Nashville's sensitive environmental resources.

In 2021, the Planning Department began work on revising Second Avenue after the Christmas Day 2020 bombing as well as a visioning plan for the East Bank. Both areas are adjacent to the Cumberland River as it flows through Downtown Nashville. In previous decades, the Cumberland River has not been activated and incorporated into the city's vitality as it should be. Central to both these studies is activating our riverfront and highlighting the river, not only for the water functions it provides but also as an important component of our city's fabric and cultural resource, including stormwater absorption, green space, parks, greenways, and mobility options in crossing. In 2024, both Second Avenue and East Bank are in the implementation phase of coordinated development to bring the community visions to life and improve connections to the Cumberland River.

The Planning Department continues its collaboration with Metro Parks and Greenways and the Land Trust for Tennessee by identifying properties that would be good additions to Nashville's open space network. This includes properties that are important to preserve for headwater areas, for wildlife habitat, and for water management in flood-prone areas.

On a daily basis, the Planning Department meets with property owners and development professionals to discuss property ideas and projects. Potential projects affect watersheds, drainage and absorption



patterns, and our city’s numerous waterways. Planning staff discuss the importance of preserving sensitive environmental features and working within the natural features of each site and regarding them as community amenities, including features such as waterways, wet weather conveyances, drainage patterns, steep slopes, woodlands, riparian habitat, and mature trees. Where appropriate, Planning staff direct property owners and development professionals to continue those discussions with Metro Water Services and the Stormwater Division for additional guidance and ideas.

MWS Engineering Division (Clean Water Nashville)

The MWS Engineering Division and the Clean Water Nashville (CWN) program oversees the overall functionality of the sanitary sewer systems and have worked diligently to minimize the volume of unintentional discharges of sanitary sewer overflow material to the MS4 and community waterways. MWS has dramatically increased its involvement on projects to reduce overflows from both the Combined Sewer System (CSS) and the Separate Sewer System (SSS) over the last 15 years. In previous years, the Mayor and Council approved a sewer fee rate increase, which increased the funding to implement future large projects to keep up with the unprecedented population growth, while reducing the potential for sanitary sewer overflows. Table 3 lists the major projects completed by the MWS Overflow Abatement Program (OAP), which serves to greatly reduce discharges of sanitary waste to the MS4 or area streams. Table 4 provides a list of future projects that are planned to be completed in future reporting years depending on funding availability.

Table 3 – MWS Engineering Projects Constructed to Reduce Sanitary Overflows

Type of Projects	# of Projects	Miles of Sanitary Lines	Money Spent	Watersheds Where Work was Performed
Sewer Rehabilitation Projects in FY 2024	16	30.18	\$39,200,000	Browns Creek, Cumberland River, Davidson Branch, Dry Creek, Ewin Branch, Little Creek, Mill Creek, Percy Priest, Richland Creek, Sandy Creek, Sevenmile Creek, Stoner Creek, Stones River, Sugartree Creek, Vaughns Gap Branch, Whites Creek
Pump Station and Equalization Projects in FY 2024	2	N/A	\$2,600,000	Cumberland River, Davidson Branch, Gibson Creek
Sewer Line Replacements in FY 2024	4	0.72	\$11,600,000	Cumberland River, Hurricane Creek, Whites Creek
Total Completed Projects in FY 2024	6	4.82	\$4,300,000	Cumberland River, Browns Creek, Davidson Branch, Dry Creek, Gibson Creek, Little Creek, Loves Branch, Percy Priest



Table 4 – Future MWS Engineering Projects to Reduce Sanitary Overflows

Type of Projects	Miles of Sanitary Lines	Money Spent	Watersheds Performed
Central Wastewater Treatment Plant - Capacity Improvements and Combined Sewer Overflow (CSO) Reduction: The design process for improvements to the CWWTP for Optimization, CSO reduction, and other improvements began with the selection of two teams for Planning and Design and engagement of a Construction Manager at Risk. Design began in June 2017 and concluded in FY2020. Construction began in July 2020 and will conclude in FY2025.	N/A	\$365M	Cumberland River
Annual Rehabilitation - 2023: This project was developed to renew aging sewer infrastructure and address overflows by reducing the amount of rainfall that can enter the system through defects. Construction is anticipated to begin in FY2025.	TBD	\$5.7M	Ewing Creek, Little Creek, Whites Creek
Cleeces Ferry Rehabilitation - Area 2: This project was developed to renew aging sewer infrastructure and address overflows by reducing the amount of rainfall that can enter the system through defects. Construction is anticipated to begin in FY2026.	4.9 miles	\$7.1M	Cumberland River
Hidden Acres Pump Station Upgrades: This project was developed to upgrade the Hidden Acres pump station to address overflows by increasing system capacity. Design will continue through FY2025 with construction anticipated to begin in late FY2025.	NA	\$7.3M	Cumberland River
Hopedale Rehabilitation: This project was developed to renew aging sewer infrastructure and address overflows by reducing the amount of rainfall that can enter the system through defects. Construction is anticipated to begin in FY2026.	5.4 miles	\$5.7M	Sevenmile Creek
Loves Branch Interim Improvements: This project was developed to modify the Loves Branch pump station to address overflows by increasing system capacity. Construction anticipated to begin in late FY2025.	NA	\$1.7M	Cumberland River, Loves Branch
Mill Creek - Collins Creek Rehabilitation - Area 1: This project was developed to renew aging sewer infrastructure and address downstream overflows by reducing the amount of rainfall that can enter the system through defects. Construction is anticipated to begin in FY2025.	3.6 miles	\$7.3M	Collins Creek, Mill Creek
River Drive Rehabilitation: This project was developed to renew aging sewer infrastructure and address overflows by reducing the amount of rainfall that can enter the system through defects. Construction is anticipated to begin in FY2025.	5.4 miles	\$5.1M	Cumberland River
Sewer Separations: These projects were developed to eliminate the Boscobel, Benedict & Crutcher, and Schrader combined sewer overflows by providing separate pipe systems for sanitary sewer flows and stormwater flows, as opposed to the current combined system which conveys both in a single pipe network. Approximately 950 total acres are targeted for sewer separation. Additional infrastructure improvements, such as water distribution improvements, may also be conducted as part of this work.	TBD	\$213M	Cumberland River
Town Village Pump Station Upgrades: This project was developed to upgrade the Town Village pump station to address overflows by increasing system capacity. Design will continue through FY2024 with construction being following easement acquisition.	NA	\$14.2M	Percy Priest
Vandiver Pump Station Upgrades: This project was developed to address overflows by increasing the capacity of the Vandiver pump station and routing its force main directly to the Dry Creek Water Reclamation Facility. Construction anticipated to begin in FY2026.	NA	\$30.9M	Cumberland River



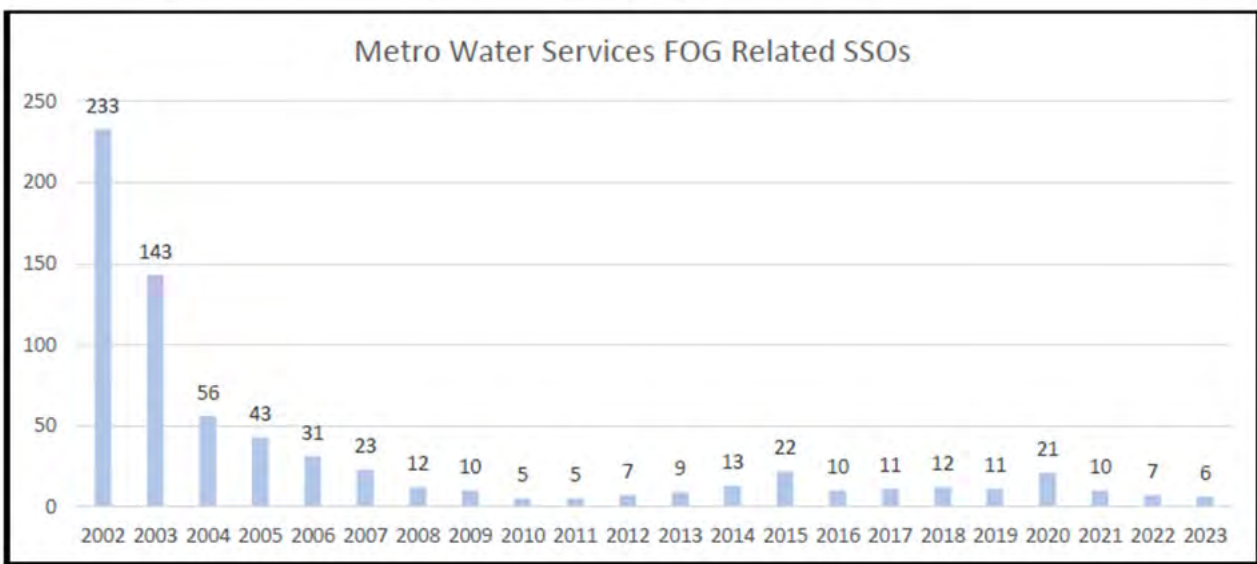
MWS System Services Division

The Metro Water Services System Services Division (SSD) and its contractors continue to inspect and clean sewers to assess conditions and prevent potential overflows. In FY24, SSD and contractors inspected with Closed Circuit TV (CCTV) approximately 1,499,833 linear feet and cleaned approximately 543,953 linear feet of Metro sewer line. During FY24, SSD continuously reviewed information from CCTV sewer inspection reports that indicated sewer problems with grease or roots. In some instances, letters were sent out to notify customers of roots or grease in their private service lines or main lines and recommend corrective actions to prevent private sewer overflows. The estimated/reported MWS sewer overflows for FY24 are depicted in Table 7H.5 within Section 3 of this report.

MWS Environmental Compliance Section

The MWS Environmental Compliance Section proactively inspects grease control equipment at food service establishments to ensure they are being maintained appropriately and functioning to prevent Fats, Oils, and Grease (FOG) from discharging to the sanitary sewer system. In the calendar year of 2023, MWS issued 168 Noncompliance Notifications to food service establishments for a variety of discovered failures in the grease control equipment that, if left uncorrected, could cause Sanitary Sewer Overflows (SSOs) to the MS4.

When FOG is identified as the primary cause of an SSO, Metro Water Services responds by investigating the possible FOG sources and issuing enforcement action notifications as necessary to prevent any future SSO events. For the year 2022, there were 15 SSOs identified as FOG related in which MWS Environmental Compliance performed follow-up coordination and education with the facilities or residences that could have been possible contributors. From the follow-up investigations, only 6 of the SSOs were confirmed to be caused by FOG. In 2023, there were 1,525 FOG educational handouts distributed. Metro Water Services Environmental Compliance personnel, or their FOG program contractor, meet with apartment, condominium, or duplex managers or owners regarding any FOG blockages and SSO problems that occur downstream from their facilities. In addition, MWS Environmental Compliance alerts MWS NPDES staff when issues are found during inspections that may be resulting in impacts to stormwater runoff. As a result of MWS Environmental Compliance efforts, FOG caused SSOs have been dramatically reduced over the years.



2.0 MS4 Program Annual Report Form Required By TDEC



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
TNS068047

Municipal Separate Storm Sewer System (MS4) Annual Report

1. MS4 Information

Nashville/Davidson County Municipal Separate Storm Sewer System (No. TNS068047)

Name of MS4

Michael Hunt/Josh Hayes

Name of Contact Person

615-880-2420

Telephone (including area code)

1607 County Hospital Rd

Mailing Address

Nashville

TN

37218

City

State

ZIP code

What is the current population of your MS4? *Approximately 700,000*

What is the reporting period for this annual report? *The reporting period for this Annual report is from 07/01/2023 to 06/30/2024, which is the 13th reporting period under the current permit. This Annual Report coincides with Metro's Fiscal Year 2024 (FY24) activities. This annual report period took place after the permit's expiration date, which has been administratively extended for Metro to continue to perform all MS4 Permit activities detailed within the permit.*

2. Protection of State or Federally Listed Species

A. Do any of the MS4 discharges or discharge-related activities likely jeopardize state or federally listed species Yes No

B. Please attach the determination of the effect of the MS4 discharges on state or federally listed species per subpart *Endangered Species Assessment included in Attachment A.*

3. Water Quality Priorities

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

B. If yes, identify each impaired water, the impairment(s), whether a TMDL has been approved by EPA for each, and whether the TMDL identifies your MS4 as a source of the impairment (See below Checklist). *The below list represents the approved 2024 list.*

Impaired Water	Impairment	Approved TMDL	MS4 Assigned to WLA
East Fork Hamilton Creek (TN05130203-539-1000)	Habitat Alteration, Alteration in stream-side or littoral veg. cover, Siltation	Yes X No	Yes X No
West Fork Hamilton Creek (TN05130203-539-1000)	Habitat Alteration, Siltation	Yes X No	Yes X No
Suggs Creek (TN05130203-232-1000)	Siltation, Nutrients	Yes X No	Yes X No
McCrary Creek (TN05130203-001-0150)	Alteration in stream-side or littoral veg. cover, Nutrients	X Yes No	X Yes No
McCrary Creek (TN05130203-001-0100)	<i>E. coli</i> , Alteration in stream-side or littoral veg. cover, Nutrients, Siltation	X Yes No	X Yes No
Unnamed Trib. to Stoners Creek (TN05130203-035-0400)	Siltation	X Yes No	X Yes No
Stoners Creek (TN05130203-035-1000)	<i>E. coli</i> , Siltation	X Yes No	X Yes No
Stoners Creek (TN05130203-035-2000)	<i>E. coli</i>	Yes X No	Yes X No
Stones River (TN05130203001-1000)	Low DO, Hydrogen Sulfide, Flow Alteration	X Yes No	X Yes No
Scotts Creek (TN051302 03-035-0100)	<i>E. coli</i> , Total Phosphorus, Nutrients, Siltation	Yes X No	Yes X No
Dry Fork Creek (TN05130203-035-0300)	Siltation	Yes X No	Yes X No
West Branch Hurricane Creek (TN05130203-036-0200)	Nutrients, Siltation	X Yes No	X Yes No
Hurricane Creek (TN05130203-036-1000)	<i>E. coli</i> , Siltation, Nutrients,	X Yes No	X Yes No
Mill Creek (TN05130202-007-5000)	Siltation, Nutrients, Low DO	X Yes No	X Yes No
Pavillion Branch (TN05130202007-1500)	<i>E. coli</i> , Other Anthropogenic Habitat Alteration	X Yes No	X Yes No
Percy Priest Reservoir (TN05130203003-2000)	Phosphorus, Total (Threatened)	Yes X No	Yes X No
Holt Creek (TN05130202-007-1100)	<i>E. coli</i> , Nutrients	X Yes No	X Yes No

Impaired Water	Impairment	Approved TMDL	MS4 Assigned to WLA
Owl Creek (TN05130202-007-0900)	Alteration in stream-side or littoral veg. cover, Nutrients	Yes X No	Yes X No
Indian Creek (TN05130202-007-0800)	<i>E. coli</i> , Nutrients, Siltation	X Yes No	X Yes No
Turkey Creek (TN05130202-007-0700)	<i>E. coli</i>	X Yes No	X Yes No
Collins Creek (TN05130202-007-0600)	Alteration in stream-side or littoral veg. cover, Siltation	Yes X No	Yes X No
Whittemore Branch (TN05130202-007-1200)	<i>E. coli</i> , Habitat Alteration	X Yes No	X Yes No
Mill Creek (TN05130202-007-3000)	Siltation, Nutrients, Low DO, <i>E. coli</i>	Yes X No	Yes X No
Sorghum Branch (TN05130202-007-1300)	Habitat Alteration, Siltation, <i>E. coli</i>	X Yes No	X Yes No
Cathy Jo (TN05130202-007-1490)	<i>E. coli</i> , Nitrate+Nitrite, Total Phosphorus, Other Anthropogenic substrate alterations, Siltation	X Yes No	X Yes No
Shasta Branch (TN05130202-007-1410)	<i>E. coli</i> , Other Anthropogenic substrate alterations	X Yes No	X Yes No
Sevenmile Creek (TN05130202-007-1450)	<i>E. coli</i> , Nutrients	X Yes No	X Yes No
Sevenmile Creek (TN05130202-007-1400)	<i>E. coli</i> , Other Anthropogenic Habitat Alteration, Nutrients, Low DO	X Yes No	X Yes No
Finley Branch (TN05130202-007-0300)	<i>E. coli</i> , Other Anthropogenic Habitat Alteration, Nutrients, Sedimentation	X Yes No	X Yes No
Unnamed Trib to Mill Creek (TN05130202007-0300)	Alteration in Stream-side or Littoral Vegetative Cover	Yes X No	Yes X No



Impaired Water	Impairment	Approved TMDL	MS4 Assigned to WLA
Mill Creek (TN05130202-007-2000)	Siltation, Nutrients, Low DO, <i>E. coli</i>	X Yes No	X Yes No
Sims Branch (TN05130202-007-0150)	Other Anthropogenic Habitat Alteration, Low DO, Propylene Glycol	Yes X No	Yes X No
Sims Branch (TN05130202-007-0100)	<i>E. coli</i> , Other Anthropogenic Habitat Alteration, Nutrients, Low DO	X Yes No	X Yes No
Mill Creek (TN05130202-007-1000)	<i>E. coli</i> , Siltation, Total Phosphorus, Low DO	X Yes No	X Yes No
Manskers Creek (TN05130202-220-2000)	<i>E. coli</i> , Siltation, Low DO, Alteration in Streamside or Littoral Vegetative Cover	X Yes No	X Yes No
Lumsley Fork (TN05130202-220-0100)	<i>E. coli</i> , Alteration in Streamside or Littoral Vegetative Cover	X Yes No	X Yes No
Manskers Creek (TN05130202-220-1000)	<i>E. coli</i> , Siltation, Alteration in Streamside or Littoral Vegetative Cover	X Yes No	X Yes No
Unnamed Trib. to Walkers Creek (TN05130202-220-1000)	Flow Alteration	Yes X No	Yes X No
Walkers Creek (TN0513020220-0100)	<i>E. coli</i> , Alteration in Streamside or Littoral Vegetative Cover	X Yes No	X Yes No
West Fork Browns Creek (TN05130202-023-0300)	<i>E. coli</i> , Nutrients, Sedimentation, Other Anthropogenic Habitat Alterations	X Yes No	X Yes No
Middle Fork Browns Creek (TN05130202-023-0200)	<i>E. coli</i> , Other Anthropogenic Habitat Alterations, Nutrients	X Yes No	X Yes No
East Fork Browns Creek (TN05130202-023-0100)	<i>E. coli</i> , Other Anthropogenic Habitat Alterations, Nutrients, Sedimentation, Oil & Grease	X Yes No	X Yes No



Impaired Water	Impairment	Approved TMDL		MS4 Assigned to WLA	
		Yes	No	Yes	No
Browns Creek (TN05130202-023-1000)	<i>E. coli</i> , Other Anthropogenic Habitat Alterations, Nutrients, Sedimentation, Oil & Grease	X		X	
Browns Creek (TN05130202-023-2000)	<i>E. coli</i> , Other Anthropogenic Habitat Alterations, Nutrients, Oil & Grease	X		X	
Richland Creek (TN05130202-314-3000)	<i>E. Coli</i> , Other Anthropogenic Habitat Alterations, Nutrients	X		X	
Vaughns Gap Branch (TN05130202-314-0750)	<i>E. coli</i> , Other Anthropogenic Habitat Alterations	X		X	
Vaughns Gap Branch (TN05130202-314-0700)	<i>E. coli</i> , Other Anthropogenic Habitat Alterations, Total Phosphorus, Nitrite+Nitrate	X		X	
Jocelyn Hollow Branch (TN05130202-314-0800)	<i>E. coli</i> , Nutrients, Other Anthropogenic Habitat Alterations	X		X	
Richland Creek (TN05130202-314-2000)	<i>E. Coli</i> Other Anthropogenic Habitat Alterations, Nutrients	X		X	
Sugartree Creek (TN05130202-314-0400)	<i>E. coli</i> , Other Anthropogenic Habitat Alterations, Nutrients, Low DO	X		X	
Bosley Springs Branch (TN05130202-314-0300)	<i>E. coli</i> , Other Anthropogenic Habitat Alterations, Nutrients	X		X	
Richland Creek (TN05130202-314-1000)	Other Anthropogenic Habitat Alterations, Nutrients, <i>E. coli</i> , Siltation	X		X	
Cooper Creek (TN05130202-209-1000)	<i>E. coli</i> , Other Anthropogenic Habitat Alterations	X		X	
Pond Creek (TN05130202041-1000)	Alteration in Streamside or Littoral Vegetative Cover	Yes	X No	Yes	X No



Impaired Water	Impairment	Approved TMDL		MS4 Assigned to WLA	
		Yes	X No	Yes	X No
Ewing Creek (TN05130202-010-0900)	<i>E. coli</i> , Other Anthropogenic Habitat Alterations, Siltation, Nutrients	Yes	X No	Yes	X No
Drakes Branch (TN05130202-010-0200)	<i>E. coli</i> , siltation	X Yes	No	X Yes	No
Whites Creek (TN05130202-010-1000)	Nutrients	Yes	X No	Yes	X No
Gibson Creek (TN05130202-212-1000)	<i>E. Coli</i> , Other Anthropogenic Habitat Alterations, Nutrients	X Yes	No	X Yes	No
Neelys Branch (TN05130202-212-0100)	<i>E. coli</i> , Alteration in stream-side or littoral vegetative cover, Other Anthropogenic Habitat Alterations	X Yes	No	X Yes	No
Dry Creek (TN05130202-027-2000)	Other Anthropogenic Habitat Alterations, <i>E.coli</i>	X Yes	No	X Yes	No
Dry Creek (TN05130202-027-1000)	<i>E. coli</i> , Other Anthropogenic Habitat Alterations	X Yes	No	X Yes	No
Loves Branch (TN05130202-211-1000)	Other Anthropogenic Habitat Alterations	Yes	X No	Yes	X No
Pages Branch (TN05130202-202-1000)	<i>E. coli</i> , Other Anthropogenic Habitat Alterations	X Yes	No	X Yes	No
Davidson Branch (TN05130202-001T-0700)	<i>E. coli</i> , Other Habitat Alteration	X Yes	No	X Yes	No
Unnamed Trib. to Cheatham Reservoir (TN05130202-001T-0700)	Iron, TDS	Yes	X No	Yes	X No
Cheatham Reservoir (TN05130202-001-1000)	PCBs in Fish Tissue	Yes	X No	Yes	X No
Cheatham Reservoir (TN05130202-001-2000)	PCBs in Fish Tissue	Yes	X No	Yes	X No
Cheatham Reservoir (TN05130202-001-3000)	<i>E. coli</i> , PCBs in Fish Tissue	X Yes	No	X Yes	No
Cheatham Reservoir (TN05130202-001-4000)	PCBs in Fish Tissue	Yes	X No	Yes	X No



Impaired Water	Impairment	Approved TMDL	MS4 Assigned to WLA
Ceatham Reservoir (TN05130202-001-5000)	PCBs in Fish Tissue	Yes X No	Yes X No
Overall Creek (TN05130202-001T-0900)	<i>E. coli</i> , Siltation, Flow Alteration	X Yes No	X Yes No
Otter Creek (TN05130204-021-0100)	Total Phosphorus, Alteration in stream-side or littoral vegetative cover, Siltation, Flow Alteration	X Yes No	X Yes No
Little Harpeth River (TN05130204-021-1000)	Alteration in stream-side or littoral vegetative cover, Siltation, <i>E. coli</i>	X Yes No	X Yes No
Harpeth River (TN05130204-009-2000)	Total Phosphorus, Low DO	Yes X No	X Yes No
Trace Creek (TN05130204-009-0900)	Physical Substrate Habitat Alteration, Siltation	X Yes No	X Yes No
Flat Creek (TN05130204-009-0400)	Alteration in stream-side or littoral vegetative cover, Siltation	Yes X No	Yes X No
Unnamed Trib. to South Harpeth (TN05130204-010-0200)	Flow Alteration	Yes X No	Yes X No
Unnamed Trib. to South Harpeth (TN05130204-010-0300)	Alteration in stream-side or littoral vegetative cover	Yes X No	Yes X No
Harpeth River (TN05130204-009-3000)	Total Phosphorus, Low DO	Yes X No	Yes X No
Beech Creek (TN05130204-009-1100)	Alteration in stream-side or littoral vegetative cover, Siltation	X Yes No	X Yes No

C. What specific sources of these pollutants of concern are you targeting?

Pathogens (pet waste, sanitary sewer leaks), siltation (construction sites), oil & grease (industries/commercial sites), and nutrients (pet waste, sanitary sewer leaks, fertilizer application)

D. Do you have discharges to any Exceptional TN Waters (ETWs) or Outstanding National Resource Waters (ONRWs)?

A large portion of Metro drains to Mill Creek, which is listed as an ETW due to the presence of the federally endangered Nashville Crayfish (Faxonius shoupi). Overall, there are 20 individual stream segments within Davidson County listed as either Exceptional TN Waters or Outstanding National Resource Waters, represented by the below table.

X Yes No

Waterbody	Description	Basis for Inclusion
Brentwood Branch	From Sevenmile Creek to origin including tributaries.	Federal endangered Nashville Crayfish.
Collins Creek	From Mill Creek to origin including all tributaries unless listed non-exceptional.	Federal endangered Nashville Crayfish.
Indian Creek	From Mill Creek to origin including tributaries.	Federal endangered Nashville Crayfish
Sevenmile Creek	From Mill Creek to origin including tributaries.	Federal endangered Nashville Crayfish.
Sims Branch	From Mill Creek to origin including tributaries except Merten's Hole (unnamed tributary) on Nashville airport property	Federal endangered Nashville Crayfish.
Sorghum Branch	From Mill Creek to origin including tributaries.	Federal endangered Nashville Crayfish.
Whittemore Branch	From Mill Creek to origin including tributaries.	Federal endangered Nashville Crayfish.
Couchville Lake	Portion in Long Hunter SP.	Long Hunter State Park
Otter Creek including Radnor Lake	Portion in Radnor Lake State Natural Area including Radnor Lake and tributaries within the state natural area.	Radnor Lake State Natural Area. State endangered American Water-pennywort and White Water-buttercup, State threatened Alligator Snapping Turtle.
Turkey Creek	From Mill Creek to origin including tributaries.	Federal endangered Nashville Crayfish.
Ewing Creek	Ewing Creek including unnamed tributaries and associated wetlands from Hillside Road to origin.	State endangered streamside salamander
Sugartree Creek	Sugartree Creek from confluence with Richland Creek to origin including tributaries.	State endangered streamside salamander and Species of Concern water stitchwort.
Cumberland River (Cheatham Reservoir) unnamed tributary wetland	Wetland associated with unnamed tributary (known as Crooked Creek) to Cumberland River (Cheatham Reservoir) near RM 210	The wetland is an inherently valuable resource. The wetland is over 10 acres with multiple types of wetland classes and plant communities in the flood plain of the Cumberland River in Nashville. The size of the wetland is very significant for an urban location where few large, high-quality wetlands remain. The wetland provides significant habitat for migratory birds especially waterfowl. Of equal importance is its function in improvement of storm water quality and attenuation of regional storm water flows prior to entering the Cumberland River.
Little Marrowbone Creek including unnamed tributaries within Beaman Park Designated State Natural Area.	Portions of Little Marrowbone Creek and unnamed tributaries within Beaman Park Designated State Natural Area.	Beaman Park Designated State Natural Area
Bull Run	Portion with Beaman Park Designated State Natural Area.	Beaman Park State Designated Natural Area.
Pages Branch Unnamed Tributaries	From just upstream I-65/I-24 to origin including all tributaries.	State endangered streamside salamander
Ewing Creek unnamed tributary	Unnamed tributary from Ewing Creek to origin including tributaries.	State endangered streamside salamander
Ewing Creek unnamed tributary	Unnamed tributary from Ewing Creek to origin including tributaries.	State endangered streamside salamander
Dry Creek Unnamed Tributary	Unnamed tributary from Dry Creek near Myatt Drive to origin including tributaries.	State endangered streamside salamander
Little Harpeth River Unnamed Tributary	From Hill Forest State Natural Area boundary to origin including any unnamed tributaries.	Hill Forest State Natural Area

- E. Are you implementing additional specific provisions to ensure the continued integrity of ETWs or ONRWS located within your jurisdiction? Yes No
 N/A

Specific public education activities have been implemented in the past for certain residential areas that drain to the Harpeth River and commercial/industrial areas that drain to Mill Creek. Nutrient and pathogen reduction education has been and will be focused on that area. The Stormwater Maintenance Sections and the MWS Sanitary Sewer Division have been trained on limiting in-creek excavation work within the Mill Creek watershed. Metro also implements a robust construction oversight program to prevent excess sediment from draining to these high valued waterways.

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?

Pathogens (pet waste), siltation (construction sites), nutrients (residential lawn maintenance & pet waste), and oil & grease (commercial/industrial facilities).

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

During the reporting period of FY24, NPDES performed many activities to increase public education and awareness for many diverse stormwater issues, all of which are detailed in Section 4 of this document. In particular, NPDES continued the expanded use of social media platforms to educate a growing number of citizens and stakeholders about stormwater issues and pollution. Four main social media platforms (Facebook, Twitter, NextDoor, and Instagram) were utilized to reach local citizens. Typical content of the posts focused on drawing the connection of storm drains to our local water resources to encourage the general public to work towards reducing pollution. Various types of visual media were used to depict the kinds of pollutants that can end up in our streams and how Metro residents can do their part to reduce it. Pollutants that were specifically targeted included lawn chemicals, lawn wastes, pet waste, and general trash. During FY24, MWS issued a total of 182 stormwater-related posts that reached 164,508 viewers. NPDES also began analyzing the engagement numbers to determine the effectiveness of various platforms and posts. NPDES also continued to perform specific stormwater educational events, such as participating in citywide events with educational booths, presenting on stormwater topics at various venues, distributing neighborhood-specific door hangers, sending out email notices, etc. During FY24, NPDES reached an estimated audience size of 6,288 with these direct educational techniques.

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?

Metro has a Stormwater Management Commission (SWMC) that reviews cases where development/redevelopment activities are unable to meet specific provisions of the stormwater regulations and hears appeals of violation decisions by the Director's office. The members of the commission are appointed by the Mayor's office. The SWMC monthly meetings are televised on the Metro Nashville Network which provides visibility of Metro stormwater matters as well as public education.

X Yes No

E. Provide a summary of all public meetings required by the permit.

Metro has various agencies that perform projects involving public meetings. For example, the MWS Stormwater Remedial Maintenance Section holds meetings for certain large-scale maintenance projects on an as-needed basis. MWS maintains a webpage for all large Metro construction projects. The Metro General Services Department holds various public meetings for large Metro Development activities. In addition, the Metro Planning Commission provides numerous opportunities designed to receive feedback from the general public or other stakeholders on a routine basis. Information on public meeting opportunities can be found at the following website link:

<https://www.nashville.gov/departments/water/news>

<https://www.nashville.gov/departments/water/projects>

<https://www.nashville.gov/departments/planning/boards/planning-commission/meetings>

MWS Stormwater also specifically facilitates monthly meetings with the Stormwater Management Commission for sites appealing specific stormwater regulations. These meetings are available for the public to view and/or attend and comment and are advertised on the internet and at the property in question with a standard public notification sign. During the reporting period, Metro Stormwater facilitated 12 separate SWMC meetings. More information about the SWMC process as well as meeting minutes from each meeting is available at the following website:

<https://www.nashville.gov/departments/water/boards/stormwater-management-commission/meetings>



5. Codes and Ordinances Review and Update

A. Is a completed copy of the EPA Water Quality Scorecard submitted with this report? *A copy of the scorecard was submitted in the FY12 annual report (First Year of this current permit cycle).* Yes No

B. Include status of implementation of code, ordinance and/or policy revisions associated with permanent Stormwater management.

MWS Stormwater has already developed and revised a new volume of the Stormwater Management Manual (SWMM) (Volume 5) dedicated to promoting/incentivizing the use of Low Impact Development (LID) techniques for post development stormwater management. In 2007, Metro was promoting/incentivizing the use of runoff reduction/100% pollution reduction practices, but still allowed development sites to utilize standard stormwater quality treatment practices of 80% total suspended solids (TSS) removal. In February of 2016, Metro revised the SWMM to require all development activities to pursue runoff reduction practices for stormwater quality treatment, unless certain site constraints were demonstrated to be present (i.e. high ground water table, clay soils, karst areas, brown fields, etc.). MWS Stormwater has developed a waiver process for sites that due to site limitations are requesting to revert to the standard water quality treatment practices. At the end of FY24, MWS had received 626 LID Waiver requests. As a result, a total of 491 of the requests were eventually approved (some with conditions). During previous years, MWS began revising the entire SWMM to improve the overall stormwater regulations of development, including updating some of the LID controls and requirements. The update to the SWMM became effective in November 2021, which is still in effect. MWS is planning to initiate the SWMM update process in FY25

6. Construction

- A. Do you have an ordinance or adopted policies stipulating:
- Erosion and sediment control requirements? Yes No
 - Other construction waste control requirements? Yes No
 - Requirement to submit construction plans for review? Yes No
 - MS4 enforcement authority? Yes No
 - Have you developed written procedures for site plan review and approval? Yes No
 - Do the written procedures for site plan review and approval include an evaluation of plan completeness and overall BMP effectiveness? Yes No



Have you developed written procedures for managing public input on projects?

Yes No
(See Notes)

Metro Nashville manages public input in a variety of different ways throughout various departments. There are no written procedures for managing the public feedback as there are numerous departments involved with various projects. Please refer to the above section on public engagement on stormwater development projects. MWS also publishes a list of Metro construction projects that have received coverage under a TDEC Construction General Permit once a month, which is posted on the following Metro web page:

<https://www.nashville.gov/departments/water/news/public-notice-metro-construction-projects-within-davidson-county-10> .

Over previous years, Metro Nashville has also implemented an online forum called hubNashville for citizens to provide feedback or submit complaints, which can also be utilized to comment on Metro construction projects. Below is a link to hubNashville: https://hub.nashville.gov/s/?language=en_US

Have you developed written procedures for site inspection and enforcement?

Yes No

Have all MS4 Inspectors maintained certification under the [Tennessee Fundamentals of Erosion Prevention and Sediment Control](#), Level 1?

Yes No

Have all MS4 site plan reviewers maintained certification under the [Tennessee Fundamentals of Erosion Prevention and Sediment Control](#), Level 2?

Yes No

Most of the engineers have taken the Level 2 training, however, a few of the newer engineers who have not taken the training have a Professional Engineer's (P.E) license, which also satisfies the MS4 permit requirement.

B. How many active construction sites disturbing at least one acre were there in your jurisdiction this reporting period?

Refer to attached Table 6B.1. In FY24, there were 240 grading permits issued, while 295 grading permit sites were completed (signed-off). Not all of the Grading Permits were for sites disturbing over an acre (requiring a TDEC General Construction Stormwater Permit). All sites that disturb over an acre are required to also obtain a grading permit and must have coverage under the State's General Construction Stormwater Permit prior to receiving a Metro Grading Permit. At the end of FY24, there were 923 active grading permits as Metro requires permits for grading over 10,000 square feet (and certain other criteria per Chapter 3 of Volume 1 of the Metro SWMM).

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

NPDES Section performed 9,373 construction-related inspections in FY24. The inspections were performed on Grading Permit sites under construction and complaint inspections of construction activity without permits. In addition, MWS Stormwater also provides oversight and guidance to small residential construction activities usually with total disturbed area of less than 10,000 square feet (not requiring a standard Metro grading permit). Refer to the attached Table 6C.1 for small construction project oversight numbers.

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

Monthly

NPDES inspects all active construction sites at least once per month. Some sites become inactive and have no exposed soils. These sites are inspected on a less frequent basis (until the site reaches final closure).

E. Do you prioritize certain construction sites for more frequent inspections?

X Yes No

If Yes, based on what criteria?

*All **active** permit sites with active grading are prioritized to receive inspections at least once per month. This meets and exceeds the permit requirement to perform monthly inspections of 303(d) listed siltation-impaired streams. Some sites may be awaiting final as-built reviews but are relatively stable. These sites do not receive the same level of priority inspections.*

7. Illicit Discharge Elimination

A. Have you completed a map of all known outfalls and receiving waters of your storm sewer system?

X Yes No

B. Have you completed a map of all known storm drain pipes of storm sewer system?

X Yes No



C. How many outfalls have you identified in your system?

Metro has migrated several iterations of mapping updates of Stormwater infrastructure into our Metro Geographic Information System (GIS). During previous reporting periods, MWS Stormwater's contractor completed a project to re-delineate the outfall layer (grid by grid) with the focus of verifying "actual" MS4 permitted outfalls. While the focus was mapping MS4-permitted outfalls, NPDES also had the contractor create the following two outfall layers: 1) Sub-MS4 Outfalls – Outfalls within the MS4 system upstream of the discharge point to Waters of the State, but usually where two large systems combine; and 2) Private Outfalls – Point at which Stormwater from private properties drain to either Waters of the State or MS4. Currently there are 12,131 MS4-permitted Outfalls, 426 Sub-MS4 Outfalls, and 2,465 Private Outfalls mapped within Metro's GIS database. Please note that in determining the point at which MS4 outfalls drain to Waters of the State, NPDES had to assume the streams layer in GIS was an accurate representation of actual streams, even though the coverage is more of an estimate and has not been field-verified. Also, MWS Stormwater hired a contractor in previous permit years to begin collecting more-detailed information on storm drains in certain watersheds as part of the overall Master Planning efforts. As part of the project, the contractor is field inventorying all stormwater drains that includes collecting invert elevations so future flood modelling can be performed. The field inventory work for the Master Planning efforts continued during FY24 and will take several more years to complete.

D. How many of these outfalls have been screened for dry weather discharges?

In previous permit years, NPDES received approval from TDEC to implement a new form of field screening, where up to three commercial and industrial properties are screened within ½ mile grids for potential stormwater runoff issues such as exposed grease, waste materials, sediment, etc. Prior to this change, NPDES inspectors were required to look only at infrastructure points for potential illicit discharges, which was very time consuming and produced very few pollution reduction results. Refer to Attachment B for complete coordination on modifications to the field screening program.

During FY24, NPDES screened 153 separate ½ mile grids for potential stormwater runoff issues, which included looking at 470 separate business practices and/or infrastructure points. Most of these field screening points were re-inspections of grids/businesses previous screened.

E. How many of these have been screened more than once?

None are required to be screened twice per our new permit. However, if a non-stormwater/"illicit" flow is suspected, NPDES initiates an IDDE investigation that is documented within the Cityworks database until the illicit discharge is eliminated. When NPDES inspectors find site management issues, they initiate education actions with site management and usually return within a few days to determine if corrective actions have taken place. At the end of FY23, all of the commercial/industrial ½ mile grids were screened once. In FY24, NPDES began re-screening the grids, prioritizing the hot areas first.

F. What is your frequency for screening outfalls for illicit discharges?

All 2,047 ¼ mile commercial and industrial-zoned grids were screened by the end of Year 5 of the MS4 permit (January 31, 2017). This requirement is no longer in effect with the approved modification to this program element per the administrative extension agreement. Despite this, NPDES is committed to continuing regular routine dry weather field screening practices, as the newly defined process has yielded very positive results. After year five of the permit, the field screening grid database was updated and NPDES began re-screening all the grids. NPDES completed a first screening of all these grids at the end of FY23 and began rescreening those same grids in FY24.

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)?

In FY24, there were 5 confirmed significant illicit discharges in which NPDES issued a Notice of Violation and associated administrative penalty to the property owner. In addition to the confirmed illicit discharges, NPDES initiated 165 separate (non-construction) new water quality investigations during FY24, most of which, originated from citizen complaints. Refer to Table 7H.1 for a complete listing of the 165 IDDE investigations initiated during FY24. There were also 6 separate after-hours spill response-specific investigations and 3 sanitary sewer-specific discharge investigations initiated by NPDES during the reporting period (refer to Tables 7H.2 and 7H.3 respectively.) Please note that some spills and sanitary sewer overflow response activities are logged as general water quality investigations. In addition to NPDES water quality-related investigations, the Metro Health Department investigates reports of failing septic sewer systems and coordinates with property owners to abate any confirmed failures. In FY24, there were 17 failing septic systems with sewage on the ground that were abated/repared due to the Health Department's coordination efforts. A listing of failing septic system investigations can be found in Table 7H.4.

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

All illicit discharge violations found during the reporting period were rectified swiftly and eliminated.

J. Do you have the authority to recover cost for addressing illicit discharges? X Yes No

We have appropriate language in our Code but have never pursued the option.

8. Stormwater Management for Municipal Operations

A. Have Stormwater pollution prevention plans (or an equivalent plan) been developed for Municipal operations:

NPDES developed a comprehensive Stormwater Management Plan (SWMP) in 2012, which was submitted in a previous annual report. The SWMP included site-specific Runoff Management Plans (RMPs) for key municipal Operations and Maintenance (O&M) facilities, which are plans equivalent to SWPPPs. Since the time the original SWMP and associated RMPs were developed, NPDES has developed additional RMPs for newly identified O&M facilities. Below is a list of current Metro operated O&M sites in which a SWPPP or RMP has been developed:

- *MWS Stormwater Maintenance Facility (County Hospital Road)*
- *Metro Transit Authority (Nestor Street) Bus Maintenance Shop*
- *Metro Transit Authority (Myatt Drive) Bus Maintenance Shop*
- *Metro Nashville Public Schools Bus Maintenance Shop*
- *Shelby Park Golf Course Maintenance Shop*
- *Ted Rhodes Golf Course Maintenance Shop*
- *Two Rivers Golf Course Maintenance Shop*
- *Harpeth Hills Golf Course Maintenance Shop*
- *Percy Warner Golf Course Maintenance Shop*
- *McCabe Golf Course Maintenance Shop*
- *Cedar Hill Park Maintenance Shop*
- *Warner Park Golf Course*
- *Cane Ridge Park Maintenance Shop*
- *NDOT Maintenance Facility (5th Street)*
- *Nashville Fairgrounds Facility*
- *Metro Police Department Impound Lot*

In FY24, NPDES continued to perform random audit inspections on some of the RMP facilities. Minor exposure issues were noted at some of the facilities, and NPDES coordinated with each of the site managers to ensure any necessary corrective actions were completed. Also, in FY24, NPDES developed the new Fairgrounds and Cane Ridge Park RMP to account for site/personnel changes since the original plans were developed.

All municipal parks, ball fields and other recreational facilities X Yes No

RMPs were developed for O&M facilities such as golf course and park maintenance facilities. RMPs were not developed for every ball field location.

All municipal turf grass/landscape management activities (See Note Above) X Yes No

All municipal vehicle fueling, operation and maintenance activities. X Yes No

As per the MS4 Permit, RMPs were created for Municipal O&M facilities, some of which include fueling stations. Some fueling sites are stand-alone with no other maintenance operations present, and RMPs were not necessary (although spill kits are at those locations).

All municipal maintenance yards. All O&M facilities located within the MS4. X Yes No

All municipal waste handling and disposal areas X Yes No

SWPPPs were created for the Central Wastewater Treatment Plant and the Dry Creek Wastewater Treatment Plant as they retained a Tennessee Multi-Sector Permit for Industrial Stormwater runoff. In previous permit years, MWS applied for and received no-exposure certification for the Central Wastewater Treatment Plant, due to some changing processes that have occurred over the years. As it currently stands, Dry Creek is the only wastewater treatment plant that is currently required to have TMSP coverage. Metro Nashville does not operate any large waste transfer facilities or transfer stations, as it contracts those services out to private companies. Metro does operate some recycling/waste collection facilities where residents can bring their waste to put in large compactor dumpsters, and NPDES has worked with Waste Services in the previous years to correct runoff issues and does routinely inspect these facilities for runoff issues..

B. Are Stormwater inspections conducted at these facilities? X Yes No

Each O&M facility where the RMPs were implemented requires on-site personnel to perform monthly grounds inspections. In FY24, NPDES personnel performed audit inspections of all the O&M facilities.

If Yes, at what frequency are inspections conducted? *See above answer*

C. Have standard operating procedures or BMPs been developed for all MS4 field activities? (e.g., road repairs, catch basin cleaning, landscape management, etc.) X Yes No

SOPs have been developed for most of the major O&M field activities. MWS posted all of the RMPs, individual water quality SOPs, and a general MS4 educational video to an internal Metro intranet/SharePoint web page for each O&M Department to train their own field staff.

D. Do you have a prioritization system for storm sewer system and permanent BMP inspections? X Yes No

In the first year of this permit cycle, NPDES submitted a BMP Maintenance Verification Plan to TDEC that outlined a multipronged strategy to ensure permanent Stormwater Control Measures (SCMs) are being properly maintained. The strategy varies according to which set of Metro's regulations the SCMs were constructed under. The plan includes some inspections by NPDES personnel as well as requiring owner/operators to perform their own inspections/maintenance annually. Since the original SCM maintenance verification plan was submitted to TDEC, NPDES has re-evaluated this process and has decided to dedicate a greater number of resources to ensuring the proper maintenance of these structures. NPDES found that there was very low participation in the owner self-inspection/reporting requirements for newly installed SCMs. In addition, NPDES discovered that some of the inspection and maintenance reports that were submitted were not accurate and lacking in content.

During previous permit years, NPDES expanded resources dedicated to SCM inspection and maintenance oversight. In FY24, NPDES maintained an average staff level dedicated to SCM inspection and maintenance oversight of 5 staff members (1 manager, 4 inspectors and 1 administrative support staff). Current organization of the SCM inspection and maintenance program is further explained in Section 1.3.1 of this document.

E. On average, how frequently are catch basins and other inline treatment systems inspected?

Varies depending on numbers of complaints or other maintenance tasks.

F. On average, how frequently are catch basins and other inline treatment systems cleaned out/maintained?

Frequency of cleanings depends on conditions. The Stormwater Maintenance Section has developed a rain route list of common stormwater infrastructure sites that clog with debris, leaves, gravel, and sediment on a frequent basis. Maintenance crews visit and clean out these sites and perform maintenance prior to many large rain events. Depicted within Table 8F.1 is a summary of some of the major routine maintenance activities performed on MS4 Stormwater infrastructure during FY24. It is estimated that approximately 7,991 cubic yards of material was removed from the MS4 ditches and culverts, approximately 265,941 pounds of material was removed from 29,549 inlets, and approximately 301,745 square feet of erosion control matting was deployed during the FY24 reporting period. In addition to performing routine maintenance and cleaning of stormwater infrastructure, the Nashville Department of Transportation (NDOT) also operates a preventative maintenance program by aggressively sweeping public "curb and gutter" streets. NDOT prioritizes certain streets for sweeping activities based on the accumulation of material on the street. Refer to Table 8F.2 for street sweeping collection numbers in FY24.

In addition to the routine maintenance activities such as inlet and pipe cleaning, MWS Stormwater also performs various large projects to correct neighborhood flooding issues. In previous reporting periods, NPDES coordinated with the MWS Stormwater Remedial Maintenance group to complete a water quality evaluation form for each large flood control project. As a result, engineers are being

asked to consider use of green infrastructure or other low impact design techniques. Based on the water quality evaluation sheets submitted, NPDES was able to estimate that the large flood control projects designed during FY24 would provide the following benefits to water quality.

- Redefining and stabilization of approximately 2,191 linear feet of open storm channel, and
- Removal of approximately 180 linear feet of concrete-lined ditches.

G. Have all applicable municipal employees received training, as identified in each of the following permit sections:

Illicit discharge detection and elimination

X Yes No

If Yes, identify the number of municipal employees trained.

Throughout the majority of FY24, the Permit Group section within NPDES had 6 - 7 people that were primarily dedicated to investigating and enforcing on illicit discharge issues. Training includes internal training from senior staff and the National Stormwater Center Certified Stormwater Inspector training program. In addition to the primary on-call personnel, there were 13 additional staff members within the NPDES office that could respond to complaints of illicit discharges. Note: NPDES has also worked with various MWS O&M sections to properly identify and report illicit discharges. Also, please note that staff levels can fluctuate each year due to staff attrition.

Construction site stormwater runoff control

X Yes No

If Yes, identify the number of municipal employees trained:

At the time this report was completed, there were 20 NPDES staff members that had adequate training (TDEC Level 1 EPSC Workshop) to respond to and inspect Stormwater runoff from construction activities. Eight of the employees are dedicated fulltime to inspecting development sites under construction. Note that staff levels can fluctuate each year based on staff attrition.

Permanent stormwater management in new development and redevelopment

X Yes No

If Yes, identify the number of municipal employees trained

During FY24, there was an average of 8 engineers employed within the MWS Development Services Section that perform some form of review and approval of the design of permanent stormwater management controls for grading permits. The current internal policy for the MWS Development Services is to require all review engineers to take the TDEC Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites at least once. In addition to the TDEC Level II training, all inspectors within the NPDES Section that perform inspections on SCMs go through the UT Water Research Center Stormwater Control Measures Inspection and Maintenance training and certification program.

Pollution prevention/good housekeeping for municipal operations

X Yes No

If Yes, identify the number of municipal employees trained:

In FY24, NPDES created an internal SharePoint website with newly updated training materials and Runoff Management Plans (RMPs) and coordinated with all the various departments' maintenance staff to ensure they viewed the training materials. Employee training sign-in sheets for all of these trainings are enclosed in Section 4.0 of this document. Well over 100 individual Metro Operation & Maintenance personnel received stormwater training in FY24.

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? Yes No

Maintenance of Stormwater management controls? Yes No

Retrofitting of existing BMPs with green infrastructure BMPs? Yes No

MWS Stormwater compiled a new volume to the Stormwater Management Manual (SWMM). Volume 5 (also referred to as the LID Manual) provides specifications for development or redevelopment sites to follow in installing “green” stormwater control measures. The requirements with this manual became mandatory in February 2016 for new development or significant redevelopment. Please note that some of the specifications with Volume 5 were updated in the latest updates to the overall SWMM, which went into effect in November 2021. NPDES will likely be initiating an update to the SWMM in FY25.

B. What is the threshold for new/redevelopment Stormwater plan review? (e.g., all projects, projects disturbing greater than one acre, etc.)

Metro actually has more stringent requirements for development than TDEC’s Construction General Permit. All development of redevelopment sites grading more than 10,000 square feet must obtain a Metro grading permit. In order to obtain a grading permit, engineered plans must be submitted to the Stormwater Development Review Section for review and approval per Metro’s stormwater regulations. All developments increasing the impervious footprint are required to install permanent stormwater treatment measures for water quality and quantity per Metro SWMM criteria.

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 3.2.5.2 and require that pre-development hydrology be met for:

Flow volumes (New LID Manual deals with reductions in site runoff 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.

<https://www.nashville.gov/Water-Services/Developers/Stormwater-Review/Stormwater-Management-Manual.aspx>

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

According to queries of Metro permit tracking database Cityworks, there were 2,085 plans submitted to the MWS Development Review Section during FY24. This number includes initial grading permit plans, re-submitted plans, as-built final submittals, etc. Refer to attached Table 9F.1 for the total number of plans reviewed by Stormwater Development Review staff in FY24.

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

According to queries of Metro permit tracking database Cityworks, there were 1,993 plans approved during FY24. This number includes initial grading permit submittals, final as-built signoffs, etc. Refer to Table 9F.1 for a complete listing. A better reflection of actual new development projects approved for construction would be the number of grading permits issued. In FY24, there were 240 grading permits issued.

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

There were an estimated 2,390 SCM structures inspected/reinspected by NPDES staff during FY24. This is an estimate based on database queries grading permit properties inspected as NPDES tracks inspections within the database based on individual site grading permit. This number of inspections also includes re-inspections of grading permit properties to verify that the necessary maintenance was performed after initial coordination with the site. Most properties have multiple SCMs; therefore, when a property is inspected or re-inspected, several SCM structures often get inspected.

How many were found to have inadequate maintenance?

Of the 2,390 SCM structures inspected by NPDES in FY24, inspectors issued 609 notices to properties that were found to have issues requiring moderate to major maintenance needs. These notices include verbal notices in person or over the phone, formal letters, and/or emails.

J. Of those, how many were notified and remedied within 30 days? (If window is different than 30 days, please specify)

While NPDES has numerous informal conversations with SCM owners about the maintenance status of their SCM(s), performing the necessary maintenance on SCM takes time and not all of the SCMs in need of maintenance were remedied within 30 days. A rough estimate would be around 50% of them were maintained within 30 days of the notice. NPDES performs follow-up compliance inspections when no response is received after an average of 90 days of the notices sent. There are many nuances involved in identifying responsible parties associated with residential "open space" SCMs. Some of these residential-owned structures can take several months to bring into compliance.

K. How many enforcement actions were taken that address inadequate maintenance?

In FY24, 11 Notices of Noncompliance (NONs) were issued to property owners for SCM maintenance issues, mostly involving sites that have made unauthorized alterations to the structures (i.e. modification of a small bioretention basin into a level, turfed back yard area).

L. Do you use an electronic tool (e.g., GIS, database, spreadsheet) to track post-construction BMPs, inspections and maintenance? Yes No

NPDES uses the Cityworks permitting database to track inspections, follow-up notifications, etc. The Cityworks database is a city-wide database that is used by all Metro departments to track permits ranging from plumbing permits to grading permits. The database tracks compliance by the property/parcel that the permit is tied to. MWS Stormwater NPDES also tracks each SCM structure within a GIS database, which is used to coordinate and plan inspections. All documentation notes involving inspection and maintenance records are recorded within the Cityworks database and is associated with the site's original grading permit.

M. Do all municipal departments and/or staff (as relevant) have access to this tracking system? *All departments and general public can access the locations of SCMs on the parcel viewer program on Nashville's Planning Department website.* X Yes No

N. Has the MS4 developed a program to allow for incentive standards for redeveloped sites? X Yes No

O. How many maintenance agreements has the MS4 approved during the reporting period? *Approximately 240, which is an assumed number based on the number of grading permits issued during FY23.*

10. Industrial and High-Risk Runoff

A. Has the MS4 developed and implemented a program to monitor and control pollutants in runoff from the following types of industrial and high-risk facilities and activities:

Municipal landfills *All municipally operated landfills in Metro were closed years ago. The Metro Water Services Waste Services Division oversees all closed landfills' associated groundwater monitoring.* X Yes No

Hazardous waste treatment, storage, and disposal facilities X Yes No

Industries subject to reporting requirements pursuant to SARA Title III section 313 X Yes No

Industrial facilities that the MS4 determines are contributing a substantial loading of pollutants to the municipal separate storm sewer system X Yes No

B. Has the MS4 maintained a database of industrial and high-risk facilities and activities in the City which includes the following types of industries:

- municipal landfills;
- hazardous waste treatment, storage, and disposal facilities;
- industries subject to reporting requirements pursuant to SARA Title III, Section 313; and
- industrial and commercial facilities that the permittee determines are contributing a substantial loading of pollutants to the municipal separate storm sewer system.

During the first permit year of this permit cycle, NPDES built a robust industrial inspection database that comprises the above categories of industrial properties. In addition to the above category of industrial sites (Metro is required to inspect), NPDES has also included within the database all of the industrial facilities with active Tennessee Multi-Sector Permits (TMSPs) for industrial Stormwater runoff, all facilities with active Ready Mix Concrete Permits (RMCPs), and all facilities with active individual NPDES permits to discharge process water. The database is a Microsoft Access database that is interactive with GIS. Please note that most TMSP or RMCP sites do not qualify as industrial facilities subject to SARA Title III, Section 313 reporting requirements and are not required to be inspected by Metro per the current MS4 permit.

Those listed in 10 (A) above X Yes No

Facilities covered by individual NPDES permits X Yes No

Facilities covered under the TMSP X Yes No

Facilities regulated by the pretreatment program; X Yes No

The MWS Pre-treatment Program inventories all sites with industrial user waste water discharge permits and would provide them to NPDES upon request. The Pre-treatment Program notifies NPDES when they become aware of stormwater issues on these sites.

C. Has the MS4 updated the database of industrial and high risk facilities and activities at least yearly? X Yes No

If yes, provide a listing of any additionally identified industrial and high-risk facilities and activities which discharge stormwater into the MS4:

Facility/Activity

Refer to the attached Table 10.C.1 for a listing of all the industrial facilities NPDES has inventoried into the database. Metro also inventoried other industrial facilities such as TMSP and RMCP facilities, which are not required to be inventoried. NPDES routinely adds facilities to the database based on reviews of the TDEC permitting database.

D. Has the MS4 developed and implemented procedures, including an inspector manual and checklist, for routine inspections of industrial and high-risk facilities and activities?

NPDES has created a Standard Operating Procedure (SOP) for performing inspections of industrial facilities. NPDES has also performed numerous co-inspections with TDEC Nashville Field Office staff to ensure the industrial inspection process reviews site controls and paperwork similarly to TDEC inspection staff.

X Yes No



E. Is the MS4 performing these inspections at such a rate that all required industries will be inspected at least once every three years?

As per the MS4 permit, NPDES is required to inspect all SARA Title III, Section 313 industrial facilities once every 3 years. NPDES completed all of the inspections of facilities designated as having the SARA Title III, Section 313 and Treatment, Storage and Disposal (TSD) facilities by the end of the permit term (January 31, 2017). Following completion of these inspections, NPDES sent a letter to TDEC that addressed the planned modifications to inspections of industrial facilities during the transition/"administrative extension" period before the new permit is reissued. A copy of this letter can be found in Attachment B of this document. The new inspection focus during the transition/"administrative extension" period between permits will be based on the types of industrial facilities that typically have the most exposed materials that can pose a risk to stormwater runoff. TDEC approved the new approach and, in FY23, NPDES vastly increased the number of inspections on facilities that typically have more pollutant exposure issues, which has resulted in an overall reduction of exposed industrial product draining to the MS4.

X Yes No

F. Provide a listing of inspections performed during this reporting year:
During FY24, NPDES performed 85 formal industrial inspections, some of which include re-inspections. Refer to Table 10.F.1 for a list of Industrial Facilities that were inspected during FY24.



11. 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: *Please note that Stop Work Orders are included as part of the same Notice of Violation for construction sites. The enforcement data below are for grading permit sites involving the grading of more than 10,000 square feet. MWS Development Services also issues enforcements for Single Family Residential (SFR) developments. In FY24, MWS Development Services issued 81 NOVs that included an assessment of \$19,200 in administrative penalties.*

Action	Construction	Permanent Stormwater Controls	Illicit Discharge	Authority?
Notice of violation	<u>38</u>	<u>0</u>	<u>5</u>	X Yes <input type="checkbox"/> No
Administrative Penalties	<u>\$15,354</u>	<u>\$0</u>	<u>\$2,100</u>	X Yes <input type="checkbox"/> No
Stop Work Orders	<u>22</u>	# _____	# _____	X Yes <input type="checkbox"/> No
Civil penalties	# _____	# _____	# _____	<input type="checkbox"/> Yes X No
Criminal actions	# _____	# _____	# _____	<input type="checkbox"/> Yes X No
Administrative orders	# _____	# _____	# _____	X Yes <input type="checkbox"/> No
Other:	_____	<u>9 Notices of Non Compliance</u>	<u>5 Notices off Non Compliance</u>	X Yes <input type="checkbox"/> No

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? X Yes No

C. What are the 3 most common types of violations documented during this reporting period?
Failure to maintain erosion prevention and sediment control measures, illicit discharges from construction and non-construction sites, and grading without applying for or receiving a Metro Grading Permit.



12. Program Resources

A. What was your annual expenditure to implement the requirements of your MS4 NPDES permit and SWMP this past fiscal year?

In FY24, NPDES, which oversees various MS4 compliance activities, operated under a budget of \$4,796,600 (including the separate budget for the Urban Forestry Program). NPDES also operated the additional capital budget of \$425,000 for the Watershed Improvement Fund. The overall MWS Stormwater Division's budget, which includes NPDES, Development Services Review engineers, Stormwater Planning and Stormwater Maintenance, was \$33,188,600. Please note that various other Metro Departments, while not included in this budget analysis, perform activities that contribute to MS4 permit compliance.

B. What is next fiscal year budget for implementing the requirements of your MS4 NPDES permit and SWMP?

The FY25 budget includes \$5,633,200 dedicated to the Stormwater NPDES/Urban Forestry Section (with a \$425,000 budget for the Watershed Improvement Fund. The overall Stormwater Department is operating under a budget of \$34,191,100.

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 Fee; Estimated Amount \$42,144,441 (collected in FY24)

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)?

The anticipated FY23 budgeted Stormwater staff includes 134 employees with 24 current vacancies.

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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13. 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.?

For over 15 years, the NPDES Watershed Group has been performing detailed sampling for TMDL streams throughout Metro, some of which is proactive and not required per the MS4 permit. The data collection has proven beneficial in identifying segments of streams where pollutants are elevated or within water quality standard criteria. Please refer to the attached Table 13A.1 (TMDL Sampling Data) for the complete quarterly sampling results for the FY24 reporting period. Please note that previous Annual Reports contained additional data for monitoring conducted during those reporting periods. NPDES performs various monitoring activities as prescribed by the MS4 Permit. The MS4 permit-required sampling (i.e., Wet Weather Monitoring, Ambient Sampling, and Benthic Sampling) was changed in the current iteration of the permit (See Attachment B). The NPDES Watershed Group routinely analyzes the sampling data to determine if negative trends are observed within any of the sampled tributaries. When negative trends are found, NPDES performs source tracking investigations. Whenever identifiable sources are not found, NPDES considers initiating targeted public education campaigns in those watersheds to address other potential impacts, such as pet waste or overfertilization. The MS4 Permit-prescribed Ambient Sampling and Benthic Sampling data is summarized in Table 13A.3 and Table 13A.4 respectively. NPDES's Watershed Group collected approximately 209 water quality samples and performed visual stream assessments on approximately 136,900 linear feet of 303(d)-listed streams within FY24.

Over the years, NPDES has also looked at other non-analytical data to evaluate the program's effectiveness. Refer to Table 13A.2 (SWMP Quantifiable Statistics). Many of the functions such as IDDE efforts, public education, etc. that NPDES performs do not easily translate into quantifiable loading reduction numbers. As an attempt to quantify pollutant loading reduction numbers from various sources, NPDES hired a contractor in previous years to develop a database that will track loading reductions of structural and non-structural controls implemented as part of Metro's SWMP. This database is known as the Watershed Improvement Evaluation System (WIES) and is cloud/web-based, which will allow NPDES to track pollutant reduction efforts of current SWMP elements as well as potential benefits through program modifications. Specific tables and graphs of FY24 estimated pollutant loading runoff numbers and pollutant loading reduction efforts by SWMP structural and non-structural controls are presented in Attachment C.

In addition to pursuing development of a database that can actively track and analyze pollution reduction efforts of the SWMP, NPDES partnered with Vanderbilt University to analyze the effectiveness of the Public Information/Education Plan, which determined that NPDES could be much more effective and efficient in reaching local audiences by attending more smaller community events, such as farmer markets, etc. This change was implemented in FY24.

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.

Please refer to the answer above and Section 3 of this document for a summary of various water quality data collected by NPDES during this reporting period. As mentioned above, a more comprehensive evaluation of pollutant reduction estimates of major SWMP program elements is included in Attachment C.

C. What environmental quality trends have you documented over the duration of your Stormwater program? (If you have reports or summaries, you can either attach them electronically, or provide the URL to where they may be found on the Web.) *As mentioned above, NPDES has actually found fewer illicit discharges to the MS4 over the years. This reduction in actual confirmed illicit discharges to the MS4 can be contributed to a robust IDDE program and increased public awareness. In addition, there have been fewer notices of violations issued for construction site infractions. Middle Tennessee contractors have become acutely aware of Metro's construction site requirements and enforcement program and, therefore, have increasingly complied with our regulations. It has also been noted that many of the concerns from citizens usually involve relatively minor issues as compared to concerns reported in the beginning of the NPDES program many years ago.*

14. Stormwater Management Program Update

A. Describe any changes to the MS4 program, per Section 3.5 of the permit, during the reporting period including but not limited to:

Changes adding (but not subtracting or replacing) components, controls, or other requirements.

At the end of year 5 of the current MS4 permit, NPDES submitted a request to change the dry weather field screening, industrial monitoring, and wet weather sampling elements for the transition/"administrative extension" period between permit expiration and reissuance. (Refer to Attachment B) NPDES also requested these items to be adjusted in the reissued permit as well. NPDES analyzed work hours per each task verses the benefit to the program in hopes of developing the most efficient and effective program possible. A summary of the proposed changes can be found in Attachment B. NPDES made some adjustments to the IDDE enforcement policies and IDDE SWMP narrative from recommendations of the TDEC CEI conducted in the previous permit year. Those amendments to the SWMP are included in Attachment B of this document. Overall, NPDES has been pleased with the increased efficiency and effectiveness of the adjusted SWMP programs. In FY24, NPDES updated the Public Information/Education (PIE) plan. The updated copy can be found in Section 4 of this document.

Changes to replace an ineffective or unfeasible BMP.

Refer to above answer

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

Just prior to the issuance of this cycle of the MS4 permit, the former satellite city of Lakewood voted to dissolve and become part of Metro Nashville and Davidson County. Upon that transition becoming official, NPDES field screened the commercial areas for potential illicit discharge connections, inventoried and added all of the Stormwater infrastructure into the GIS database, and began performing stormwater maintenance services for the newly annexed area.

Changes to the program as required by the division.

Please refer to the explained SWMP narrative changes and enforcement policy changes that resulted from the TDEC CEI.

15. Certification

This report must be signed by a ranking elected official or by a duly authorized representative of that person. See signatory requirements in subpart 5.7 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."

Michael H. Hunt

Printed Name and Title

*WATER Services
Mgt*

Michael H. Hunt

Signature

11/14/24

Date



3.0 Required MS4 Reporting Tables

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Table 6B.1 – Grading Permit Projects Initiated/Completed within FY24

Year	Preconstruction Meetings	Grading Permits Issued	Permits Completed
Total FY03	257	198	102
Total FY04	305	270	159
Total FY05	284	271	220
Total FY06	296	252	196
Total FY07	251	239	188
Total FY08	222	165	205
Total FY09	148	109	238
Total FY10	146	121	117
Total FY11	130	135	131
Total FY12	152	142	153
Total FY13	167	138	133
Total FY14	249	318	159
Total FY15	292	276	259
Total FY16	268	254	217
Total FY17	297	262	203
Total FY18	331	311	264
Total FY19	345	327	250
Total FY20	312	283	285
Total FY21	351	308	237
Total FY22	291	290	206
Total FY23	258	255	214
Total FY24	264	240	295
Total	5,616	5,164	4,431



Table 6C.1 – Small Construction Site Oversight in FY24

New Infill Permits Issued	987
Follow up site visits for Infill Developments	7385
NOVs Issued to Single Family Residential Development	81
NOV Administrative Penalties issued for Single Family Residential Stormwater Violations	\$19,200

Note: Midway through FY15, Metro passed new legislation establishing the new Infill Development Permits. Projects that create 800 to 15,000 square feet of additional net impervious area through new development, redevelopment, or rehabilitation of a residential structure in existing neighborhoods are required to obtain Infill Development Permits. As such, MWS Stormwater staff provides oversight to require stormwater controls to be installed to treat stormwater runoff during and after construction, which is above and beyond MS4 permit requirements.

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Table 7H.1 – Illicit Discharge (Non-Construction-Related) Investigations Initiated during FY24

Case Name	Location	Initiated Date	Initiated By Name
Lift Station Overflow	1 Club Dr 37215	06/28/24	Kevin Turner
Sewer Odor	7816 Old Harding Pike 37221	06/28/24	Kevin Turner
Gravel Lot Discharge	823 Cherokee Ave 37207	06/26/24	Gretchen Judkins
Grease Stain On Roof	3025 Nolensville Pike 37211	06/24/24	Kevin Turner
Discharge Ascend Outfall	310 1St Ave S 37201	06/17/24	Kevin Turner
Unknown Discharge To Alley	1424 Ordway Pl 37206	06/14/24	Kevin Turner
Private Sewer Issue	1801 Golf Club Rd 37138	06/14/24	Kevin Turner
Paint Washing Into Storm	32 Belcaro Cir 37215	06/14/24	Kevin Turner
Trash And Sewer In Yard	447 American Rd 37209	06/06/24	Kevin Turner
Private Sewer Line Damage	819 Davidson Dr 37205	06/06/24	Kevin Turner
Car Washing	3760 Nolensville Pike 37211	06/06/24	Kevin Turner
Overton Sewer Overflow	4960 Edmondson Pike 37211	06/05/24	Kevin Turner
Semi-Truck Accident	5090 Blue Hole Rd 37013	06/05/24	Kevin Turner
Paint Rinse Water	3300 Ironwood Dr 37214	05/31/24	Gretchen Judkins
Concrete Dumping	728 Madison Blvd 37115	05/30/24	Gretchen Judkins
Plaza Mariachi Fog	3955 Nolensville Pike 37211	05/24/24	Kevin Turner
Blue Colored Spring	6544 Whittemore Ln 37013	05/24/24	Veronica Logue
Fuel Spill	3896 Stewarts Ln 37218	05/23/24	Kevin Turner
Nash Pizza Fog Dumping	1201 Dickerson Pike 37207	05/23/24	Kevin Turner
Private Sewer Issue	3200 Batavia St 37209	05/23/24	Kevin Turner
Oil Discharging To Street	602 Thompson Ln 37211	05/15/24	Kevin Turner
Milky Discharge Storm Ditch	2811 Patriot Way 37214	05/15/24	Kevin Turner
I24 Wreck	0 Blue Hole Rd 37013	05/15/24	Kevin Turner
Tracking Into Roadway	0 Spencer Ave 37209	05/15/24	Kevin Turner
Trash In Buffer	1136 Blairfield Dr 37013	05/13/24	Kevin Turner
Pool Discharge	4410 Lindawood Dr 37215	05/13/24	Kevin Turner
Force Main Break	411 Annex Ave 37209	05/13/24	Kevin Turner
Sewer Coming Out Of Ground	2400 Antioch Pike 37013	05/07/24	Kevin Turner
ProTriton Spill	3601 Trousdale Dr 37204	05/06/24	Kevin Turner
Sewage Routed To Creek	2404 Baker Rd 37072	05/03/24	Kevin Turner
Milky Discharge In Storm Ditch	2303 Belmont Blvd 37212	05/01/24	Kevin Turner
Hydraulic Oil Spill	78 Charles E Davis Blvd 37210	04/26/24	Kevin Turner
Discharge Into Catch Basin	105 Molloy St 37201	04/26/24	Kevin Turner
TSU Possible Sso	1661 Ed Temple Blvd 37208	04/26/24	Kevin Turner
Car Wash Discharge	212 B Gallatin Pike 37115	04/26/24	Kevin Turner
Possible Discharge From Gas Station	336 E Trinity Ln 37207	04/26/24	Kevin Turner
Unknown Discharge With Odor	2458 Crocker Springs Rd 37072	04/26/24	Kevin Turner
Dump Truck Incident	741 Freelands Station Rd 37228	04/17/24	Kevin Turner
Oil In Storm Drain	620 Brook Dr 37013	04/17/24	Kevin Turner
Trash Truck Fire	1116 Polk Ave 37210	04/16/24	Kevin Turner
Water Leak In Alley	5321 Pennsylvania Ave 37209	04/16/24	Laurence Brown
SA Recycling Discharge	1831 Linder Industrial Dr 37209	04/12/24	Kevin Turner



Table 7H.1 – Illicit Discharge (Non-Construction-Related) Investigations Initiated during FY24 (Continued)

Case Name	Location	Initiated Date	Initiated By Name
Blue Colored Creek	3410 Knight Dr 37189	04/09/24	Joshua Hayes
Grease Containers	4670 Lebanon Pike 37076	04/02/24	Kevin Turner
Pool Discharge	919 Waldkirch Ave 37204	04/01/24	Kevin Turner
Pressure Washing Dumpster Area	433 Opry Mills Dr 37214	04/01/24	Kevin Turner
Grease In Nes Vault	201 1St Ave S 37201	03/29/24	Kevin Turner
Discharge To Storm Ditch	3014 New Natchez Trce 37215	03/29/24	Kevin Turner
Sewer In Creek	8926 Highway 100 37221	03/29/24	Kevin Turner
Hydraulic Oil Spill	6304 James Ct 37209	03/29/24	Kevin Turner
Sewer Issue	3111 Clarksville Pike 37218	03/29/24	Kevin Turner
Tires In Creek	3840 Lebanon Pike 37076	03/29/24	Kevin Turner
Dumping In Storm Drain	7748 Stapleton Chase Dr 37013	03/29/24	Kevin Turner
MWS SSO	198 Eisenhower Dr 37211	03/28/24	Kevin Turner
Trash In Creek	2736 Anderson Rd 37217	03/26/24	Kevin Turner
Trash And Washing Machine Discharge	4912 Shasta Dr 37211	03/22/24	Kevin Turner
Dirt From Parking Lot	327 Elberta St 37210	03/22/24	Kevin Turner
Water Line Break	3215 Powell Ave 37204	03/15/24	Kevin Turner
Fog Storm Drain	1000 N 16Th St 37206	03/15/24	Kevin Turner
Auto Fluid In Street	4012 Scotwood Dr 37211	03/15/24	Kevin Turner
Dirt Stored In Row	2136 Utopia Ave 37211	03/13/24	Kevin Turner
Private Sewer Issue	6012 A Deal Ave 37209	03/13/24	Kevin Turner
Camper Sewer Line	384 Rio Vista Dr 37115	02/27/24	Kevin Turner
Toxic Waste Sign	4601 Murphy Rd 37209	02/23/24	Kevin Turner
Private Sewer Overflow CSS	1904 Broadway 37203	02/23/24	Kevin Turner
AZZ Discharge	200 33Rd Ave N 37209	02/23/24	Kevin Turner
Apartment Sewer Overflow	308 Plus Park Blvd 37217	02/21/24	Kevin Turner
Cargill Waste Water Spill	2621 Eugenia Ave 37211	02/16/24	Kevin Turner
Sewer Overflow Thermograph	570 Knight Valley Dr 37217	02/14/24	Kevin Turner
Private Sewer Service	902 Delray Dr 37209	02/12/24	Kevin Turner
Drywall Dust Near Drain	1009 Summercrest Ct 37013	02/09/24	Kevin Turner
Tracking Into Roadway	0 Spencer Ave 37209	02/07/24	Kevin Turner
Dirt/Soil Leaving Site	408 Mcnally Dr 37211	02/07/24	Kevin Turner
Fuel Truck Spill	611 Muci Dr 37013	02/02/24	Kevin Turner
Staining In Roadway	3820 Round Rock Dr 37013	01/31/24	Kevin Turner
Dumping / Debris In Floodplain	109 Edgemeade Blvd 37115	01/25/24	Laurence Brown
Disturbance And Contamination Of Stream	2408 Dickerson Pike 37207	01/24/24	Laurence Brown
Unknown Pipe Coming From Building	600 Amelia Dr 37013	01/12/24	Kevin Turner
Sewer Overflow	1058 Murfreesboro Pike 37217	01/12/24	Kevin Turner
Product Containers Near Storm	3823 Dickerson Pike 37207	01/10/24	Kevin Turner
MWS SSO	4724 Bowfield Dr 37013	01/05/24	Kevin Turner
Dump Truck Leaking Fuel	600 St Cloud Dr 37013	12/28/23	Joshua Hayes
Tipped Over Porto-Toilet	0 Baker Station Rd 37072	12/21/23	Kevin Turner
Unknown Discharge From Drilling	619 Center St 37115	12/21/23	Kevin Turner
Possible Sewer Discharge	218 Larkin Springs Rd 37115	12/15/23	Kevin Turner
Discharge From Ground	2305 Ashwood Ave 37212	12/15/23	Kevin Turner



Table 7H.1 – Illicit Discharge (Non-Construction-Related) Investigations Initiated during FY24 (Continued)

Case Name	Location	Initiated Date	Initiated By Name
Grease Dumping	3056 Dickerson Pike 37207	12/15/23	Kevin Turner
MWS SSO	514 Forest Park Rd 37115	12/15/23	Kevin Turner
Mechanic Parking Lot Staining	1451 Donelson Pike 37217	12/15/23	Kevin Turner
Water Main Break - Near 2501 Powell Ave	2501 Powell Ave 37204	12/14/23	Laurence Brown
Trash Dumping In Creek	14095 Old Hickory Blvd 37013	12/13/23	Kevin Turner
Bosley - Water Main Break	401 Bowling Ave #91 37205	12/08/23	Laurence Brown
Sewer Odor	501 Weakley Ave 37207	12/01/23	Kevin Turner
Paint Pens In Drain	727 Bell Rd 37013	12/01/23	Gretchen Judkins
Airsoft Pellets	406 Davidson St 37213	12/01/23	Gretchen Judkins
Wash Water Discharge To SCM	7452 Old Hickory Blvd 37189	11/27/23	Kevin Turner
Sediment Irrigation Water	218 Shady Grove Rd 37214	11/27/23	Kevin Turner
Trash In Drain	2508 Solomon Ln 37207	11/22/23	Kevin Turner
Private Sewer Overflow	308 Plus Park Blvd 37217	11/22/23	Kevin Turner
Private Grinder Pump	3940 Apache Trl 37013	11/21/23	Kevin Turner
Grease Containers Overflowing	1309 Bell Rd 37013	11/16/23	Kevin Turner
Sewer Coming Out Of Ground	4717 Nolensville Pike 37211	11/16/23	Kevin Turner
Human Contamination In Creek	0 Old Glenrose Ave 37210	11/15/23	Kevin Turner
Staining In Driveway	1904 Waterford Dr 37138	11/13/23	Kevin Turner
Private Sewer Overflow	1501 Corporate Pl 37086	11/08/23	Kevin Turner
Servier Park Creek Cloudy	2911 12Th Ave S 37204	11/06/23	Kevin Turner
Food Truck Dumping Grease	2205 Gilmore Crossing Ln 37218	10/31/23	Kevin Turner
Petroleum Sheen In Parking Lot	610 Thompson Ln 37211	10/31/23	Gretchen Judkins
Car Washing	3955 Nolensville Pike 37211	10/30/23	Kevin Turner
Wing Stop Grease Interceptor	5570 Old Hickory Blvd 37076	10/30/23	Kevin Turner
Carpet Wastewater	110 Carriage Ct 37027	10/30/23	Gretchen Judkins
Fuel Spill Exxon	3144 Dickerson Pike 37207	10/25/23	Kevin Turner
Private Sewer Issue	1074 Murfreesboro Pike 37217	10/25/23	Kevin Turner
Waffle House Sewer	816 Murfreesboro Pike 37217	10/25/23	Kevin Turner
Paint Dumping Howard Office	700 President Ronald Reagan Way 37210	10/25/23	Kevin Turner
Private Sewer Overflow	1501 Corporate Pl 37086	10/25/23	Kevin Turner
Water Discharge In Tributary	323 B Forest Park Rd 37115	10/24/23	Kevin Turner
Sewer In Ms4	2000 Richard Jones Rd 37215	10/23/23	Kevin Turner
Grass Blown In Street	1718 B Hanover Rd 37216	10/18/23	Gretchen Judkins
Wing Stop Grease	825 Hamilton Crossings 37013	10/17/23	Kevin Turner
Paint In Storm Channel	4024 Lake Pkwy 37076	10/17/23	Kevin Turner
Auto Zone Buckets	3913 Charlotte Ave 37209	10/17/23	Kevin Turner
Slurry Discharge	104 B Douglas Ave 37207	10/12/23	Kevin Turner
Product Dumping In Hole	1964 Port James Cir 37013	09/29/23	Kevin Turner
Sewer Odor	3220 Country Lawn Dr Smell	09/26/23	Joseph Brown
Car Wash Sewer Discharge	2008 Murfreesboro Pike 37217	09/21/23	Kevin Turner
Food Truck Waste Water	6333 Charlotte Pike 37209	09/19/23	Kevin Turner
Spilled Fog	4611 Alabama Ave 37209	09/19/23	Kevin Turner
Sewer Complaint	5201 Little Marrowbone Rd 37015	09/12/23	Kevin Turner



Table 7H.1 – Illicit Discharge (Non-Construction-Related) Investigations Initiated during FY24 (Continued)

Case Name	Location	Initiated Date	Initiated By Name
Grease In Storm Drain	114 4Th Ave S 37201	09/08/23	Kevin Turner
Vehicle Accident Fuel Spill	628 Old Hickory Blvd 37209	09/08/23	Kevin Turner
Wash Water Discharge	460 Metroplex Dr 37211	09/08/23	Kevin Turner
Vehicle Leaking Fluid	2121 Maynard Ct 37218	09/08/23	Kevin Turner
Sewer Hit During Construction	616 N Dupont Ave 37115	09/08/23	Kevin Turner
7-11 Grease Dumping	1309 Murfreesboro Pike 37217	09/08/23	Kevin Turner
Grease In Storm Drain	2823 Dickerson Pike 37207	09/06/23	Gretchen Judkins
Sewer Overflow Shelby Park	2009 Sevier St 37206	08/31/23	Kevin Turner
Overflowing Trash And Fog	2917 Dickerson Pike 37207	08/31/23	Kevin Turner
Car Wash	3745 Nolensville Pike 37211	08/31/23	Kevin Turner
Oil Staining On Street	2404 Elliott Dr 37138	08/30/23	Gretchen Judkins
Scrap Metal In River	200 Davidson St 37213	08/30/23	Gretchen Judkins
Exposed Dirt To Drain	2406 Elliott Dr 37138	08/30/23	Gretchen Judkins
Oil From Car	7213 Legacy Dr 37013	08/25/23	Kevin Turner
Oil Dumping	3900 Clifton Ave 37209	08/25/23	Kevin Turner
Sewer Overflow	2310 12Th Ave S 37204	08/25/23	Kevin Turner
Washing Machine Discharge	2401 Brick Church Pike 37207	08/24/23	Kevin Turner
Contaminated Water	6680 Charlotte Pike 37209	08/21/23	Kevin Turner
Leaves In Storm Drain	7104 Riverfront Dr 37221	08/21/23	Kevin Turner
Car Wash Discharge	4112 Nolensville Pike 37211	08/21/23	Kevin Turner
Food Truck Discharge	2532 Solomon Ln 37207	08/21/23	Kevin Turner
Fuel Truck Accident	5636 Old Hickory Blvd 37076	08/17/23	Kevin Turner
Greenrise Technologies Discharge	658 Murfreesboro Pike 37210	08/11/23	Kevin Turner
Brush Dumped In West Fork Browns	1106 Brookmeade Dr 37204	07/31/23	Gretchen Judkins
NT Glass Discharge 2Nd	1860 Air Lane Dr 37210	07/31/23	Kevin Turner
BHT Exposed Fog	1216 Dickerson Pike 37072	07/27/23	Kevin Turner
Horizon Park Sewer	4601 Packard Dr 37211	07/27/23	Kevin Turner
Beaman Mobile Car Wash	620 Crutcher St 37213	07/25/23	Gretchen Judkins
Discharge From Pipe	4660 Fanning Dr 37013	07/25/23	Kevin Turner
Living Earth Discharge	1511 Elm Hill Pike 37210	07/21/23	Kevin Turner
Sewer Odor In Creek	5111 Nolensville Pike 37211	07/14/23	Kevin Turner
FOG Spill	704 51St Ave N 37209	07/14/23	Kevin Turner
Strange Flow In Catch Basin	555 Great Circle Rd 37228	07/12/23	Kevin Turner
Fill Placed In Wetland	1106 Elm Hill Pike 37210	07/10/23	Kevin Turner
Total Automotive	3462 Lebanon Pike 37076	07/05/23	Kevin Turner
Seep Onto Sidewalk	397 Wallace Rd 37211	07/03/23	Kevin Turner

Note: Some of these investigations were proactive water quality investigations of Metro's O&M facilities.



Table 7H.2 – Spill Response Investigations Initiated by NPDES during FY24

Case Name	Location	Initiated Date	Initiated By Name
I24 Wb Mm 58.6 Spill - Mill Creek	0 Hickory Hollow Pkwy 37013	06/03/24	Dale Binder
401 Enos Reed Spill	411 Enos Reed Dr 37210	05/24/24	Dale Binder
CSX Fire	2513 Grandview Ave 37211	03/09/24	Dale Binder
Oil Spill - Tulip Grove Road	735 Tulip Grove Rd 37076	03/01/24	Dale Binder
Sanitary Sewer Leak @ Springfield Hwy & East End Rd.	East End Rd	01/31/24	Kenneth Tranter
Diesel Fuel Spill	1608 Union Hill Rd 37072	09/21/23	Dale Binder

Table 7H.3 – MWS Sewer Discharge Investigations Initiated by NPDES during FY24

Case Name	Location	Initiated Date	Initiated by Name
Service Tap Sewer Leak	1804 B Overton St 37138	5/31/2024	Gretchen Judkins
Sewer Discharge To Ms4	504 Donelson Pike 37214	2/23/2024	Kevin Turner
Leaking Sewer/Overflow	570 Knight Valley Dr 37217	2/12/2024	Laurence Brown



Table 7H.4 – Metro Health Department Failing Septic Tank Investigations during FY24

Date Received	Street Name	Health Department Personnel	Date Investigated	Sewage on the Ground	Date Abated
7/17/2023	6620 Clarksville Hwy.	Alexander	7/20/2023	Y	n/a
5/12/2023	4111 Gourley Rd	Kenney	7/25/2023	Y	n/a
7/25/2023	2864 Morgan Road	Kenney	7/26/2023	Y	10/23/2023
7/10/2023	2960 Morgan Road	Alexander	7/12/2023	N	n/a
9/5/2023	117 Lakeside Drive	Alexander	9/11/2023	Y	10/18/2023
9/13/2023	3041 Morgan Road	Alexander	9/13/2023	N	n/a
10/2/2023	5000 Clarksville Pike	Alexander	10/2/2023	Y	n/a
1/3/2024	2145 Baker Road	Alexander	1/4/2024	Y	n/a
1/8/2024	1423 Pleasant Hill Dr.	Kenney	1/8/2024	N	n/a
1/25/2024	4578 Old Hickory Blvd.	Kenney	1/29/2024	N	n/a
2/5/2024	2758 Greer Road	Alexander	2/5/2024	N	n/a
2/1/2024	8510 Raymond Roberts Drive	Alexander	2/5/2024	Y	n/a
3/28/2024	2522 Greer Road	Alexander	3/29/2024	N	n/a
4/2/2024	3212 Greer Road	Alexander	4/3/2024	N	n/a
6/28/2024	6176 Pettus Road	Alexander	7/1/2024	Y	7/24/2024
6/3/2024	5531 Brick Church Pike	Alexander	6/6/2024	Y	7/19/2024
5/8/2024	1012 Old Buck Hill Road	Alexander	5/14/2024	N	n/a



Table 7H.5 – MWS Estimated/Reported Sewage Overflows in FY24

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOT
Wet Weather Overflows - CSO Permitted	33	21	8	2	5	10	13	22	13	14	27	15	183
Wet Weather Overflows - sewer (non-pumps)	5	1	2	0	3	2	14	18	2	4	17	5	73
Wet Weather Overflows - Pump Stations	1	0	0	0	0	1	1	4	0	0	11	4	22
Wet Weather Overflows SSO - TOTAL	6	1	2	0	3	3	15	22	2	4	28	9	95
Dry Weather Overflows - sewer (non-pumps)	7	2	2	2	3	9	4	13	10	7	5	4	68
Dry Weather Overflows - Pump Stations	0	0	0	0	0	0	1	0	0	0	2	0	3
Dry Weather Overflows - TOTAL	7	2	2	2	3	9	5	13	10	7	7	4	71
# of Overflows that Reached Creeks - Sewer (non-pumps)	2	1	1	0	2	6	14	14	2	1	13	6	62
# of Overflows that Reached Creeks - Pump Stations (All)	1	0	0	0	0	1	1	4	0	0	13	4	24
# of Overflow Response Staff per sewer event	2	2	2	2	2	2	2	2	2	2	2	2	2
# of Sewer Vac Trucks per sewer event	1	1	1	1	1	1	1	1	1	1	1	1	1

*Note: Most of the dry-weather overflows involve a small level of clean-up performed by Department personnel. Most of the overflows that reach creeks occur during wet weather conditions.

Table 8F.1 - MWS Stormwater Maintenance Work Order Numbers for FY24

Item	Total
Ditch Excavated/Repaired (Linear Feet)	32,391.00
Debris Removed - Ditch Exc. and Repair (Cubic Yards)	4,288.00
Debris Removed - General (Cubic Yards)	3,703.00
Inlets Cleaned	29,549.00
Inlets Repaired	121.00
Material Removed (lbs.)	265,941.00
Walls/Headwalls Built	405.50
Walls/Headwalls Repaired	81.00
Cross Drains Cleaned	150.00
Cross Drains Replaced	3.00
Matting Used (square feet)	301,745.50
Driveway Pipes Cleaned	472.00
Driveway Pipes Replaced	22.50
Preventative Maintenance Hours	335.00
Rain Route Hours	10,244.67

Note: (Some assumptions are used in the quantity estimates)
 *All statistics are reported based on the actual finish date of the task(s), not the work order(s).
 *All cubic yardage is computed from the loads reported for each truck size.
 *'Debris Removed' under Ditch Exc. & Repair is the total of all cubic yardage reported under work orders that had a *Redefine Ditch' task.
 'Debris Removed' under Debris Removal (misc.) is the total of cubic yardage reported under all other work orders not counted in the first Debris Removal figure.
 *Inlets Repaired number includes those that were replaced with "bike-friendly" grates.
 *In FY2024, the Stormwater Maintenance department upgraded to a new version of the Cityworks database. In doing so, some of the tracking of maintenance numbers had to be adjusted to the new system. Due to some fields being different the calculation had to be updated, which resulted in some of the fields to be calculated differently than previous Fiscal Years.



Table 8F.2 - NDOT Contracted Street Sweeping Collection Numbers for FY24

	July	August	September	October	November	December	January	February	March	April	May	June	Total
Debris Collected (tons)	173.57	199.50	260.64	286.62	285.61	268.59	189.08	312.66	250.46	275.12	274.73	272.60	3,049.18
Miles of Streets Swept	1,888.38	1,888.38	1,888.38	1,888.38	1,888.38	1,893.14	1,893.14	1,893.14	1,893.14	1,893.14	1,893.14	1,893.14	22,693.92

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Table 9F.1 – MWS Development and Review Section Plan Review Numbers for FY24

	July	August	September	October	November	December	January	February	March	April	May	June	Total
Number of Plan Submittals	74	108	79	672	126	347	124	110	106	109	107	123	2,085
Number of Plan Approvals	72	107	76	601	125	344	122	107	106	109	105	119	1,993

Note: This spreadsheet represents all plan submittals, re-submittals, including grading permit plans, plat reviews/approvals, as-built drawings, including Single Family Stormwater plan reviews, etc.

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Table 10C.1 - Industrial Sites Inventoried within MWS NPDES Database

Site Name	Site Location	TMSP Site	RMCP Site	TDEC Permit Number
Rogers Group, Inc. (Reostone Quarry)	6514 Robertson Avenue	No	No	TN0057657
Bearded Iris	101 Van Buren St	Yes	No	TNR050863
Barrique Brewing and Blending	30 Oldham St	Yes	No	None
Animax Designs Inc	101 Fernco Drive	Yes	No	TNR059705
Hearthside Food Solutions	715 Massman Drive	Yes	No	TNR050230
XPO Logistics fka Con-Way Freight	401 Enos Reed Drive	Yes	No	TNR051466
Nelson Green Brier Distillery	1414 Clinton Street	Yes	No	TNR059687
Smyrna Ready Mix Concrete, 2nd Ave	1136 2nd Ave N	No	Yes	TNG110268
Waste Management dba Nashville High Grades	1740 Riverhills Drive	Yes	No	TNR059650
Living Earth - East Nashville	1511 Elm Hill Pike	Yes	No	TNR059260
Averitt Express Nashville Service Center	1 Averitt Express Drive	Yes	No	TNR053592
Tenn South dba Big Machine Distillery	122 3rd Ave S	Yes	No	TNR050964
Neely's Bend Inc.	1327 Neely's Bend Rd	Yes	No	TNR051976
Cyanide Cider	410 Woodbine St	Yes	No	TNR051005
Broadcast Brewing	2605 Grissom Dr	Yes	No	TNR051000
Tennessee Brew Works	809 Ewing Ave	Yes	No	TNR050985
Smitty's Auto Parts	1609 Bell Rd	Yes	No	TNR053717
Rivergate Auto Parts, Inc. (Nashville Truck Parts)	1471 Gallatin Pike	Yes	No	TNR056268
Four Lane Auto Salvage Inc.	400 W Trinity Ln	Yes	No	TNR050223
Rogers Group- Whites Creek Quarry	2819 Whites Creek Pike	No	No	TN0057452
Rogers Group - Whites Creek Asphalt Plant	2819 Whites Creek Pike	Yes	No	TNR050886
Gibson USA	641 Massman Drive	Yes	No	TNR058870
S&H Plating	817 Madison Industrial Road	Yes	No	TNR059463
Nashville Craft Distillery	514 Hagan St	Yes	No	TNR050980
LKQ Pick Your Part Southeast LLC	2030 Lucas Lane	Yes	No	TNR058938
Steel Summit Tennessee	1718 JP Hennessy Dr	Yes	No	TNR055890
Ergon Terminals, Inc. - Nashville	1114 Visco Dr	Yes	No	TNR056603
Alternative Energy Products	1821 Seminary St	Yes	No	TNR050480
Transflo Terminal Services	426 Chestnut St	Yes	No	TNR053444
Reading Midwest Distribution (FTEC, Inc. (Palfleet Truck)	1801 Lebanon Park	Yes	No	TNR056769
Living Waters Brewing	1056 E Trinity Lane	Yes	No	TNR050993
Crazy Gnome Brewery	948 Main St	Yes	No	TNR050979
Yazoo Brewing Company	900 River Bluff Drive	Yes	No	None



Table 10C.1 - Industrial Sites Inventoried within MWS NPDES Database (Continued)

Site Name	Site Location	TMSP Site	RMCP Site	TDEC Permit Number
Black Abbey Brewing	2952 Sidco Drive	Yes	No	TNR050953
Marble Fox Brewing	701 8th Ave S	Yes	No	TNR050955
Firstexpress Inc.	1135 Freightliner Dr	Yes	No	TNR053075
Bassline Brewing	410 39th Ave N	Yes	No	TNR050950
Tennfold Brewing	2408 Lebanon Pike	Yes	No	TNR050954
City Winery	609 Lafayette St	Yes	No	TNR050982
La Hacienda Tortilleria	431 Allied Drive	Yes	No	None
Southern Grist Brewing Co	5000 Centennial Blvd	Yes	No	TNR050978
Corsair Artisan	1200 Clinton St	Yes	No	TNR050951
Smith & Lentz Brewing Co	903 Main St	Yes	No	TNR050956
Rolling Frito-Lay Sales, LP - Nashville DC	130 Spence Lane	Yes	No	TNR056640
Sadler Bros Trucking & Leasing Company, Inc.	436 Enos Reed Dr	Yes	No	TNR050326
Dicaperl Minerals Corp.	2601 Osage St	Yes	No	TNR056770
Tailgate Brewery	7300 Charlotte Pike	Yes	No	TNR050849
Diskin Cider	1235 Martin St	Yes	No	TNR050899
Superior Solvents & Chemicals	518 Swinging Bridge Rd	No	No	None
Czanns Brewing Company	4909 Indiana Ave	Yes	No	TNR050895
Jackalope Brewing	429b Houston St	Yes	No	TNR050879
HoneyTree	918 Woodland St	Yes	No	TNR050862
Proper Sake	3109 Ambrose Ave	Yes	No	TNR050894
Bearded Iris	4101 Charlotte Ave Ste 40	Yes	No	TNR050865
Walker Brothers Beverage Co	411 Haynie Ave Suite 101	Yes	No	TNR050868
YRC Freight	7300 Centennial Blvd	Yes	No	TNR059164
John C. Tune Airport- TDOT Hangar	110 Tune Airport Drive	Yes	No	TNR050301
Cambria Company	3607 Trousdale Drive	Yes	No	TNR050379
Frontier Logistical Services (aka Cone Solvents)	1830 Linder Industrial Dr	Yes	No	None
Innophos, Inc.	4600 Centennial Blvd	Yes	No	TNR050060
Smyrna Ready Mix - Hailey's Harbor, Inc.	3730 Amy Lynn Dr	Yes	No	TNR053535
Harcros Chemicals	1418 Poplar Ln	Yes	No	TNR058747
Fait la Force Brewing Co	1414 3rd Ave S. Suite 101	Yes	No	TNR050852
Nashville Barrel Co	809 Heathcote Ave	Yes	No	TNR050890
Corsair Artisan	601 Merritt Ave	Yes	No	TNR050858
CMC Rebar Nashville	852 Visco Dr	Yes	No	TNR058335
The Coats Company fka Hennessy Industries	1601 JP Hennessy Dr	Yes	No	TNR050446



Table 10C.1 - Industrial Sites Inventoried within MWS NPDES Database (Continued)

Site Name	Site Location	TMSP Site	RMCP Site	TDEC Permit Number
Sinomax East, Inc.	1740 JP Hennessey Drive	Yes	No	TNR059275
Ole Smoky Distillery	423 6th Ave S.	Not Yes	No	None
YeeHaw Brewing	423 6th Ave S.	Yes	No	TNR050904
Mid-South Wire	1040 Visco Drive	Yes	No	TNR050712
Mid-South Wire (formerly AJAX Turner Co.)	1045 Visco Drive	Yes	No	TNR058898
Prisma fka Quad Graphics	2947 Brick Church Pike	Yes	No	TNR058368
SA Recycling fka Southern Recycling	1840 Linder Industrial Blvd	Yes	No	TNR056650
Tennessee Imports Auto Salvage	326 Oriel Ave	Yes	No	TNR055923
TWB Antioch	6050 Dana Way	Yes	No	TNR059269
Pull-A-Part, LLC	7114 Centennial Boulevard	Yes	No	TNR056537
Amazon.com Services DTN6	710 Myatt Drive	Yes	No	TNR056369
Parman Energy	7101 Cockrill Bend Blvd	Yes	No	TNR059092
BHT Resources	1216 South Dickerson Road	Yes	No	TNR050737
Nashville Ready Mix West Nashville	5853 River Road	No	Yes	TNG110308
Fiberweb, Inc. (Berry Global)	70 Old Hickory Blvd	Yes	No	TNR056004
Waste Management - North Nashville (Rivergate MRF)	630 Myatt Dr	Yes	No	TNR058691
CMC Steel US, LLC	4280 Sidco Drive	Yes	No	TNR054524
Nashville Wire Products	1604 County Hospital Rd	Yes	No	TNR050806
Carlex Glass America	7200 Centennial Blvd	No	No	TN0003573
Nashville Ready Mix - Visco	1120 Visco Drive	No	Yes	TNG110470
Superior Sandblasting and Powder Coating	71 Fesslers Lane	No	No	None
Vulcan Materials - Danley Quarry	3187 Franklin Limestone Rd	No	No	TN0003026
Home City Ice	1406 Gould Ave	Yes	No	TNR050944
Safety-Kleen Systems, Inc.	215 Whitsett Rd	Yes	No	TNR053225
Hilltop Auto Salvage	2408 Dickerson Pk	Yes	No	TNR056159
Quikrete - Nashville	6614 Robertson Ave	Yes	No	TNR053497
Home City Ice fka Reddy Ice	7261 Centennial Blvd	Yes	No	TNR058772
Anchor Transportation	7435 Old Hickory Blvd	Yes	No	TNR050589
Anchor Transportation	3108 Blevins Road	Yes	No	TNR050588
AZZ Galvanizing (North American Galvanizing Co.)	3201 Elkins Avenue	Yes	No	TNR053495
Nitetrain Coach Co	7454 Old Hickory Blvd	Yes	No	TNR050604
Smyrna Ready Mix Concrete INC. - Visco Drive	1020 Visco Dr	No	Yes	TNG110138
Nashville Ready Mix, Inc. Baptist World	1326 Baptist World Center Dr	No	Yes	TNG110237
Jones Brothers Truck Shop	129 Bush Road	Yes	No	TNR051878



Table 10C.1 - Industrial Sites Inventoried within MWS NPDES Database (Continued)

Site Name	Site Location	TMSP Site	RMCP Site	TDEC Permit Number
Marathon Petroleum Company LLC	930 Youngs Lane	Yes	No	TNR056654
West Nashville Auto Recycling Inc.	5604 Centennial Blvd	Yes	No	TNR051899
Shrum Auto Salvage	1050 Old Buck Hill Road	Yes	No	TNR055907
Purity Dairies	360 Murfreesboro Pike	Yes	No	TNR053516
Metro Salvage, Inc.	1975 Springfield Hwy	Yes	No	TNR056220
VF Imagewear, Inc.	552 Hickory Hills Blvd	Yes	No	TNR051734
Kabinart fka United Cabinet Corporation	3650 Trousdale Dr	Yes	No	TNR054500
Cave Road Recycling	511 Cave Road	No	No	TNR050754
Clemons Concrete Coatings	505 Cave Road	Yes	No	TNR050721
Greer Stop Nut	481 McNally Dr	Yes	No	TNR050038
Nashville Ready Mix - Cowan Ct.	1436 Cowan Ct	No	Yes	TNG110236
Smyrna Ready Mix Concrete Plant	3730 Amy Lynn Drive	No	Yes	TNG110422
BFI Waste Services of TN (BFI of Nashville)	1160 Freightliner Dr	Yes	No	TNR058639
SA Recycling fka PSC Metals	710 S 1st St	Yes	No	TNR051488
Rogers Manufacturing Company	110 Transit Avenue	Yes	No	TNR050478
Buckeye Nashville I Terminal (fka Magellan)	1609 63rd Ave N	Yes	No	TNR056545
Buckeye Nashville II Terminal (fka Magellan)	1441 51st Ave N	Yes	No	TNR056486
Loves Travel Stops Store 429	130 West Trinity Lane	No	No	TN0065536
Jones Bros. Contractors Asphalt Plant #1 (Danley)	820 Old Ezell Road	Yes	No	TNR050885
Waste Management	7320 Centennial Blvd	No	No	TNR059106
Southeastern Freight Lines, Inc.	4141 Murfreesboro Pike	Yes	No	TNR053861
Besway Systems Inc	305 Williams Ave	Yes	No	TNR050298
MPLX Terminals-Bordeaux Terminal (aka Marathon Petroleum)	2920 Hydes Ferry Rd	Yes	No	TNR056512
(BFI Waste) Republic Services dba Nashville Hauling	621 Hill Ave	Yes	No	TNR058626
Exxon Mobile Nashville Terminal	1741 Ed Temple Blvd	No	No	TN0022462
Tennessee Commercial Warehouse - Nashville	700 Visco Drive	Yes	No	TNR053626
Motiva Nashville Terminal	1717 61st Ave N	No	No	None
Nashville Wilbert Burial Vault Co.	432 Woddycrest Ave	Yes	No	TNR053618
Nashville Wire Products	295 Driftwood St	No	No	None
Quality Plating	71 Fesslers Lane	Yes	No	TNR056370
Nashville VMF	707 Chestnut St	Yes	No	TNR053104
Vintage Millworks Inc	525 Merritt Ave	Yes	No	TNR054564
Wonton Food	1045 Firestone Parkway	Yes	No	TNR059509
American Farms	2132 Smith Springs Road	No	No	None



Table 10C.1 - Industrial Sites Inventoried within MWS NPDES Database (Continued)

Site Name	Site Location	TMSP Site	RMCP Site	TDEC Permit Number
Vulcan Construction Materials - Hermitage Asphalt (Lojac)	3552 Hermitage Industrial Dr	Yes	No	TNR055996
Vulcan Construction Materials - Hermitage Sign Shop	3552 Hermitage Industrial Drive	Yes	No	TNR058118
Vulcan Equipment Repair and Wash	3552 Hermitage Industrial Drive	No	No	TN0060119
Blanchard Terminal Company, LLC (Marathon Terminal)	1409 51st Ave N	Yes	No	TNR053661
Four Corners Yacht Club	4027 Lavergne Couchville	No	No	SOP-19022
WWO AL DP, LLC - Cane Ridge Rd Facility	5825 Cane Ridge Road	No	No	SOP-96032
St. Kyrillos the Sixth Coptic Orthodox Church	5988 Cane Ridge Road	No	No	SOP-00035
Metro Nashville - Arbor Crest	Arbor Pointe Way	No	No	SOP-00032
Rebound Care Corp- Burkitt Rd	6850 Burkitt Road	No	No	SOP-97009
Amazon.com Services DNA2	2960 Armory Dr	Yes	No	TNR058768
Vulcan Nashville- River Road Asphalt Plant	5853 River Road	Yes	No	TNR050735
Vulcan Construction - River Road Asphalt Plant	5853 River Road	No	No	SOP-96025
Vulcan Construction Materials - River Road Quarry	5853 River Road	No	No	TN0003549
Pine Bluff Materials (formerly Hunter Marine)	6615 Robertson Ave	Yes	No	TNR059211
Feintool Tennessee	2930 Old Franklin Road	Yes	No	TNR058955
Lee Building Products (Southland Brick and Block)	3201 Franklin Limestone Rd	Yes	No	TNR053089
Berry Film Products	428 Harding Industrial Drive	Yes	No	TNR059649
New Image Auto Dealer	1656 Antioch Pike	Yes	No	TNR059906
Amazon.com DEDC UTN1	410 Harding Industrial Drive	Yes	No	TNR059098
Southerland Inc	6050 Dana Way Suite 100	Yes	No	TNR050106
Waste Management C&D Recycle Center	3211 Franklin Limestone Rd	Yes	No	TNR058154
Wise Coaches Inc	540 Collins Park Drive	Yes	No	TNR059948
Vulcan Quarry - Hermitage	5301 Old Hickory Blvd	No	No	TN0003115
USA COE J P Priest Anderson Rd Picnic Area	4060 Anderson Road	No	No	SOP-16015
ABT Power Management (Concentric)	221 Blanton Avenue	Yes	No	TNR059350
August Bioservices (Radiant Technologies)	1845 Elm Hill Pk	No	No	TNR059955
Federal Express - BNAA	1931 Air Lane Dr	Yes	No	TNR053436
Stericycle (Shred-it)	800 Airpark Commerce Drive Suite 801	Yes	No	TNR059987
USPS Nashville	525 Royal Pkwy	Yes	No	TNR059239
US Smokeless Tobacco Manufacturing	800 Harrison St	Yes	No	TNR058868
CSM Paul Huff US Army Reserve Center	3598 Bell Road	Yes	No	TNR058762
Hearthside Food Solutions	660 Massman Drive	Yes	No	TNR050229



Table 10C.1 - Industrial Sites Inventoried within MWS NPDES Database (Continued)

Site Name	Site Location	TMSP Site	RMCP Site	TDEC Permit Number
Foley Products (Sherman-Dixie Concrete Industries, Inc.)	3641 Central Pike	No	Yes	TNG110408
AllWaste fka Onsite Environmental fka Greentree Processing	1501 Baptist World Center Drive	Yes	No	TNR053609
Smyrna Ready Mix	3040 Brandau Rd	No	Yes	TNG110270
IMI Nashville Freightliner	1281 Freightliner Drive	No	Yes	TNG110488
United States Cold Storage	1727 JP Hennessy Drive	Yes	No	TNR058897
Vulcan Construction Materials, LLC - Danley Asphalt (Lojac)	3185 Franklin Limestone Rd	Yes	No	TNR053269
FedEx Freight East Inc	3960 Logistics Way	Yes	No	TNR056445
Tradebe Treatment and Recycling of Nashville LLC.	450 Edenwold Road	Yes	No	TNR050450
Techno-Aide	7532 Hickory Hills Ct	Yes	No	TNR059784
Smyrna Mix Concrete	6677 River Road Pike	No	Yes	TNG110044
Amazon, LLC Sort Center / BNA5	50 Airways Blvd	Yes	No	TNR058257
IMI Nashville Airport	141 Bush Rd	No	Yes	TNG110189
Nashville Chemical & Equipment Co Inc	7340 Cockrill Bend Blvd	Yes	No	TNR059929
Hayward Pool Products	2935 Sidco Drive	Yes	No	TNR053355
Amazon.com Services STN1	2 Dell Parkway	Yes	No	TNR059496
81st RD CPL William F. Lyell AFRC	160 White Bridge Rd	Yes	No	TNR053805
Southern Aluminum Finishing	1417 Poplar Lane	Yes	No	TNR059771
Federal Express - MQYA	127 Athens Way	Yes	No	TNR053437
Kyzen Corporation	430 Harding Industrial Drive	Yes	No	TNR050396
Amazon.com Services HBN2	1701 Lebanon Pike Circle	Yes	No	TNR059918
American Fabricators Inc	570 Metroplex Drive	Yes	No	TNR050340
IMI Ready Mix- Robertson Road	6616 Robertson Ave	No	Yes	TNG110100
Waste Connections (Music City Pick A Part, LLC)	922 Lebanon Pike	Yes	No	TNR058703
ProTriton Feed LLC (fka Land O Lakes Purina Feed)	3601 Trousdale Dr	Yes	No	TNR053398
PlastiCycle	5801 Centennial Blvd	Yes	No	TNR059682
Southern Services (Waste Management of Tennessee-Nashville)	4651 Amy Lynn Dr	Yes	No	TNR051258
Amazon.com Services LLC	3818 Logistics Way	Yes	No	TNR059700
Palm Commodities International, Inc Sales	1717 JP Hennessy Dr	Yes	No	TNR056856
Messer LLC	4301 Hurricane Creek Rd	Yes	No	TNR059999
XPO Logistics	3737 Stewarts Lane	Yes	No	TNR058754
United Parcel Service - Nashville Whites Creek Pike	3205 Whites Creek Park	Yes	No	TNR053554
Akzo Nobel Coatings Inc.	20 Culvert St	Yes	No	TNR050546
Pepsi Bottling Group	715 Thompson Lane	Yes	No	TNR051157



Table 10C.1 - Industrial Sites Inventoried within MWS NPDES Database (Continued)

Site Name	Site Location	TMSP Site	RMCP Site	TDEC Permit Number
Vietti Foods Company, Inc.	636 Southgate Ave	Yes	No	TNR053850
GAF Materials Corp.	970 Fiber Glass Rd	Yes	No	TNR050872
Wikoff Color Corporation	214 Omonhundro Place	Yes	No	TNR059474
Living Earth - Jennie Brown Yard Processing	4783 Jennie Brown Lane	Yes	No	TNR059310
Cargill (Five Star Foods)	2621 Eugenia Ave	Yes	No	TNR059257
Superior Trim	511 Bridgeway Ave	Yes	No	TNR058370
Music City Environmental	1629 Elm Hill Pike	No	No	none
Warren Paint & Color Co	700 Wedgewood Ave	Yes	No	TNR051129
AAA Industries Inc.	3141 Ambrose Ave	Yes	No	TNR050753
All Star Recycling	460A Craighead Street	Yes	No	TNR056304
Delek Logistics LLC	90 Van Buren St	Yes	No	TNR056587
Rogers Group - Nashville Resale Yard	711 Lebanon Road	Yes	No	TNR058110
Cumberland Scrap Processor	3730 Amy Lynn Drive	Yes	No	TNR050017
Liquid Environmental Solutions	501 Cave Road	Yes	No	TNR058465
Electronic Responsible Recyclers	7515 Hickory Hills Ct	Yes	No	TNR059742
United Parcel Service - Nashville Massman Dr.	705 Massman Dr	Yes	No	TNR053562
Hogan Truck Leasing (Howard Baer)	1301 Foster Ave	Yes	No	TNR053385
N & S Inc.	361 Herron Dr	Yes	No	TNR050716
McRedmond Farms	919 Massman Dr	Yes	No	TNR059956
Metro Nashville District Energy System	90 Peabody St	Yes	No	TNR056643
Mid TN Recycling	3533 Hermitage Industrial Drive	Yes	No	TNR059390
R + L Carriers	3240 Franklin Limestone Rd	Yes	No	TNR052096
A & C Auto Parts	4701 Ashland City Hwy	Yes	No	TNR050702
Auto Central	12761 Old Hickory Blvd	Yes	No	TNR059790
TREW Industrial Wheels Inc.	310 Wilhagan Rd	Yes	No	TNR053987
M & W Transportation Co., Inc.	101 Terminal Court	Yes	No	TNR053706
River Cement Sales Co dba Buzzi Unicem USA	1818 Cement Plant Rd	Yes	No	TNR054581
Kano Laboratories LLC	1000 E Thompson Lane	Yes	No	TNR059830
Pine Bluff Materials - Visco	1030 Visco Dr	Yes	No	TNR053697
Flexsol Packaging Corp.	1105 Visco Drive	Yes	No	TNR055073
Civil Constructors - Staging	4551 Jennie Brown Lane	Yes	No	TNR059724
Hamilton Machine Co Inc	464 Woodycrest Ave	Yes	No	TNR054334
Darling Ingredients Inc.	31 Edenwald Rd	Yes	No	TNR056700
Alternative Energy Products	501 Crutcher St	Yes	No	TNR056334



Table 10C.1 - Industrial Sites Inventoried within MWS NPDES Database (Continued)

Site Name	Site Location	TMSP Site	RMCP Site	TDEC Permit Number
Lone Star Industries, Inc. d/b/a Buzzi Unicem USA - Nashville	1702 2nd Ave N	Yes	No	TNR050218
Fed Ex Ground - Nashville Knight Rd	3301 Knight Dr	Yes	No	TNR053369
Berry Global Group (Clipay Plastics Products)	463/555 Harding Industrial Dr	Yes	No	TNR056368
Greyhound Lines	709 Representative John Lewis Way South	Yes	No	TNR058664
Glatfelter Sontara Old Hickory (Jacob Holm Inc.)	326 Swinging Bridge Rd	Yes	No	TNR058900
Supreme Oil Central, Inc. (Stratas Foods)	189 Spence Lane	Yes	No	TNR053774
Summit Constructors	1516 Ft. Negley Blvd	Yes	No	TNR059632
Waste Management Truck Maintenance Facility/Garbage Transfer St	1428 Antioch Pike	Yes	No	TNR051258
The Mulch Company	665 & 667 Vernon Ave	Yes	No	TNR053751
American Appliance Products - Madison	1129 Myatt Dr	Yes	No	TNR050823
Siskin Steel	4040 Jordonia Station Road	Yes	No	TNR058950
ABF Freight System, Inc. - Nashville	890 Visco D	Yes	No	TNR051577
3M Company	400 Swinging Bridge Rd	Yes	No	TNR058417
Servitech Industries, Inc.	550 Brick Church Park Dr	Yes	No	TNR053500
Sessions Paving	6535 Robertson Ave	Yes	No	TNR055987
Titan Logistics LLC (BNE Properties, Inc).	317 Arlington Ave	Yes	No	TNR051617
Living Earth - West Nashville	6401 Centennial Blvd	Yes	No	TNR059259
Sysco Nashville	1 Hermitage Plaza	Yes	No	TNR058838
Nashville Machine Company	530 Woodycrest Ave	Yes	No	TNR050889
Rock Harbor Marine/Marina	525 Basswood Ave	Yes	No	TNR058737
Nashville Central STP	1600 2nd Ave N	Yes	No	TNR053258
Whites Creek Wastewater Treatment Plant	1360 County Hospital Rd	Yes	No	TN0024970
Dry Creek Wastewater Treatment Plant	61 Edenvold Rd	Yes	No	TNR053255
Paulo Products Company	3206 Ambrose Ave	Yes	No	TNR050762
Dynamic Lifecycle Innovations TN LLC	3520 Ambrose Ave	Yes	No	TNR058723
Precision Design and Machine Inc	6124 Cockrill Bend Circle	Yes	No	TNR054425
Kennametal Inc (ATI Metal Working Products)	1 Teledyne Place	Yes	No	TNR053523
WestRock (Smurfit-Stone Container)	707 19th Ave N	Yes	No	TNR053040
Advanced Composites (TN)	3050 Sidco Dr	Yes	No	TNR050238
48Forty Solutions (CHEP Recycled Pallet Solutions, LLC)	601 Space Park S	Yes	No	TNR059311
United Parcel Service - TCI	7525 Hickory Hills Ct	Yes	No	TNR053556
All State Auto Parts, Inc.	515 Nawakwa Trl	Yes	No	TNR056026
River Hills MRF	208 River Hills Drive	Yes	No	TNR053058



RelaDyne (J B Weimar)	7281 Centennial Blvd	Yes	No	TNR058304
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Table 10C.1 - Industrial Sites Inventoried within MWS NPDES Database (Continued)

Site Name	Site Location	TMSP Site	RMCP Site	TDEC Permit Number
Cumberland Terminals, Inc.	7260 Centennial Blvd	Yes	No	TNR056673
TDSI- Auto Distribution Center	600 Veritas St	Yes	No	TNR053065
John W. McDougall Co., Inc.	3731 Amy Lynn Drive	Yes	No	TNR056432
CSX Intermodal, Inc - Nashville Terminal	3086 Sidco Dr	Yes	No	TNR058111
MPLX Terminals LLC-Nashville (Marathon)	5 Main Street	Yes	No	TNR058168
Airgas USA LLC	7236 Centennial Blvd	No	No	none
Industrial Land Developers - Nashville Quarry	771 Burnett Road	No	No	TN0069922
Triune Residuals- Centennial	7133 Centennial Blvd	Yes	No	TNR050428
Mobile Materials Nashville	475 Ezell Pike	No	Yes	TNG110490
John C Tune Airport - Corporate Flight Management	110 Tune Airport Drive	Yes	No	TNR053942
Harpeth Valley Utility District	5910 River Road	No	No	TN0074748
Scott Materials	4701 Old Hydes Ferry Pike	Yes	No	TNR050486
Ford Nashville Property (Automotive Components)	7228 Centennial Blvd	Yes	No	TN0080675
Metro Nashville Airport Authority	1 Terminal Drive	No	No	TN0064041
NWI Nashville	1431 Vultee Blvd	No	No	TN0001597
Harpeth Valley Utility District STP	4063 Old Hickory Blvd	Yes	No	TN0074748
J.P. Priest HydroPower Plant	3737 Bell Road	No	No	TN0068152
Cumberland Heights Rehabilitation Center	8283 River Road	No	No	TN0067270
USA COE Old Hickory Dam, Left Bank	Cinder Road	No	No	TN0021491
Tennessee Air National Guard	240 Knapp Boulevard	Yes	No	TNR051762
CSX Transportation (Radnor Yard)	3661 Seaboard Drive	No	No	TN0064955
J.P. Priest Lake Hamilton Creek Recreation	2901 Bell Road	No	No	TN0028550
Wright Industries	707 Spence Lane	Yes	No	TNR054344
Opryland Resort and Entertainment Complex	2802 Opryland Drive	No	No	TN0068713
Borrow Site - Jones Brothers Contractors	Franklin Limestone Road	Yes	No	TNR059959
Antioch Travel Center	13011 Old Hickory Blvd	No	No	TN0028797
Nashville Ready Mix	411 Cowan St	No	Yes	TNG110500
Waste Pro Nashville	91 Polk Avenue	Yes	No	TNR050651
FusionSite Facility	1240 Fesslers Lane	Yes	No	TNR050662
Tennessee Army National Guard- Joint Base Berry Field	240 Knapp Boulevard	Yes	No	TNR058958
Amazon.com Services HBN1	2 Dell Pkwy	Yes	No	TNR059710
Nashville Zoo aka Grassmere	3777 Nolensville Road	No	No	TN0080630
Triune Residuals- Hermitage	3516 Central Pike	Yes	No	TNR054259



Table 10F.1 - Industrial Sites Inspected during FY24

Site Name	Site Location	Date Inspected	TDEC Permit Number	Pollutant Contributor
Rolling Frito-Lay Sales, LP - Nashville DC	130 Spence Lane	6/26/24	TNR056640	Minor-No Follow-up Performed
Sadler Bros Trucking & Leasing Company, Inc.	436 Enos Reed Dr	6/26/24	TNR050326	Minor-No Follow-up Performed
Dicaperl Minerals Corp.	2601 Osage St	6/13/24	TNR056770	Minor-No Follow-up Performed
Tailgate Brewery	7300 Charlotte Pike	5/30/24	TNR050849	Minor-No Follow-up Performed
Diskin Cider	1235 Martin St	5/28/24	TNR050899	Minor-No Follow-up Performed
Superior Solvents & Chemicals	518 Swinging Bridge Rd	5/28/24	none	Minor-No Follow-up Performed
Czanns Brewing Company	4909 Indiana Ave	5/28/24	TNR050895	Minor-No Follow-up Performed
Jackalope Brewing	429b Houston St	5/28/24	TNR050879	Minor-No Follow-up Performed
HoneyTree	918 Woodland St	5/28/24	TNR050862	Minor-No Follow-up Performed
Proper Sake	3109 Ambrose Ave	5/28/24	TNR050894	Minor-No Follow-up Performed
Bearded Iris	4101 Charlotte Ave Ste 40	5/28/24	TNR050865	Minor-No Follow-up Performed
Walker Brothers Beverage Co	411 Haynie Ave Suite 101	5/28/24	TNR050868	Minor-No Follow-up Performed
YRC Freight	7300 Centennial Blvd	5/28/24	TNR059164	Minor-No Follow-up Performed
John C. Tune Airport- TDOT Hangar	110 Tune Airport Drive	5/28/24	TNR050301	Minor-No Follow-up Performed
Cambria Company	3607 Trousdale Drive	5/24/24	TNR050379	Minor-No Follow-up Performed
Frontier Logistical Services (aka Cone Solvents)	1830 Linder Industrial Dr	5/24/24	None	Minor-No Follow-up Performed
Innophos, Inc.	4600 Centennial Blvd	5/22/24	TNR050060	Minor-No Follow-up Performed
Smyrna Ready Mix - Hailey's Harbor, Inc.	3730 Amy Lynn Dr	5/21/24	TNR053535	Major Exposure-NON/Letter Issued
Harcros Chemicals	1418 Poplar Ln	5/16/24	TNR058747	Minor-No Follow-up Performed
Fait la Force Brewing Co	1414 3rd Ave S. Suite 101	5/16/24	TNR050852	Minor-No Follow-up Performed
Nashville Barrel Co	809 Heathcote Ave	5/16/24	TNR050890	Minor-No Follow-up Performed
Corsair Artisan	601 Merritt Ave	5/16/24	TNR050858	Minor-No Follow-up Performed
CMC Rebar Nashville	852 Visco Dr	5/16/24	TNR058335	Minor-No Follow-up Performed
The Coats Company fka Hennessy Industries	1601 JP Hennessy Dr	5/10/24	TNR050446	Minor-No Follow-up Performed
Sinomax East, Inc.	1740 JP Hennessey Drive	5/10/24	TNR059275	Minor-No Follow-up Performed
Ole Smoky Distillery	423 6th Ave S.	5/8/24	None	Minor-No Follow-up Performed
YeeHaw Brewing	423 6th Ave S.	5/8/24	TNR050904	Minor-No Follow-up Performed
Mid-South Wire	1040 Visco Drive	5/1/24	TNR050712	Moderate Exposure-Verbal/Email Follow-up



Table 10F.1 - Industrial Sites Inspected during FY24 (Continued)

Site Name	Site Location	Date Inspected	TDEC Permit Number	Pollutant Contributor
Mid-South Wire (formerly AJAX Turner Co.)	1045 Visco Drive	5/1/24	TNR058898	Minor-No Follow-up Performed
Prisma fka Quad Graphics	2947 Brick Church Pike	4/24/24	TNR058368	Minor-No Follow-up Performed
SA Recycling fka Southern Recycling	1840 Linder Industrial Blvd	4/18/24	TNR056650	Major Exposure-NON/Letter Issued
Tennessee Imports Auto Salvage	326 Oriel Ave	4/17/24	TNR055923	Minor-No Follow-up Performed
TWB Antioch	6050 Dana Way	4/17/24	TNR059269	Moderate Exposure-Verbal/Email Follow-up
Pull-A-Part, LLC	7114 Centennial Boulevard	4/16/24	TNR056537	Minor-No Follow-up Performed
Amazon.com Services DTN6	710 Myatt Drive	4/12/24	TNR056369	Minor-No Follow-up Performed
Parman Energy	7101 Cockrill Bend Blvd	3/27/24	TNR059092	Minor-No Follow-up Performed
BHT Resources	1216 South Dickerson Road	3/22/24	TNR050737	Moderate Exposure-Verbal/Email Follow-up
Nashville Ready Mix West Nashville	5853 River Road	3/12/24	TNG110308	Minor-No Follow-up Performed
Fiberweb, Inc. (Berry Global)	70 Old Hickory Blvd	3/11/24	TNR056004	Minor-No Follow-up Performed
Waste Management - North Nashville (Rivergate MRF)	630 Myatt Dr	3/6/24	TNR058691	Minor-No Follow-up Performed
CMC Steel US, LLC	4280 Sidco Drive	2/28/24	TNR054524	Moderate Exposure-Verbal/Email Follow-up
Nashville Wire Products	1604 County Hospital Rd	2/28/24	TNR050806	Minor-No Follow-up Performed
Carlex Glass America	7200 Centennial Blvd	2/13/24	TN0003573	Minor-No Follow-up Performed
Nashville Ready Mix - Visco	1120 Visco Drive	2/6/24	TNG110470	Minor-No Follow-up Performed
Superior Sandblasting and Powder Coating	71 Fessler's Lane	2/6/24	None	Major Exposure-NON/Letter Issued
Vulcan Materials - Danley Quarry	3187 Franklin Limestone Rd	2/2/24	TN0003026	Major Exposure-NON/Letter Issued
Home City Ice	1406 Gould Ave	2/2/24	TNR050944	Moderate Exposure-Verbal/Email Follow-up
Safety-Kleen Systems, Inc.	215 Whitsett Rd	1/31/24	TNR053225	Minor-No Follow-up Performed
Hilltop Auto Salvage	2408 Dickerson Pk	1/30/24	TNR056159	Major Exposure-NON/Letter Issued
Quikrete - Nashville	6614 Robertson Ave	1/30/24	TNR053497	Moderate Exposure-Verbal/Email Follow-up
Home City Ice fka Reddy Ice	7261 Centennial Blvd	1/26/24	TNR058772	Minor-No Follow-up Performed
Anchor Transportation	7435 Old Hickory Blvd	1/10/24	TNR050589	Minor-No Follow-up Performed
Anchor Transportation	3108 Blevins Road	1/10/24	TNR050588	Moderate Exposure-Verbal/Email Follow-up
AZZ Galvanizing (North American Galvanizing Co.)	3201 Elkins Avenue	1/9/24	TNR053495	Major Exposure-NON/Letter Issued
Nitetrain Coach Co	7454 Old Hickory Blvd	1/5/24	TNR050604	Moderate Exposure-Verbal/Email Follow-up

Table 10F.1 - Industrial Sites Inspected during FY24 (Continued)

Site Name	Site Location	Date Inspected	TDEC Permit Number	Pollutant Contributor
Smyrna Ready Mix Concrete INC. - Visco Drive	1020 Visco Dr	12/13/23	TNG110138	Moderate Exposure-Verbal/Email Follow-up
Nashville Ready Mix, Inc. Baptist World	1326 Baptist World Center Dr	12/12/23	TNG110237	Minor-No Follow-up Performed
Jones Brothers Truck Shop	129 Bush Road	12/12/23	TNR051878	Minor-No Follow-up Performed
Marathon Petroleum Company LLC	930 Youngs Lane	12/5/23	TNR056654	Minor-No Follow-up Performed
West Nashville Auto Recycling Inc.	5604 Centennial Blvd	11/28/23	TNR051899	Minor-No Follow-up Performed
Shrum Auto Salvage	1050 Old Buck Hill Road	11/28/23	TNR055907	Minor-No Follow-up Performed
Purity Dairies	360 Murfreesboro Pike	11/28/23	TNR053516	Moderate Exposure-Verbal/Email Follow-up
Metro Salvage, Inc.	1975 Springfield Hwy	11/28/23	TNR056220	Minor-No Follow-up Performed
VF Imagewear, Inc.	552 Hickory Hills Blvd	11/22/23	TNR051734	Minor-No Follow-up Performed
Kabinart aka United Cabinet Corporation	3650 Trousdale Dr	11/17/23	TNR054500	Moderate Exposure-Verbal/Email Follow-up
Cave Road Recycling	511 Cave Road	11/14/23	TNR050754	Moderate Exposure-Verbal/Email Follow-up
Clemons Concrete Coatings	505 Cave Road	11/14/23	TNR050721	Minor-No Follow-up Performed
Greer Stop Nut	481 McNally Dr	10/31/23	TNR050038	Minor-No Follow-up Performed
Nashville Ready Mix - Cowan Ct.	1436 Cowan Ct	10/24/23	TNG110236	Moderate Exposure-Verbal/Email Follow-up
Smyrna Ready Mix Concrete Plant	3730 Amy Lynn Drive	10/10/23	TNG110422	Minor-No Follow-up Performed
BFI Waste Services of TN (BFI of Nashville)	1160 Freightliner Dr	10/4/23	TNR058639	Minor-No Follow-up Performed
SA Recycling fka PSC Metals	710 S 1st St	10/2/23	TNR051488	Major Exposure-NON/Letter Issued
Rogers Manufacturing Company	110 Transit Avenue	10/2/23	TNR050478	Minor-No Follow-up Performed
Buckeye Nashville I Terminal (fka Magellan)	1609 63rd Ave N	9/29/23	TNR056545	Minor-No Follow-up Performed
Buckeye Nashville II Terminal (fka Magellan)	1441 51st Ave N	9/29/23	TNR056486	Minor-No Follow-up Performed
Loves Travel Stops Store 429	130 West Trinity Lane	9/20/23	TN0065536	Major Exposure-NON/Letter Issued
Jones Bros. Contractors Asphalt Plant #1 (Danley)	820 Old Ezell Road	9/19/23	TNR050885	Moderate Exposure-Verbal/Email Follow-up
Waste Management	7320 Centennial Blvd	9/8/23	TNR059106	Minor-No Follow-up Performed
Southeastern Freight Lines, Inc.	4141 Murfreesboro Pike	8/30/23	TNR053861	Minor-No Follow-up Performed
Besway Systems Inc	305 Williams Ave	8/21/23	TNR050298	Moderate Exposure-Verbal/Email Follow-up

Table 10F.1 - Industrial Sites Inspected during FY24 (Continued)

Site Name	Site Location	Date Inspected	TDEC Permit Number	Pollutant Contributor
MPLX Terminals-Bordeaux Terminal (fka Marathon Petroleum)	2920 Hydes Ferry Rd	8/15/23	TNR056512	Minor-No Follow-up Performed
(BFI Waste) Republic Services dba Nashville Hauling	621 Hill Ave	8/9/23	TNR058626	Moderate Exposure-Verbal/Email Follow-up
Exxon Mobile Nashville Terminal	1741 Ed Temple Blvd	7/25/23	TN0022462	Minor-No Follow-up Performed
Tennessee Commercial Warehouse - Nashville	700 Visco Drive	7/14/23	TNR053626	Minor-No Follow-up Performed
Motiva Nashville Terminal	1717 61st Ave N	7/7/23	None	Minor-No Follow-up Performed

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Table 13A.1 – TMDL Monitoring Data for FY24

Date	Time	Site Name	DWR	Samplers (initials)	Diss. O2	Conductivity	Temp.	pH	Flow	E. coli	Activity Type
			STATION ID		mg/L	µS	°C		cfs	MPN/100mL	
7/12/2023	9:04	Little Harpeth	LHARP001.0WI	VL/LB	7.59	531	22.1	8.04		517.2	Sample Routine
7/12/2023	10:51	Hurricane	HURRI000.26DA	VL/LB	9.11	561	23.5	8.03	7.51	58.1	Sample Routine
7/12/2023	11:36	McCroy 1	MCCRO001.5DA	VL/LB	7.73	707	21.6	7.9	2.52	387.3	Sample Routine
7/12/2023	12:13	Stoners 1	STONE000.9DA	VL/LB	6.75	845	21.9	7.81		151.5	Sample Routine
7/12/2023	12:35	Stoners 2	STONE001.9DA	VL/LB	8.44	510	23.9	8.13	4.75	307.6	Sample Routine
7/12/2023	13:02	Scotts	SCOTT000.06DA	VL/LB	7.92	497	22.6	8.1	1.65	290.9	Sample Routine
7/18/2023	7:31	Little Harpeth	LHARP001.0WI	MB	6.55	534	23.5	8.23	9.62	579.4	Sample Routine
7/18/2023	7:38	Stoners 1	STONE000.9DA	VL/LB	7.09	709	21.2	8.53		290.9	Sample Routine
7/18/2023	8:10	Stoners 2	STONE001.9DA	VL/LB	6.59	443.9	23.6	8.54	10.39	410.6	Sample Routine
7/18/2023	8:44	Scotts	SCOTT000.06DA	VL/LB	6.17	479	22.7	8.55		410.6	Sample Routine
7/18/2023	9:42	McCroy 1	MCCRO001.5DA	VL/LB	6.32	683	22.9	8.58	4.27	435.2	Sample Routine
7/18/2023	10:32	Hurricane	HURRI000.26DA	VL/LB	8.72	559	24.9	8.71	5.61	118.7	Sample Routine
7/18/2023	10:32	Hurricane	HURRI000.26DA	VL/LB						129.6	Sample Routine
7/25/2023	9:28	Little Harpeth	LHARP001.0WI	MB	7.5	519	21.5	8.01	50.01	275.5	Sample Routine
7/25/2023	7:48	Hurricane	HURRI000.26DA	VL/LB	7.28	590	22.8	8.42	2.15	122.3	Sample Routine
7/25/2023	9:09	McCroy 1	MCCRO001.5DA	VL/LB	6.18	756	21.8	8.81	2.4	>2419.6	Sample Routine
7/25/2023	9:44	Stoners 1	STONE000.9DA	VL/LB	7.51	705	21.7	8.5	15.08	167	Sample Routine
7/25/2023	10:29	Stoners 2	STONE001.9DA	VL/LB	7.83	524	23.1	9.04	1.54	185	Sample Routine
7/25/2023	10:59	Scotts	SCOTT000.06DA	VL/LB	7.82	462	22.2	8.68	0.86	648.8	Sample Routine
7/25/2023	7:48	Hurricane	HURRI000.26DA	VL/LB						85.7	Sample Routine
7/26/2023	7:38	Little Harpeth	LHARP001.0WI	MB	7.59	545	22.7	8.05	9.72	387.3	Sample Routine
7/26/2023	7:48	Hurricane	HURRI000.26DA	VL/LB	7.49	583	24	8.39	8.23	98.8	Sample Routine
7/26/2023	9:00	McCroy 1	MCCRO001.5DA	VL/LB	6.69	759	22.8	8.54	17	547.5	Sample Routine
7/26/2023	9:33	Stoners 1	STONE000.9DA	VL/LB	7.49	718	22.1	8.55	37.1	125.9	Sample Routine
7/26/2023	10:13	Stoners 2	STONE001.9DA	VL/LB	7.85	512	24.3	8.92	12.63	248.9	Sample Routine
7/26/2023	10:43	Scotts	SCOTT000.06DA	VL/LB	7.04	464	23	8.84	3.75	410.6	Sample Routine

Table 13A.1 – TMDL Monitoring Data for FY24 (Continued)

Date	Time	Site Name	DWR	Samplers (initials)	Diss. O2	Conductivity	Temp.	pH	Flow	E. coli	Activity Type
			STATION ID		mg/L	µS	°C		cfs	MPN/100mL	
7/25/2023	7:48	Hurricane	HURRI000.26DA	VL/LB						85.7	Sample Routine
7/26/2023	7:38	Little Harpeth	LHARP001.0WI	MB	7.59	545	22.7	8.05	9.72	387.3	Sample Routine
7/26/2023	7:48	Hurricane	HURRI000.26DA	VL/LB	7.49	583	24	8.39	8.23	98.8	Sample Routine
7/26/2023	9:00	McCrary 1	MCCRO001.5DA	VL/LB	6.69	759	22.8	8.54	17	547.5	Sample Routine
7/26/2023	9:33	Stoners 1	STONE000.9DA	VL/LB	7.49	718	22.1	8.55	37.1	125.9	Sample Routine
7/26/2023	10:13	Stoners 2	STONE001.9DA	VL/LB	7.85	512	24.3	8.92	12.63	248.9	Sample Routine
7/26/2023	10:43	Scotts	SCOTT000.06DA	VL/LB	7.04	464	23	8.84	3.75	410.6	Sample Routine
7/27/2023	8:10	Little Harpeth	LHARP001.0WI	MB	6.7	506	23.2	8.02	11.72	290.9	Sample Routine
7/27/2023	8:12	Hurricane	HURRI000.26DA	VL/LB	6.85	603	24.7	8.74	5.27	325.5	Sample Routine
7/27/2023	9:07	McCrary 1	MCCRO001.5DA	VL/LB	5.99	758	23.4	8.6	4.18	461.1	Sample Routine
7/27/2023	9:39	Stoners 1	STONE000.9DA	VL/LB	7.35	767	22.3	8.55	18.76	129.6	Sample Routine
7/27/2023	10:30	Stoners 2	STONE001.9DA	VL/LB	7.33	513	24.9	8.79	13.28	344.8	Sample Routine
7/27/2023	11:06	Scotts	SCOTT000.06DA	VL/LB	6.4	506	23.8	8.6	5.87	387.3	Sample Routine
8/21/2023	8:36	Hurricane	HURRI000.26DA	VL/LB	7.85	616	23.8	7.91		121.1	Sample Routine
8/21/2023	9:17	McCrary	MCCRO001.5DA	VL/LB	6.32	766	22.4	7.91		1203.3	Sample Routine
8/21/2023	8:10	Little Harpeth	LHARP001.0WI	MB	6.63	558	23.1	8.39		307.6	Sample Routine
8/21/2023	9:39	Stoners 1	STONE000.9DA	VL/LB	6.2	714	23	7.84		131.4	Sample Routine
8/21/2023	10:10	Stoners 2	STONE001.9DA	VL/LB	7.49	528	23.4	8.18		201.4	Sample Routine
8/21/2023	9:39	Stoners 1 Dup	STONE000.9DA	VL/LB						166.4	Quality Control Sample - Field Replicate

Table 13A.1 – TMDL Monitoring Data for FY24 (Continued)

Date	Time	Site Name	DWR	Samplers (initials)	Diss. O2	Conductivity	Temp.	pH	Flow	E. coli	Activity Type
			STATION ID		mg/L	µS	°C	cfs	MPN/100mL		
8/21/2023	10:33	Scotts	SCOTT000.06DA	VL/LB	7.97	480	23.1	8.22		648.8	Sample Routine
9/21/2023	8:58	Hurricane	HURRI000.26DA	VL/LB	8.23	60.1	19.8	8.05		178.5	Sample Routine
9/21/2023	10:06	McCroy	MCCRO001.5DA	VL/LB	6.07	717	19.4	8.03		275.5	Sample Routine
9/21/2023	9:31	Little Harpeth	LHARP001.0WI	MB	7.03	505	19.5	8.87		579.4	Sample Routine
9/21/2023	10:31	Stoners 1	STONE000.9DA	VL/LB	7.58	1000	20.2	7.99		1986.3	Sample Routine
9/21/2023	11:02	Stoners 2	STONE001.9DA	VL/LB	6.52	578	20.5	8.17		186	Sample Routine
9/21/2023	11:25	Scotts	SCOTT000.06DA	VL/LB	5.58	554	19.9	8.25		1203.3	Sample Routine
9/21/2023	11:25	Scotts Dup	SCOTT000.06DA	VL/LB	5.86	534	19.8	8.21		1986.3	Quality Control Sample - Field Replicate
9/25/2023	11:40	Scotts	SCOTT000.06DA	LB	6.2	556	19.9	8.64		1732.9	Sample Routine
10/23/2023	7:08	McCroy 1	MCCRO001.5DA	MB/LB	5.32	812	13.6	7.68		325.5	Sample Routine
10/23/2023	7:36	Stoners 1	STONE000.9DA	MB/LB	7.17	1105	15.4	7.77		261.3	Sample Routine
10/23/2023	7:55	Stoners 2	STONE001.9DA	MB/LB	6.01	341.1	13.5	8.83		43.9	Sample Routine
10/23/2023	8:20	Scotts	SCOTT000.06DA	MB/LB	7.16	521	12.4	7.83		365.4	Sample Routine
10/23/2023	9:14	Hurricane	HURRI000.26DA	MB/LB	9.97	605	13	7.92		76.7	Sample Routine
10/23/2023	10:09	Little Harpeth	LHARP001.0WI	MB/LB	8.14	571	13.4	8.09		77.1	Sample Routine
10/23/2023	9:14	Hurricane	HURRI000.26DA							117.8	Quality Control Sample - Field Replicate
11/14/2023	8:20	Hurricane	HURRI000.26DA	VL/LB	11.37	553	10.6	7.96		84.5	Sample Routine
11/14/2023	9:01	McCroy 1	MCCRO001.5DA	VL/LB	6.52	735	10.6	7.69		191.8	Sample Routine
11/14/2023	9:33	Stoners 1	STONE000.9DA	VL/LB	8.39	1065	13.5	8.07		145	Sample Routine
11/14/2023	9:57	Stoners 2	STONE001.9DA	VL/LB	7.6	550	10.5	7.95		103.6	Sample Routine

Table 13A.1 – TMDL Monitoring Data for FY24 (Continued)

Date	Time	Site Name	DWR	Samplers (initials)	Diss. O2	Conductivity	Temp.	pH	Flow	E. coli	Activity Type
			STATION ID		mg/L	µS	°C		cfs	MPN/100mL	
11/14/2023	9:57	Stoners 2	STONE001.9DA	VL/LB						95.9	Quality Control Sample - Field Replicate
11/14/2023	10:24	Scotts	SCOTT000.06DA	VL/LB	76.4	565	10.2	8.47		325.5	Sample Routine
11/14/2023	9:44	Little Harpeth	LHARP001.0WI	MB	8.74	548	10.2	8.34		101	Sample Routine
12/20/2023	8:00	Little Harpeth	LHARP001.0WI	VL	12.61	562	3.2	8.62		70.8	Sample Routine
12/20/2023	8:31	Hurricane	HURRI000.26DA	LB	12.64	577	4.1	7.98		101.7	Sample Routine
12/20/2023	9:23	McCrary 1	MCCRO001.5DA	LB	10.9	755	4.3	7.9		135.4	Sample Routine
12/20/2023	9:48	Stoners 1	STONE000.9DA	LB	10.46	833	8.8	8.48		110.6	Sample Routine
12/20/2023	10:10	Stoners 2	STONE001.9DA	LB	96.6	563	2.9	8.1		98.8	Sample Routine
12/20/2023	10:51	Scotts	SCOTT000.06DA	LB	106.4	571	3.9	8.28		108.1	Sample Routine
1/31/2024	8:11	Hurricane	HURRI000.26DA	LB	9.52	574	11.8	7.53		69.7	Sample Routine
1/31/2024	8:18	Little Harpeth	LHARP001.0WI	VL	11.24	374.7	9.5	8.04		64.4	Sample Routine
1/31/2024	9:03	McCrary 1	MCCRO001.5DA	LB	10.15	802	9.8	7.89		139.6	Sample Routine
1/31/2024	9:05	Field Blank		LB						ND	Quality Control Sample - Field Blank
1/31/2024	9:13	Scotts	SCOTT000.06DA	VL	13.12	350.9	9	8.88		166.4	Sample Routine
1/31/2024	9:39	Stoners 1	STONE000.9DA	LB	10.57	608	10.1	7.96		382.3	Sample Routine
1/31/2024	10:00	Stoners 2	STONE001.9DA	VL/LB	11.87	510	9.4	8.17		191.8	Sample Routine
1/31/2024	10:00	Stoners 2 Dup	STONE001.9DA	VL/LB						143.9	Quality Control Sample - Field Replicate
1/31/2024	6:21	Trip Blank		VL						ND	Quality Control Sample - Trip Blank
2/21/2024	6:30	Trip Blank		LB/VL						ND	Quality Control Sample - Trip Blank

Table 13A.1 – TMDL Monitoring Data for FY24 (Continued)

Date	Time	Site Name	DWR	Samplers (initials)	Diss. O2	Conductivity	Temp.	pH	Flow	E. coli	Activity Type
			STATION ID		mg/L	µS	°C	cfs	MPN/100mL		
2/21/2024	8:00	Little Harpeth	LHARP001.0WI	LB/VL	11.08	496	9.1	8.09		209.1	Sample Routine
2/21/2024	8:04	Hurricane	HURRI000.26DA	LB/VL	11.23	393.6	9.7	8.06		40.8	Sample Routine
2/21/2024	8:57	McCrary 1	MCCRO001.5DA	LB/VL	11.05	510	7.87	8.05		111.2	Sample Routine
2/21/2024	9:02	Scotts	SCOTT000.06DA	LB/VL	14.02	464	8.2	8.4		261.3	Sample Routine
2/21/2024	9:15	Stoners 1	STONE000.9DA	LB/VL	11.44	386.9	9	8.05		172.2	Sample Routine
2/21/2024	9:39	Stoners 2	STONE001.9DA	VL/LB	13.24	338.3	8.9	8.28		85.7	Sample Routine
2/21/2024	9:39	Stoners 2 Dup	STONE001.9DA	VL/LB						96	Quality Control Sample - Field Replicate
2/21/2024	9:13	Field Blank		VL/LB						ND	Quality Control Sample - Field Blank
3/20/2024	8:06	Hurricane	HURRI000.26DA	VL/LB	10.66	399.4	10.9	7.58		56.5	Sample Routine
3/20/2024	9:03	McCrary 1	MCCRO001.5DA	VL/LB	10.87	498	10.9	7.82		172.2	Sample Routine
3/20/2024	9:28	Stoners 1	STONE000.9DA	VL/LB	11.74	440.2	11.6	8		129.6	Sample Routine
3/20/2024	9:53	Stoners 2	STONE001.9DA	VL/LB	13.18	344.5	10.6	8.23		260.3	Sample Routine
3/20/2024	8:48	Little Harpeth		VL/LB	10.19	484	10.6	8.06		160.7	Sample Routine
3/20/2024	9:05	Scotts	SCOTT000.06DA	VL/LB	12.06	467	9.6	8.2		1986.3	Sample Routine
3/20/2024	9:03	McCrary 1 Dup	MCCRO001.5DA	VL/LB						172.2	Quality Control Sample - Field Replicate
3/20/2024	6:30	Trip Blank		VL/LB						ND	Quality Control Sample - Trip Blank
3/20/2024	9:02	Field Blank		VL/LB						ND	Quality Control Sample - Field Blank
3/25/2024	9:09	Scotts	SCOTT000.06DA	LB	10.96	367.5	11.7	8.29		488.4	Sample Routine

Table 13A.1 – TMDL Monitoring Data for FY24 (Continued)

Date	Time	Site Name	DWR	Samplers (initials)	Diss. O2	Conductivity	Temp.	pH	Flow	E. coli	Activity Type
			STATION ID		mg/L	µS	°C	cfs	MPN/100mL		
4/15/2024	8:17	Little Harpeth	LHARP001.0WI	VL	7.72	503	16.6	7.86		167	Sample Routine
4/15/2024	9:26	Scotts	SCOTT000.06DA	VL	10.15	488	16	8.32		579.4	Sample Routine
4/15/2024	10:11	Stoners 2	STONE001.9DA	VL	11.39	480	17.2	8.41		85.7	Sample Routine
4/15/2024	8:50	Hurricane	HURRI000.26DA	LB	11.58	531	16.3	7.95		35.9	Sample Routine
4/15/2024	9:39	McCrary 1	MCCRO001.5DA	LB	9.18	668	16.4	7.88		167	Sample Routine
4/15/2024	9:54	Stoners 1	STONE000.9DA	LB	11.65	608	16.9	8.26		66.3	Sample Routine
4/15/2024	7:04	Trip Blank		VL/LB						ND	Quality Control Sample - Trip Blank
4/15/2024	9:06	Field Blank		VL						ND	Quality Control Sample - Field Blank
5/20/2024	8:50	Little Harpeth	LHARP001.0WI	VL/LB	8.78	503	18.8	8.02		410.6	Sample Routine
5/20/2024	9:16	Hurricane	HURRI000.26DA	VL/LB	8.89	548	18.9	7.72		113.7	Sample Routine
5/20/2024	9:51	McCrary 1	MCCRO001.5DA	VL/LB	7.85	717	18.8	8.01		185	Sample Routine
5/20/2024	9:48	Scotts	SCOTT000.06DA	VL/LB	9.1	484	18.9	8.23		325.5	Sample Routine
5/20/2024	10:11	Stoners 1	STONE000.9DA	VL/LB	8.38	653	19.7	8.01		178.9	Sample Routine
5/20/2024	10:37	Stoners 2	STONE001.9DA	VL/LB	8.2	489	20.1	8.1		260.3	Sample Routine
5/20/2024	10:37	Stoners 2 Dup	STONE001.9DA	VL/LB						261.3	Quality Control Sample - Field Replicate
5/20/2024	10:32	Field Blank		VL/LB						ND	Quality Control Sample - Field Blank

Table 13A.1 – TMDL Monitoring Data for FY24 (Continued)

Date	Time	Site Name	DWR	Samplers (initials)	Diss. O2	Conductivity	Temp.	pH	Flow	E. coli	Activity Type
			STATION ID		mg/L	µS	°C		cfs	MPN/100mL	
5/20/2024	7:20	Trip Blank								ND	Quality Control Sample - Trip Blank
6/12/2024	9:20	Hurricane	HURRI000.26DA	LB	8.45	592	19.4	7.88		95.8	Sample Routine
6/12/2024	10:00	McCroy 1	MCCRO001.5DA	LB	7.72	725	18	7.88		292.4	Sample Routine
6/12/2024	10:19	Stoners 1	STONE000.9DA	LB	8.81	757	18.3	7.91		185	Sample Routine
6/12/2024	10:42	Stoners 2	STONE001.9DA	LB	8.47	505	19.1	8.16		206.4	Sample Routine
6/12/2024	10:42	Stoners 2 Dup	STONE001.9DA	LB						238.2	Quality Control Sample - Field Replicate
6/12/2024	11:03	Scotts	SCOTT000.06DA	LB	9.33	465	18.9	8.25		436	Sample Routine
6/12/2024	9:10	Little Harpeth	LHARP001.0WI	VL/AC	8.74	519	18.6	8.58		117.8	Sample Routine
6/12/2024	8:06	Trip Blank		VL						ND	Quality Control Sample - Trip Blank
6/12/2024	9:08	Field Blank		VL/AC						ND	Quality Control Sample - Field Blank

Table 13A.2 - SWMP Quantifiable Statistics

Categories	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Total Waste Collected (tons)	152,430.24	153,266.01	149,474.79	151,425.06	151,501.17	148,297.40	151,131.01	153,795.70	155,738.78	163,340.77	162,884.18	165,720.90	175,580.57	179,135.55	178,483.99	169,782.47	161,684.58	164,291.02
# of Water Quality Complaints (non-construction) Investigations Initiated in Database	156	135	133	139	138	122	131	114	99	100	107	120	123	130	112	94	124	165
# of Construction Stormwater-Related Inspections (Grading Permit Sites or Grading without Permit)	6,552	6,327	6,160	5,079	5,457	5,843	5,170	6,064	6,082	6,684	6,787	7,277	8,342	8,590	8,606	9,528	9,597	9,373
# of Grading Permits Issued	239	165	109	121	135	142	138	318	276	254	262	311	327	283	308	290	255	240
# of Engineered Plans Submitted to Stormwater Development and Review	1,505	1,970	1,600	1,367	1,319	1,525	1,791	1,813	2,572	3,034	3,636	3,293	2,911	1,646	1,340	1,168	1,121	2,085
# of Construction Plans Approved or Declared No Permit Needed by Stormwater Development and Review	619	871	687	506	559	1,174	1,411	1,360	1,998	1,450	1,419	1,415	1,205	1,537	1,286	1,144	1,109	1,993
# of Stormwater Enforcements (Construction-Related) (NOVs and SWOs)	190	342	188	123	148	94	96	168	128	116	159	112	125	87	76	77	78	60



Table 13A.3 – Ambient Monitoring Data for the FY24 Reporting Period

Date	Time	Site Name	DWR STATION ID	Sampler s (initials)	DO %	DO mg/L	Conductivity	Temp. C	pH	Flow	E. coli	BOD 5	CO D	NH3	TKN	Nitrate -Nitrite	Total Nitrogen	Dissolved P	Total P	Lead	Zinc	Cr	Copper	Nickel	Oil and Grease	TSS	TDS
							uS			ft ³ /sec	MPN	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L
11/29/2023	10:35	Field Blank	---	VL/LB	---	---	---	---	---	---	<1	<2	<15	<0.1	<0.07	<0.1	<0.175	ND	ND	<0.1	<1	<1	<1	<0.1	<1.4	<5	<5
8/22/2023	6:45	Trip Blank	---	LB/VL	---	---	---	---	---	---	<1	<2	<15	<0.1	<0.07	<0.1	<0.175	ND	ND	<0.1	<1	<1	<1	<0.1	<1.4	<5	<5
8/22/2023	8:44	Harpeth 2	HARPE048.9DA	VL/LB	78.8	6.33	470	26	8.09	164	69.5	<2	<15	<0.1	0.34	0.771	1.211	0.34	0.5	0.227	1.454	<1	<1	0.552	<1.4	22	304
11/29/2023	8:56	Harpeth 2	HARPE048.9DA	VL/LB	97.5	12.3	496	5.1	8.94	41	29.2	<2	<15	<0.1	0.33	0.37	0.8	0.33	0.36	<0.1	1.438	<1	<1	0.345	<1.4	<5	328
2/7/2024	7:49	Harpeth 2	HARPE048.9DA	MB/VL	111	12.78	433.6	8.9	8.55	324	36.8	<2	<15	<0.1	0.23	1.09	1.42	0.21	0.24	0.142	1.141	<1	<1	0.325	<1.4	11	270
2/7/2024	7:49	Harpeth 2 Dup	HARPE048.9DA	MB/VL	---	---	---	---	---	324	37.9	<2	<15	<0.1	0.16	1.08	1.34	0.19	0.25	0.137	1.147	<1	<1	0.332	<1.4	10	267
5/21/2024	6:58	Harpeth 2	HARPE048.9DA	MB/LB	82.8	7.2	393.7	21.4	Equip. Error	418	98.8	<2	<15	<0.1	0.2	0.908	1.208	0.25	0.33	0.282	<1	<1	<1	0.496	<1.4	14	243
8/22/2023	10:08	Stones 2	STONE003.9DA	VL/LB	52	4.07	352	24.6	7.67	128	12.1	<2	<15	<0.1	0.37	0.147	0.617	0.04	0.07	<0.1	<1	<1	<1	0.294	<1.4	<5	215
11/29/2023	10:35	Stones 2	STONE003.9DA	VL/LB	71.6	7.4	299.5	13.7	7.61	1620	10.9	<2	<15	<0.1	0.69	<0.1	0.89	0.03	-99	<0.1	<1	<1	<1	0.261	<1.4	<5	182
2/7/2024	9:18	Stones 2	STONE003.9DA	MB/VL	119.6	15	32.7	5.5	8.86	5350	2	<2	<15	<0.1	0.51	0.226	0.836	0.03	0.09	0.124	<1	<1	<1	0.534	<1.4	8	195
5/21/2024	6:39	Stones 2	STONE003.9DA	VL	118	10.25	293.7	21.9	7.87	4620	133.4	<2	<15	<0.1	0.44	<0.1	0.64	Lab Error	0.04	<0.1	<1	<1	<1	0.38	<1.4	9	161

ND = Non-detect

DRAFT



Table 13A.4 – Benthic Monitoring Data for TMDL Streams during FY24 Reporting Period

Date	Time	Watershed	Site Name	Samplers (initials)	DO %	DO mg/L	Cond. uS	Temp. C	pH	Flow ft3/sec	Nitrate-Nitrite mg/L	Total Phos. mg/L	Benthic Score	DWR STATION ID
7/11/2023	8:39	Mill	Owl Creek	VL/LB	65.3	5.82	528	21.8	7.92	9.523	1.838	0.26	34	OWL000.1DA
8/24/2023	9:15	Mill	Cathy Jo @ zoo	VL/LB	74.4	6.94	466	18.8	7.22	0.072	---	---	14	CJO000.1DA
9/6/2023	8:54	Harpeth	Flat Creek	VL	73.1	6.1	491	23.2	7.89	0.2208	---	---	24	FLAT000.7DA
9/7/2023	9:51	Harpeth	Trace Creek	MB/VL	56.4	4.91	72.5	22	7.5	0.258	---	---	26	TRACE000.4DA
9/12/2023	9:33	Harpeth	Harpeth 2	VL/LB	62.5	5.44	491	23.8	8.09	84.6	0.472	0.49	32	HARPE049.2DA
9/13/2023	9:49	Harpeth	Little Harpeth	MB/LB	84.1	7.46	552	21	8.23	9.9349	---	---	30	LHARP000.6DA
9/18/2023	9:28	Harpeth	Unnamed Trib. to S. Harpeth	VL/LB	57.9	5.22	431.7	19.3	7.77	0.134	---	---	36	SHARP7.2TO.3DA
9/25/2023	8:50	Harpeth	Otter Creek	VL/MB	71.2	6.61	594	18.3	8.06	0.3509	---	0.23	22	OTTER000.8DA
9/26/2023	9:00	Stones	McCrorry 1	VL/LB	62	5.74	794	19	7.82	1.1485	0.4	0.23	24	MCCRO001.5DA
10/2/2023	9:12	Stones	McCrorry 2	VL/LB	80.2	7.31	762	19	7.9	8.67	0.331	0.16	22	MCCRO003.3DA
10/2/2023	9:12	Stones	McCrorry 2-Dup	VL/LB	80.1	7.43	763	19	7.94	---	---	---	18	MCCRO003.3DA
10/3/2023	8:55	Harpeth	Harpeth 1	VL/MB	72.5	6.42	542	21.4	8.02	33.8	0.641	0.6	34	HARPE062.0DA
10/4/2023	9:15	Stones	Scotts	VL/LB	68.7	6.39	552	18.9	8.03	0.1629	0.577	0.36	20	SCOTT000.3DA
10/9/2023	8:33	Stones	Dry Fork	VL/LB	79.1	8.2	789	13.5	8.16	0.68	---	---	22	DRY000.1DA
10/11/2023	10:41	Stones	Unnamed Trib. to Stoners	VL/LB	90.7	8.47	1046	18.4	7.69	2.52	---	---	14	STONE1.9TO.1DA
10/16/2023	9:23	Stones	Suggs	VL/LB	27.1	2.86	583	12.7	7.78	0	-99	0.06	32	SUGGS007.5DA
10/19/2023	12:05	Stones	East Fork Hamilton	VL/LB	71.2	7.06	404.2	16	8.2	---	---	---	---	EFHAM001.1DA
10/19/2023	9:49	Stones	West Fork Hamilton	VL	74.9	7.79	558	13.6	8	0.29	---	---	20	WFHAM000.5DA
3/13/2024	8:34	Harpeth	Beech	VL/GJ	99.9	10.99	287.2	10.9	7.73	3.816	---	---	34	BEECH000.7DA
3/21/2024	9:11	Stones	E Fork Hamilton	VL/MB	132.8	14.87	404	10.2	8.77	0.2307	---	---	10	EFHAM001.1DA
3/27/2024	9:54	Percy Priest	E. Fork Hamilton	VL/MB	107.9	11.31	447.6	12.6	8.59	8.0195	---	---	10	EFHAM000.5DA
3/28/2024	9:42	Harpeth	Little Harpeth	VL/LB	108.7	11.87	357.8	11.6	8.38	88.38	---	---	18	LHARP000.6DA
3/28/2024	9:42	Harpeth	Little Harpeth	VL/LB	110.1	11.98	357.8	11.6	8.38	---	---	---	14	LHARP000.6DA
4/8/2024	8:18	Harpeth	Flat	VL/LB	94.5	9.53	431.6	14.2	7.9	3.028	---	---	18	FLAT000.7DA
4/16/2024	9:08	Harpeth	Otter	VL/MB	88.3	8.32	484	17.2	8.13	3.8133	0.489	0.17	22	OTTER000.8DA
5/2/2024	9:10	Harpeth	Trace	VL/MB/JB	92.2	8.87	488	17.2	7.9	0.4437	---	---	24	TRACE000.4DA
5/13/2024	8:40	Stones	Dry Fork	VL/LB	98	9.6	457	16.3	8.17	6.63	---	---	16	DRY000.1DA
5/16/2024	9:22	Stones	W F Hamilton	MB/VL/LB	74.9	7.03	459	18.1	7.64	1.52	---	---	10	WFHAM000.5DA



Table 13A.4 – Benthic Monitoring Data for TMDL Streams during FY24 Reporting Period (Continued)

Date	Time	Watershed	Site Name	Samplers (initials)	DO %	DO mg/L	Cond. uS	Temp. C	pH	Flow ft3/sec	Nitrate-Nitrite mg/L	Total Phos. mg/L	Benthic Score	DWR STATION ID
5/28/2024	9:10	Stones	W Branch Hurricane	VL/LB	86.9	8.11	471	17.9	7.71	7.46	0.324	0.19	30	WBHUR000.5DA
5/29/2024	7:41	Harpeth	Unnamed Trib to S Harpeth	VL/LB	94.2	9.32	273.4	15.4	7.67	3.17	---	---	32	SHARP7.2TO.3DA
5/30/2024	8:30	Stones	McCrary 2	VL/MB	89.9	8.66	752	16.7	8.33	9.0776	1.33	0.12	16	MCCRO003.3DA
5/31/2024	7:52	Stones	McCrary 1	MB/LB	84	8.03	675	17.2	7.74	10.07	1.56	0.19	16	MCCRO001.5DA
6/3/2024	8:38	Stones	Suggs	VL/RT	87.5	7.8	464	20.7	8.07	15.553	0.447	0.03	28	SUGGS007.5WS
6/6/2024	9:45	Stones	UT to Stoners	VL/MB	96.3	8.32	780	21.6	8.19	6.0667	---	---	28	STONE1.9TO.1DA
6/10/2024	9:37	Stones	Scotts	VL/LB	95.9	8.79	449.3	18.8	8.08	1.01	1.47	0.35	16	SCOTT000.3DA
6/11/2024	9:35	Stones	Stoners 1	VL/LB	79.1	7.36	625	18.7	7.88	24.676	---	---	26	STONE000.9DA
6/17/2024	9:20	Stones	Hurricane	VL/LB	94	8.02	398.1	22.9	8.08	17.97	1.15	0.13	30	HURRI000.26DA
6/18/2024	9:53	Harpeth	Harpeth 2	VL/LB/AC	74.9	6.1	464	26.9	8.06	193.46	0.908	0.33	26	HARPE049.2DA
6/24/2024	8:30	Harpeth	Harpeth 1	VL/LB	67	5.32	454.5	27.2	7.94	95.47	0.7	0.46	16	HARPE062.0DA
6/24/2024	8:30	Harpeth	Harpeth 1 Dup	VL/LB	69.2	5.52	454.8	27.3	7.81	---	---	---	24	HARPE062.0DA



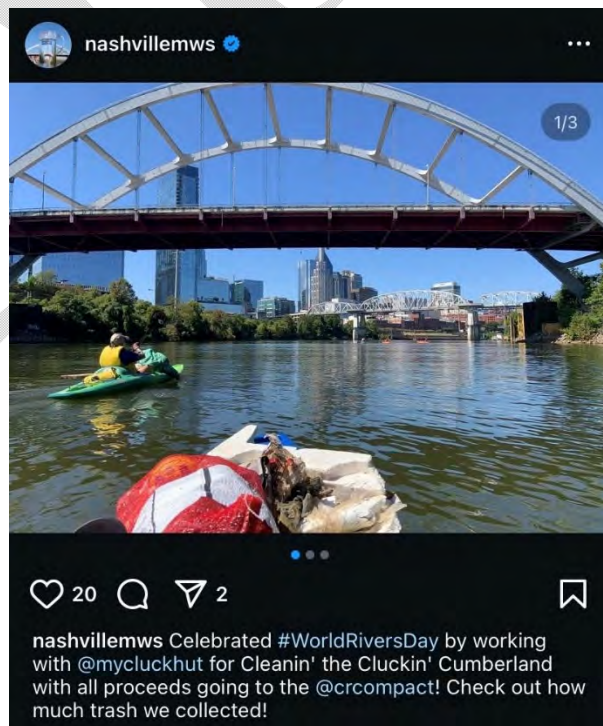
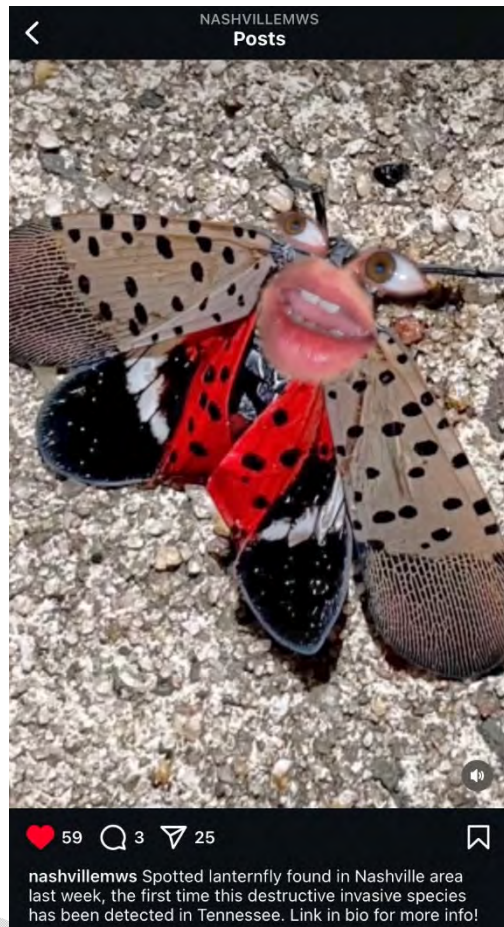
4.0 Supporting Program Data

The following is supplemental data that supports Metro Nashville’s MS4 Permit Compliance:

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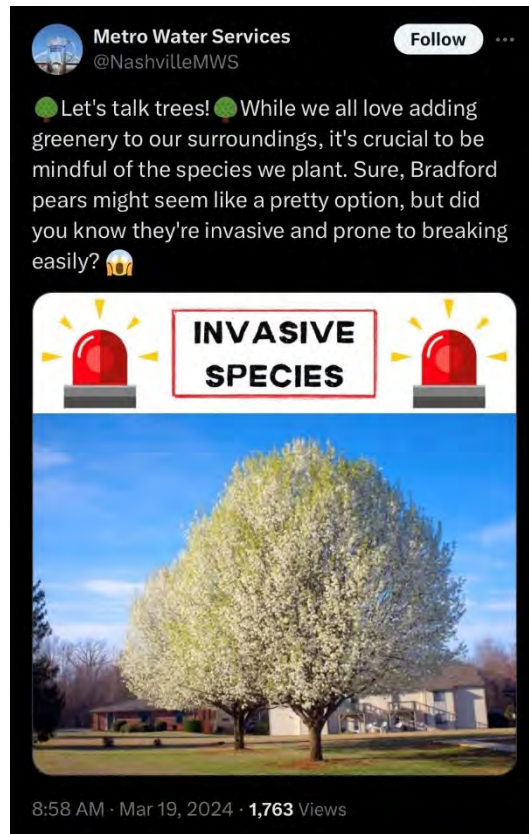
Examples of MWS Stormwater Social Media Posts in FY24



Examples of MWS Stormwater Social Media Posts in FY24 (Continued)



Examples of MWS Stormwater Social Media Posts in FY24 (Continued)



NPDES Social Media Plan Implemented in FY24

From January to April 2023, we have had 99 posts across all MWS social media platforms which puts us on track to do almost 300 posts for 2023.

Social media posts according to previous annual reports:

- FY22 – 214 Stormwater posts
- FY21 – 662 posts for all of MWS, Stormwater not separated
- FY20 – 417 posts for all of MWS, Stormwater not separated
- FY19 – 9 Stormwater posts
- FY18 – 18 Stormwater posts
- FY17 - 37 Stormwater posts

To find a good place between one extreme to another, here is a proposed schedule for posting that will meet our permit requirements, not consume much time by NPDES staff, and not inundate our followers with information:

- There will be **one post per public event** NPDES attends, and there will be coordination to ensure that all groups (i.e., TNSY and Urban Forestry) are represented in the wording of the posts. These will mostly be contained to Twitter and Facebook. To avoid the struggle of Canva, these posts would not require graphics, but if one is provided by the organization leading the event (like by the Conservancy for Earth Day), it will be used in some of the posts. We have at least one public event per month.
- There will be **one post per month** for each of the following topics. These posts will be mainly on Twitter and Facebook unless a photo is taken that would be sufficient for Instagram (see explanation below). Graphics for these posts wouldn't be necessary, so no Canva would be required. Posts that do well with engagement could be reposted later.
 - **seasonal pollution prevention**, such as pool draining, brush litter, salt for ice, etc.
 - **general urban forestry items** including tree care, tree benefits, tree research, happenings in the world of trees, etc.
 - **TNSY** tip or informational post
- Each month, there will be a minimum of **one post** (with a maximum of five) that will be an **action photo** of something NPDES has done in the community. An action photo would be one taken during a community project like the John Overton High Tree Planting, SCM digital design with Cane Ridge High School, or a significant illicit discharge that was corrected. These action photos will be best for Instagram posting where the photo speaks louder than the caption, but they can go on Facebook and Twitter as well if space/time allows.

This schedule will generate a minimum of **9 posts per month** (108 posts per year) that we are obligated to post, assuming that each event, seasonal, tree care, and TNSY post is put onto Twitter and Facebook, the most used platforms while action photos are on Instagram.

Social media has not been entered into the PIE Database consistently over the past 7 years. Currently, each individual social media post is being added to the PIE Database. To increase efficiency, social media would be entered once a month for each platform based on the metrics sent by Megan Fuqua, totaling **three entries per month** that summarize the posts and total reach on each platform



**Locations of MWS-Facilitated Tennessee Smart Yard Certifications
 in Davidson County during FY24**

Timestamp	Street Address	City	Zip Code
7/8/2023 14:32:59	1820 Beechwood Ave	Nashville	37212
7/8/2023 16:35:08	1025B Cheatham Place	Nashville	37208
7/9/2023 16:47:05	1948 Waterford Drive	Old Hickory	37138
7/13/2023 16:34:26	3453 White Pine Drive	Nashville	37214
8/7/2023 15:37:27	3809 Barlow Dr.	Nashville	37211
8/16/2023 10:07:34	1533 Ocoee Trl	Madison	37115
8/16/2023 16:40:10	Portland Park	Nashville	37212
8/20/2023 16:49:52	306 Valeria St	Nashville	37210
8/21/2023 16:30:36	910 Beechmont Pl	Nashville	37206
8/24/2023 18:25:19	1911 Valley Park Dr	Nashville	37216
8/24/2023 18:31:46	1507 Andy Street	Nashville	37216
9/19/2023 19:43:08	50 Vantage Way	Nashville	37205
9/29/2023 14:14:59	4612 Woodside Dr	Old Hickory	37138
9/30/2023 14:18:49	517 Brookvale Terrace	Nashville	37209
10/3/2023 12:07:40	790 Saussy Place	Nashville	37205
10/28/2023 22:37:17	4505 Cato Rd	Nashville	37218
12/27/2023 9:35:51	330 Westchester Drive	Madison	37115
1/2/2024 9:25:38	120 Spring Valley Rd	Nashville	37214
1/6/2024 13:19:41	1606 24th Ave N	Nashville	37208
1/8/2024 17:11:22	5217 Larkway Drive	Nashville	37211
1/22/2024 9:46:23	1413B Dugger Drive	Nashville	37206
1/27/2024 23:27:35	760 Harpeth Bend Dr.	Nashville	37221
2/12/2024 10:05:11	8541 Whites Creek Pike	Joelton	37080
2/18/2024 15:01:03	4907 Darlington Court	Nashville	37211
2/20/2024 14:39:00	4415 Harding Place	Nashville	37205
2/21/2024 9:54:32	3837 Lunn Drive	Nashville	37218
3/6/2024 16:22:34	211 S 12th Street	Nashville	37206
3/11/2024 16:54:53	3117 McGavock Pike	Nashville	37214
3/13/2024 12:59:15	101 Platform Way N.	Nashville	37203
3/24/2024 15:17:06	1014 Joyce Lane	Nashville	37216
3/29/2024 9:47:00	2107 Riverwood Dr	Nashville	37216
3/29/2024 11:50:32	1004 Burchwood Ave	Nashville	37216
3/29/2024 15:22:47	1509 Fall Drive	Nashville	37207
4/2/2024 9:10:26	783 Saussy Place	Nashville	37205
4/10/2024 8:42:43	821 West Nocturne Dr	Nashville	37207
4/18/2024 14:45:49	1705 Eastside Ave	Nashville	37206
4/18/2024 18:34:55	1416 Forr Gaines Place	Brentwood	37027
4/21/2024 0:24:50	405A West Bend Drive	Nashville	37209
4/21/2024 16:06:13	811 Evansdale Dr.	Nashville	37220
4/21/2024 17:17:07	3855 Crouch Dr.	Nashville	37207
4/22/2024 17:40:20	213 Ashawn Blvd	Old Hickory	37138
4/29/2024 12:32:02	2203 Thistlewood Dr	Nashville	37216

Locations of MWS-Facilitated Tennessee Smart Yard Certifications in



Davidson County during FY24 (Continued)

Timestamp	Street Address	City	Zip Code
5/3/2024 12:22:21	4947 Rawlings Rd.	Joelton	37080
5/7/2024 12:09:28	405 Fairfax Ave.	Nashville	37212
5/7/2024 14:36:30	5410 Illinois Avenue	Nashville	37209
5/8/2024 17:27:28	2305B Carter Ave	Nashville	37206
5/10/2024 14:06:42	5516 Stanford Drive	Nashville	37215
5/13/2024 18:17:28	1272 Scarcroft Lane	Nashville	37221
5/18/2024 18:01:08	5113 English Village Dr	Nashville	37211
5/19/2024 16:56:59	5928 Long Meadow Rd	Nashville	37205
5/20/2024 15:28:06	5201 Marchant Dr	Nashville	37211
5/21/2024 10:52:24	4101 Westlawn Dr	Nashville	37209
5/21/2024 17:11:08	3116 Noble Valley Dr	Nashville	37214
5/25/2024 17:14:28	5824 Beauregard Drive	Nashville	37215
5/28/2024 14:37:38	422 W Bend Dr	Nashville	37209
5/31/2024 18:06:46	2413 Dundee Ln	Nashville	37214
6/3/2024 20:36:57	3211 Moorewood Drive	Nashville	37207
6/11/2024 16:46:13	4688 Gray's Point Road	Joelton	37080
6/13/2024 20:33:55	2719 Wortham Ave	Nashville	37215
6/13/2024 20:41:05	1231 Plymouth Ave	Nashville	37216
6/27/2024 0:02:03	2706 Sunset Place	Nashville	37212



Summary of MWS-Facilitated Tennessee Smart Yard Actions Taken During FY24

Total Yards Certified (July 1st, 2023, to June 30th, 2024):	61
Total Area Reported (acres):	75.2
Practices	Count
Determine your landscape objectives.	59
Incorporate plants that support habitat needs of desirable wildlife.	59
Leave grass clippings on lawn.	56
Assess yard conditions such as light availability/soil characteristics etc.	56
Use landscape waste (tree trimmings/ fallen leaves/ pine needles etc.) on site.	55
Remove or avoid using invasive/exotic plants and incorporate native plants.	55
Practice good housekeeping.	55
Protect beneficial insects that control pests and support pollination.	54
Check for pests regularly.	54
Use mechanical approach to control pests such as pruning and hand removal.	54
Use composted grass clippings/ leaves/ pruned plant parts/ kitchen scraps to improve soils.	53
Use organic pine straw/ pine bark/ leaves/ or hardwood mulch.	52
Spot treat only affected areas, avoiding routine applications of pesticides.	51
Mow grass high.	50
Protect all soil surfaces with vegetation to minimize erosion by rainfall and runoff.	50
Maintain a 2–3-inch mulch layer in plant beds and over tree roots.	50
Group plants according to site conditions.	49
Preserve existing vegetation (especially trees) during land disturbance activities.	49
Install bat houses, bird houses, and bird feeders.	48
Use environmentally friendly pesticides such as horticultural oils and insecticidal soaps.	47
Incorporate salvaged materials into landscaping.	46
Provide a wildlife water source.	44
Sketch your yard including long-term goals.	40
Fertilize as recommended by soil test and not in wet weather.	34
Assess and address soil compaction.	33
Adjust sprinkler heads to avoid hitting paved surfaces.	31
Use rain gauge to monitor plant water needs.	30
Maintain a mix of native trees, shrubs, grasses, and wildflowers along water's edge.	30
Disconnect downspouts from the stormwater drainage system or from impervious surfaces.	28
Use rain barrels to catch rooftop runoff	28
Create a "no mow, no fertilizer, no pesticide" zone along waterways.	28
Locate plants to increase home energy efficiency.	27
Use permeable surfaces for hardscapes.	25
Maintain soil pH in the recommended value.	21
Build a rain garden to catch and filter runoff.	17



Thematic Analysis Report for Tennessee Smart Yards Certification Quotes, Davidson County, July 1, 2023 – June 30, 2024

Summary:

The Tennessee Smart Yards certification program is highly valued by applicants for its focus on community collaboration, personal and environmental impact, and educational opportunities. The sentiment analysis reveals a predominantly positive outlook, reflecting enthusiasm for gardening and its benefits. Key themes such as community learning, personal satisfaction, sustainability, and wildlife support highlight the multifaceted impact of the program on both individuals and the environment. By addressing these themes, the program effectively meets the diverse needs and aspirations of its participants.

References to Stormwater, Runoff, Erosion, and Pollution:

- **Stormwater:**
 - "Smart Gardens helped us keep a big stormwater problem from getting worse."
- **Water and Soil Protection:**
 - "I have become much more aware of what I'm doing to protect pollinators, wildlife, native species, soil, and water in my yard."
- **Erosion and Runoff Prevention:**
 - The use of native plants, organic gardening techniques, and sustainable practices like recycling materials (e.g., using cardboard instead of landscape fabric) are indirectly related to preventing erosion and managing runoff.
 - "Smart" guidelines and knowledge gained through the program likely included best practices for minimizing runoff and erosion, although not explicitly stated in the quotes provided.

Introduction: This report presents a comprehensive thematic analysis of quotes from applicants for the Tennessee Smart Yards certification. The analysis combines qualitative content analysis with grounded theory approaches to identify key themes and emotional tones. This analysis aims to uncover what applicants value most about the program and their experiences.

ChatGPT Prompt: Conduct an open-ended thematic analysis using both qualitative content analysis and grounded theory approaches on quotes extracted from applications for Tennessee Smart Yards certification. Identify key themes that represent what was most important to applicants about the program. Additionally, perform sentiment analysis on the quotes to gauge emotional tone. In the event that similar themes emerge in multiple quotes, consider the following choices: a) Merge them into overarching themes, b) Treat them as separate but related themes, or c) Analyze the nuances that differentiate them. Finally, provide a comprehensive analysis report that includes a summary and detailed report. The quotes to analyze are:

Methodology:

1. **Qualitative Content Analysis:**
 - **Data Extraction:** Key phrases and sentiments were extracted from the quotes.
 - **Initial Coding:** Quotes were initially coded based on recurring topics and sentiments.
 - **Theme Development:** Themes were developed through an iterative process, refining codes into broader categories.
2. **Grounded Theory Approach:**



**Thematic Analysis Report for Tennessee Smart Yards Certification Quotes,
Davidson County, July 1, 2023 – June 30, 2024 (Continued)**

- **Open Coding:** Key concepts were identified and coded without preconceived categories.
 - **Axial Coding:** Codes were grouped into categories to explore relationships and sub-themes.
 - **Selective Coding:** Core themes were identified based on their prevalence and significance.
3. **Sentiment Analysis:**
- **Emotional Tone Evaluation:** Each quote was assessed for its emotional tone, including positive, negative, or neutral sentiments.

Key Themes:

1. **Community and Collaboration:**

- **Quotes:**
 - “We have a wonderful community of 'Second Sunday Gardeners'...”
 - “It has been a thrill for Second Sunday Gardeners to work with the Tennessee Environmental Council...”
- **Description:** Many applicants emphasize the value of community engagement and collaboration with local groups and organizations. This theme reflects a strong sense of collective effort and shared learning.

2. **Personal and Environmental Impact:**

- **Quotes:**
 - “I’ve enjoyed learning more about native species and researching plants...”
 - “Seeing my yard come alive with all the native plants! It’s a great way to connect with nature...”
- **Description:** Applicants frequently mention the personal satisfaction and environmental benefits gained from their gardening efforts. This includes improvements in their own yards and contributions to local biodiversity.

3. **Learning and Improvement:**

- **Quotes:**
 - “I learned SO much!! The videos were super helpful...”
 - “I have enjoyed getting an understanding of the comprehensive TN Smart Yard...”
- **Description:** The learning aspect of the certification process is highly valued. Applicants appreciate the educational resources and the opportunity to enhance their gardening practices.

4. **Sustainability and Resource Management:**

- **Quotes:**
 - “I’m adding native shrubs and trees to my back woods.”
 - “Creating sustainable water sources using water barrels...”
- **Description:** The commitment to sustainable practices and effective resource management, such as using rain barrels and native plants, is a prominent theme. This reflects a dedication to environmental stewardship.

5. **Wildlife and Biodiversity:**

- **Quotes:**
 - “I have really enjoyed the wildlife in my yard just by adding water sources...”
 - “We’ve enjoyed the additional wildlife and pollinators the most...”
-



**Thematic Analysis Report for Tennessee Smart Yards Certification Quotes,
Davidson County, July 1, 2023 – June 30, 2024 (Continued)**

- **Description:** Enhancing wildlife habitats and supporting pollinators are significant aspects of the applicants' experiences. This theme highlights their appreciation for the ecological benefits of their gardening practices.

Sentiment Analysis:

- **Positive Sentiment:**
 - The majority of quotes express a positive emotional tone, with applicants showing enthusiasm, pride, and satisfaction in their gardening achievements and the impacts on their local environments.
- **Neutral Sentiment:**
 - Some quotes focus on factual information or specific improvements, reflecting a neutral tone.
- **Negative Sentiment:**
 - Negative sentiment is less common but present in quotes discussing challenges or areas for improvement.

Analysis of Theme Overlaps:

1. **Merging Themes:**
 - **Community and Collaboration** and **Learning and Improvement** are interrelated, as community involvement often facilitates learning and improvement. Combining these into a broader theme of **Community Learning and Collaboration** could encapsulate both aspects effectively.
2. **Separate but Related Themes:**
 - **Personal and Environmental Impact** and **Sustainability and Resource Management** can be treated separately due to their distinct focuses on personal satisfaction versus broader environmental practices. However, they are interconnected in the context of gardening.
3. **Nuances Analysis:**
 - **Wildlife and Biodiversity** and **Sustainability and Resource Management** overlap in their emphasis on ecological benefits but differ in their specific focus areas. Analyzing nuances might involve exploring how each theme contributes differently to overall environmental health.



MWS Classroom/Youth-Based Public Education Program Activities during FY24

SUMMER CAMP PROGRAMS				
Target Audience	Program Description	Outcomes/ Measures of Success		Recommendations for Improvement
Summer Camps that include creek/lake activities	<i>The Water Cycle & Me:</i> Hands-on EnviroScape model activity. Campers participate in a story about adults making common mistakes causing non-point source pollution. The story is personalized to the camp and water activity the campers will experience.	At the end of the program, campers named residential sources of pollution and made pretend recommendations to neighbors of best practices. These camps have made the program a regular part of the curriculum.		These programs are successful in building awareness of non-point source pollution and should continue.
Date	Camp	Programs	Campers	Ages
TOTALS		36	404	
03-Jul-23	Metro Parks Outdoor Recreation and Community Centers	1	10	middle school
05-Jul-23	Summer Camp: Leadership Academy	1	15	middle school
06-Jul-23	Summer Camp: Watkins Park Library	1	15	elementary - middle school
10-Jul-23	Metro Parks Outdoor Recreation and Community Centers	1	12	middle school
11-Jul-23	Summer Camp: Leadership Academy	4	24	elementary - middle school
12-Jul-23	Summer Camp: Leadership Academy	2	20	middle school
19-Jul-23	Summer Camp: Leadership Academy	2	20	middle - high school
20-Jul-23	Summer Camp: Owls Hill Nature Sanctuary	1	22	elementary – middle school
25-Jul-23	Summer Camp: Leadership Academy	2	22	middle - high school
26-Jul-23	Summer Camp: Leadership Academy	4	24	elementary - middle school
03-Jun-24	Metro Parks Outdoor Recreation and Community Centers	1	12	Elementary/middle
10-Jun-24	Metro Parks Outdoor Recreation and Community Centers	2	20	middle school
11-Jun-24	Summer Camp: Cheekwood	1	12	elementary
11-Jun-24	Summer Camp: Leadership Academy	3	24	elementary/middle
13-Jun-24	Summer Camp: Owls Hill Nature Sanctuary	1	24	elementary/middle
17-Jun-24	Metro Parks Outdoor Recreation and Community Centers	2	20	elementary/middle
20-Jun-24	Summer Camp: Owls Hill Nature Sanctuary	1	24	elementary/middle
24-Jun-24	Metro Parks Outdoor Recreation and Community Centers	1	12	elementary/middle
25-Jun-24	Metro Parks Outdoor Recreation and Community Centers	1	12	elementary/middle
25-Jun-24	Summer Camp: Cheekwood	1	12	elementary
26-Jun-24	Summer Camp: Leadership Academy	2	24	elementary/middle
27-Jun-24	Summer Camp: Owls Hill Nature Sanctuary	1	24	elementary/middle



MWS Classroom/Youth-Based Public Education Program Activities during FY24 (Continued)

LOANER PROGRAM: The Watershed Game				
Target Audience	Program Description	Outcomes/ Measures of Success		Recommendations for Improvement
K-12 Teachers and their students.	Teachers are training to use the Game in their classroom. The Watershed Game helps students understand the relationship between land uses within a watershed, water quality, and their community. The Game emphasizes collaboration and cooperative decision-making, persuasive argument, teamwork, and leadership skills along with science and math.	Teacher feedback on concepts students learned: - "Students have a better understanding of how all parts of the watershed are interconnected." - Successful for "engagement, lessons in sustainability"		Based on teacher feedback, we will continue to promote the loaner programs this year.
Date				
Teacher Professional Development Training on The Watershed Game			Programs	Teachers
TOTAL			8	44
03-Aug-23	MNPS STEAM In Service		3	15
03-Aug-23	MNPS STEAM In Service Exhibit Hall		1	25
29-Aug-23	Academy at Old Cockrill		1	1
11-Sep-23	Antioch Middle		1	1
21-Sep-23	Home School Group		1	1
1/12/2024	Stratford High School		1	1
Date				
Date	Loaner Watershed Game Programs	Programs	Students	Grade Level
	TOTALS	12	256	
29-Aug-23	Academy at Old Cockrill	1	10	12 th grade
15-Sep-23	Antioch Middle	1	31	6th grade
17-Nov-23	Hume Fogg High Magnet	2	38	11, 12th grades
21-Sep-23	Home School Group	1	10	Middle, high School
26-Sep-23	Antioch Middle – class recap discussion	2	31	6th
04-Dec-23	Antioch Middle	1	30	6th grade
1/12/2024	Stratford HS	1	19	11 th grade
06-Feb-24	Antioch Middle	1	30	6th grade
19-Apr-24	Antioch Middle	1	30	6th grade
01-May-24	Antioch Middle	1	27	6 th grade



MWS Classroom/Youth-Based Public Education Program Activities during FY24 (Continued)

LOANER PROGRAM: The EnviroScape				
Target Audience	Program Description	Outcomes/ Measures of Success	Recommendations for Improvement	
K-12 teachers and their students.	Teachers are trained to use the EnviroScape model. The EnviroScape watershed model includes three lessons: non-point source pollution, the impact of green infrastructure on flooding, and erosion and sediment control.	Teacher feedback: -‘Students loved it’ -‘Students have a visual understanding of watershed & how geography plays a role.’ -‘children had a better understanding of what happens to the pollutants’ -‘Great conversations about who causes pollution in our neighborhoods’	Based on teacher feedback, we will continue to promote the loaner programs this year. Most teachers are using all three lessons with their classes and appreciate the extra time the students have with the loaner model versus a one-time classroom presentation.	
Date	Teacher Professional Development Training on The EnviroScape		Programs	Teachers
	TOTALS		7	9
29-Aug-23	Academy at Old Cockrill		1	1
11-Sep-23	Antioch Middle		1	1
06-Nov-23	Montessori East		1	1
29-Nov-23	Guidepost Montessori		1	1
01-Dec-23	Inglewood Elementary		1	1
15-Feb-24	Carter-Lawrence Elementary Magnet		1	1
26-Feb-24	Glengarry Elementary		1	3
Date	Loaner EnviroScape Programs Presented by Teachers	Programs	Students	Grade Level
	TOTALS		32	693
05-Jul-23	Nature Center: Shelby Bottoms	3	30	elementary/middle
29-Aug-23	The Academy at Old Cockrill	1	10	12 th grade
15-Sep-23	Antioch Middle	3	93	6th grade
06-Nov-23	Montessori East	3	75	1st-3rd grade
17-Nov-23	Hume Fogg High Magnet	2	38	11, 12th
28-Nov-23	Guidepost Montessori	3	12	Elementary
04-Dec-23	Antioch Middle	3	90	6th grade
04-Dec-23	Inglewood Elementary	2	45	3rd grade
02-Feb-24	Antioch Middle	3	90	6th grade
15-Feb-24	Carter Lawrence Elementary	3	60	4 th grade
26-Feb-24	Glengarry Elementary	3	60	3 rd grade
19-Apr-24	Antioch Middle	3	90	6th grade



MWS Classroom/Youth-Based Public Education Program Activities during FY24 (Continued)

STORMWATER EXPERIENCES						
Target Audience		Program Description		Outcomes/ Measures of Success		Recommendations for Improvement
Elementary-College		On teacher request, we provided stormwater experiences: demonstrating stormwater pollution testing and exploring stormwater infrastructure.		Students understood about stormwater pollutants and stormwater infrastructure in their neighborhoods.		These will continue to be on demand programs and will be re-evaluated in the future.
Date	School	Programs	Students	Adults	Grade Level	Activity
TOTALS		10	169	20		
21-Aug-23	Stratford High	1	20		High School	ISR Class, water testing demonstration
18-Sep-23	Inglewood Elementary	2	40		2nd grade	Stormwater walk
21-Sep-23	Warner Elem. Enhanced Option	2	40		2nd grade	Stormwater walk
22-Sep-23	Warner Elem. Enhanced Option	2	40		2nd grade	Stormwater walk
07-Nov-23	University: Vanderbilt	1	0	20	College	20 adults Stormwater walk
06-Mar-24	Carter-Lawrence Elementary Magnet	2	29		4th grade	Stormwater walk



MWS Classroom/Youth-Based Public Education Program Activities during FY24 (Continued)

Tennessee Smart Yards Training Presentations			
Target Audience	Program Description	Outcomes/ Measures of Success	Recommendations for Improvement
Master Gardeners	TN Smart Yards is a statewide Extension/Stormwater Agency residential certification program focused on pollution prevention.	This training program has been integrated into the Master Gardener curriculum. Interns in the class use personalized maps to draw the flow of water on their property and develop solutions.	This is a successful training program, and it will continue to be part of the MG training.
Date	School	Programs	Adults
TOTALS		1	37
14-Feb-24	Davidson County Master Gardeners	1	37

Miscellaneous Classroom Activities					
Target Audience	Program Description	Outcomes/ Measures of Success	Recommendations for Improvement		
Students	These are trial programs requested by teachers.	Students learned about tree care for an adopt-a-tree program. Elementary Students learned how to use a climate change model.	A tree curriculum booklet will be developed. The En Roads program does not fit into our programming focus and will be discontinued.		
Activities					
Date	School	Programs	Students	Grade Level	Activity
TOTALS		4	157		
15-Dec-23	Stratford Middle School	3	150	6, 7, 8th grades	New trees on campus, tree care
19-Dec-23	Napier Elem. Enhanced Option	1	7	4th and 5th grade	En Roads



MWS Classroom/Youth-Based Public Education Program Activities during FY24 (Continued)

Projects							
Target Audience		Program Description		Outcomes/ Measures of Success		Recommendations for Improvement	
High School Students in the Vanderbilt School for Science & Math		Students were challenged to create an impact calculator for Tennessee Smart Yards. MWS staff provided direction, information, and critique.		Students created a calculator, collected data from certified Smart Yards, and produced a poster that will be presented at the fall TNSA conference.		Continue to pitch research projects to the School for Science and Math.	
Tennessee Smart Yards Calculator Project							
Date	School	Programs	Students	Grade Level	Activity		
TOTALS		13	95				
14-Nov-23	Vanderbilt School of Science & Math (High School)	1	30	10 th grade	Smart Yards Pitch for projects		
10-Jan-24	Vanderbilt School of Science & Math (High School)	1	30	10th grade	SW overview		
14-Feb-24	Vanderbilt School of Science & Math (High School)	1	5	10th grade	SSMV Tn Smart Yard project		
21-Feb-24	Vanderbilt School of Science & Math (High School)	1	3	10th grade	SSMV TN Smart Yards project		
28-Feb-24	Vanderbilt School of Science & Math (High School)	1	3	10th grade	SSMV TN Smart Yards project		
06-Mar-24	Vanderbilt School of Science & Math (High School)	1	3	10th grade	SSMV TN Smart Yards project		
27-Mar-24	Vanderbilt School of Science & Math (High School)	1	3	10th grade	SSMV TN Smart Yards project		
03-Apr-24	Vanderbilt School of Science & Math (High School)	1	3	10th grade	SSMV TN Smart Yards project		
10-Apr-24	Vanderbilt School of Science & Math (High School)	1	3	10th grade	SSMV TN Smart Yards Project		
17-Apr-24	Vanderbilt School of Science & Math (High School)	1	3	10th grade	SSMV TN Smart Yards project		
24-Apr-24	Vanderbilt School of Science & Math (High School)	1	3	10th grade	SSMV TN Smart Yards presentations		
07-Jun-24	Vanderbilt School of Science & Math (High School)	1	3	10th grade	SSMV TN Smart Yards project		
12-Jun-24	Vanderbilt School of Science & Math (High School)	1	3	10th grade	SSMV TN Smart Yards poster presentations		



MWS Classroom/Youth-Based Public Education Program Activities during FY24 (Continued)

Target Audience	Program Description	Outcomes/ Measures of Success	Recommendations for Improvement		
High School Students in the Engineering Academy/Architecture class at Overton High School	Students were challenged to design an outdoor classroom in a flood plain area.	Students created powerpoint and poster presentations for their final project.	Develop a project using the new Stormwater Building site as inspiration.		
Shelby Bottoms Nature Center Outdoor Classroom Project					
Date	School	Programs	Students	Grade Level	Activity
TOTALS		5	97		
11-Jan-24	Overton High	1	17	11th grade	Introduction to permeable building materials
01-Mar-24	Overton High	1	30	11th grade	Field trip to Shelby Nature Center for floodplain/outdoor classroom project
25-Mar-24	Overton High	1	25	11th grade	Shelby Nature Center project review
01-Apr-24	Overton High	1	5	11th grade	Global Perspectives project interview
05-Apr-24	Overton High	1	20	11th grade	Shelby Nature Center final projects



MWS Classroom/Youth-Based Public Education Program Activities during FY24 (Continued)

Career-based Activities					
Target Audience	Program Description	Outcomes/ Measures of Success	Recommendations for Improvement		
High school	Job shadows, career presentations, and plant tours are used to inform students and teachers about careers in water.	Hands on job shadows were created to give students a realistic experience of the jobs. Classroom career programs were requested by teachers to emphasize soft skills. Plant tours have become a part of the curriculum for some high schools and colleges.	Continue to offer job shadows and tours.		
Job Shadows					
Date	School	Programs	Students	Grade Level	Activity
TOTALS		12	149		
08-Sep-23	Glencliff High	1	25	Sophomores, Juniors	Hydrant Flushing
03-Oct-23	Glencliff High	3	50	High School	SCMs at Fulton Campus
08-Nov-23	Girl Scout Event	1	22	3rd grade	Water Treatment Career
16-Nov-23	Academy at Old Cockrill	1	10	12th grade	Meter Shop, Apprentice Program
29-Feb-24	Overton High	2	21	11th grade	Meter Shop
26-Mar-24	Overton High	1	3	11th grade	Meter shop
28-Mar-24	Overton High	1	10	11th grade	Meter Shop
24-Apr-24	Academy at Old Cockrill	2	8	12th grade	Meter shop, Maintenance shop
Classroom Career Programs					
Date	School	Programs	Students	Grade Level	Activity
TOTALS		27	824		
16-Oct-23	Overton High	3	90	high school	Career/AVID classes
18-Oct-23	Overton High	3	90	high school	career/AVID classes
20-Oct-23	Overton High	3	90	high school	career/AVID classes
31-Oct-23	MNPS ALL SCHOOLS	1	320	9th grade	
17-Nov-23	Carter-Lawrence Elementary Magnet	10	180	1st - 3rd grades	Engineering Day
29-Nov-23	Academy at Old Cockrill	4	4	12th grade	Mock Interviews
06-Dec-23	Glencliff High	3	50	Juniors	Career information



MWS Classroom/Youth-Based Public Education Program Activities during FY24 (Continued)

Biosolids Facility Tours						
Date	School	Tours	Students	Grade Level	Adults	Class
TOTALS		5	46		48	
12-Jul-23	Special Group	1	16	high school	0	Vanderbilt summer HS program
26-Oct-23	David Lipscomb Elementary School	1	0		23	
04-Mar-24	Hillsboro High	1	20	11th grade	0	
28-Mar-24	David Lipscomb University	1	0		25	
16-Apr-24	Home School Group	1	10	middle/high school		
KRHWTP Tours						
Date	School	Tours	Students	Grade Level	Adults	Class
TOTALS		2	28			
12-Jul-23	Special Group	1	16	high school		Vanderbilt HS Summer Camp
28-Jun-24	Community Center: Hadley Park	1	12	middle school		
OMOWTP Tours						
TOTALS		4	72			
16-Feb-24	Stratford High	1	19	10th grade		
27-Feb-24	Home School Group	1	20	middle, high school		
04-Mar-24	Hillsboro High	1	20	11th grade		
03-Apr-24	Montessori Academy	1	13	7th ,8th grade		
Whites Creek Water Reclamation Plant Tours						
Date	School	Tours	Students	Grade Level	Adults	Class
TOTALS		12	111		154	
12-Jul-23	Special Group	1	16	high school		Vanderbilt HS summer camp
28-Sep-23	University: Vanderbilt	1	0		31	History of Waste Class
19-Oct-23	Academy at Old Cockrill	1	5	12th grade	0	
26-Oct-23	David Lipscomb University	1	0		23	
16-Feb-24	Stratford High	1	19	10th grade	0	
26-Feb-24	Whites Creek High	1	26	11th grade	0	
04-Mar-24	Hillsboro High	1	20	11th grade	0	
19-Mar-24	Home School Group	1	12	middle school	0	
26-Mar-24	Belmont University	1	0		25	
27-Mar-24	Belmont University	1	0		25	
28-Mar-24	David Lipscomb University	1	0		25	
03-Apr-24	Montessori Academy	1	13	7th/8th grade	0	
15-Apr-24	Belmont University				25	



MWS Classroom/Youth-Based Public Education Program Activities during FY24 (Continued)

SW Building and Site Tours						
Date	School	Tours	Students	Grade Level	Adults	Class
TOTALS		2	5		15	
22-Mar-24	Special Group	1			15	Metro Parks Nature Center Staff
22-Mar-24	Home School Group	1	5	middle/high school		

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NPDES Public Education Activities during FY24

Date	Event	Education Type	Audience #	Audience	Target Audience/ Pollutant	Notes
7/29/2023	Urban Runoff 5K	Citywide Event	346	Nashville Residents and Runners	General Stormwater Pollution	MWS worked with TNSA, City of Gallatin, Rutherford County, and multiple consulting firms to put on the annual race showcasing innovative green stormwater management practices. The water quality festival hosted 18 agencies and companies that focus on sustainability including an MWS educational booth which had information about TNSY and 20 booth visitors. There were 346 runners with uncountable attendees with them
8/12/2023	Tomato Fest	Citywide Event	25	Tomato Fest Attendees	General Stormwater Pollution	Gretchen provided Master Gardener volunteers booth supplies along with TNSY rack cards, TNSY standing banner, MCG samples (4), pet waste bags (15), Black Eyed Susan packets, and the QR for the rain barrel giveaway. This booth was on the library lawn with a Seed Exchange booth next door. Booth was from 8:30-12:30 but was rained out around 11am. Booth visitors estimated to be at least 25 by Seed Exchange volunteer
8/18/2023	Leaves in Storm Drain	Brochure/ Door Hanger Distribution	50	Homeowners	Leaves/Brush/ Trash Dumping	We received complaint that a man was using a leaf blower to blow leaves and debris into a storm drain at the above address. Kevin stopped by to distribute about 50 door hangers and talk to some of the residents in the neighborhood about pollution and how to contact us.
8/19/2023	Farmers Market: Richland Park	Educational Booth	34	Richland Park Farmers Market Attendees	General Stormwater Pollution	Gretchen and Zero Waste (Jen, Simone, Dayla) had a shared booth at the market with Zero Waste information along with TNSY banner, yard sign, Smart Actions poll, pet waste bags (22), Music City gold samples (18), seed packets, TNSY rack cards, and leftover swag bags from the 5K. This was also the first booth advertising the rain barrel giveaway.



NPDES Public Education Activities during FY24 (Continued)

Date	Event	Education Type	Audience #	Audience	Target Audience/ Pollutant	Notes
8/23/2023	Oil Dumped into Inlet	Brochure/ Door Hanger Distribution	30	Homeowners	Oil and Grease	Kevin received report of oil dumped into an inlet. Upon visiting the site, he saw it was dumped into the catch basin that drains to a detention pond, but no oil was seen in the pond. He distributed 30 door hangers at the units around the incident and let MDHA know in case they want to follow up with education as well
8/23/2023	TNSY Presentation for Amazon Sustainability	Presentation	5	Members of the Amazon Sustainability Affinity Group	General Stormwater Pollution	Julie did a presentation to the Amazon Sustainability Group on TNSY. She gave out 5 MCG samples and 4 pet waste bags to attendees. She left 15 MCG samples and 16 dog waste bags with them, along with TNSY rack cards and bookmarks. They will use these items at their internal tabling events (the affinity groups, like this one, set up tables fall and spring to attract more members.)
8/24/2023	Leaking Oil from Vehicle	Brochure/ Door Hanger Distribution	20	Homeowners	Oil and Grease	Kevin received complaint that a car at the above address consistently leaks oil onto the road, but the owner just replaces the oil rather than fixing the leak. Kevin went to the neighborhood to distribute door hangers and educate residents on stormwater pollution.
8/24/2023	Farmers Market: Crieve Hall	Educational Booth	15	Crieve Hall Market Attendees	General Stormwater Pollution	Gretchen attended the Crieve Hall market with Jen and Simone from Zero Waste. They spoke about their food scraps pilot while Gretchen talked to community members about the TNSY program, offering MCG samples, pet waste bags, and leftover swag bags from the UR5K. We also had the rain barrel giveaway QR code
8/30/2023	Oil Staining in Street	Brochure/ Door Hanger Distribution	5	homeowners	Oil and Grease	Gretchen distributed door hangers to neighbors of the above address due to oil staining appearing to be from a leaking car



NPDES Public Education Activities during FY24 (Continued)

Date	Event	Education Type	Audience #	Audience	Target Audience/ Pollutant	Notes
8/30/2023	Dirt Dumping in Drain	Brochure/ Door Hanger Distribution	1	homeowner	Sediment Runoff from Non-Construction	Gretchen distributed a door hanger and spoke to a homeowner who is redoing their landscaping, causing sediment to accumulate in the storm drain in front of their house.
8/31/2023	Southern Sustainable Stormwater Summit	Presentation	165	Conference Attendees	General Stormwater Pollution	Michael Hunt presented an overview of Metro Nashville's MS4 program and highlighted some of the sustainable practices.
9/8/2023	Farmers Market: Donelson	Educational Booth	14	Donelson Farmers Market Attendees	General Stormwater Pollution	Julie attended the HIP Donelson market with Simone from Zero Waste. Julie talked to community members about the TNSY program, offering MCG samples, pet waste bags, and seeded bookmarks. We also had the rain barrel giveaway QR code and the UF tree guide
9/16/2023	Recycle, Reuse in the Garden (TNSY) Class	Presentation	6	Bell Garden Class Attendees	General Stormwater Pollution	Julie hosted a class to teach people easy and cheap ways to help their garden grow with a focus on TNSY. Julie had people take the Smart Yard Actions poll.
9/21/2023	TDEC Level 1 Certification	Presentation	120	Proposed Level 1 EPSC Professionals	Construction/ Development Education	Shawn Herman presented the Metro Grading Permit information to people seeking Level 1 TDEC Certification.
9/23/2023	Dragonboat Festival	Citywide Event	64	Festival Attendees and Racers	General Stormwater Pollution	Gretchen and Jennifer staffed a booth at the festival to promote TNSY and inform about the EAB epidemic. The booth included MCG samples (10), pet waste bag dispensers with the "Show us your pup" sign (43), TNSY brochures and sign, Smart Yard Actions poll, EAB brochures with EAB specimen and wood, and the Urban Tree Guide. Gretchen also set up Comm's free water flags by the water fountains at the park in place of the portable water fountain. Our booth was also put on the Dragonboat's Instagram story tagging MWS.



NPDES Public Education Activities during FY24 (Continued)

Date	Event	Education Type	Audience #	Audience	Target Audience/ Pollutant	Notes
9/25/2023	Clean the Cluckin' Cumberland	Citywide Event	13	Residents	General Stormwater Pollution	Julie and Gretchen participated in the kayak river cleanup that stretched 3 miles from Shelby Park's boat ramp to the East Bank Park. There were 6 tickets bought, and the rest of the group was local musicians who performed after the cleanup. MWS provided goodie bags for participants that had dog waste bag dispensers, seeded bookmarks, TNSY brochure, and MCG sample along with a thank you note with a QR to the rain barrel giveaway and HUB. Julie talked about TNSY and Gretchen spoke of monitoring industrial sites since that section of river was lined with several of them
9/26/2023	East Nash Sustainability	Presentation	13	Community Members	General Stormwater Pollution	Julie spoke about TNSY, sustainability, and how we protect our soil and water.
10/4/2023	SESWA Pre-Conference Workshop	Presentation	48	Conference Attendees	MS4 Permit Compliance	Julie spoke at a pre-conference workshop about different public education tools used by MWS such as the Watershed Game, EnviroScape, Stream Assessments, etc. Julie had a pre and post workshop questionnaire that asked about prior knowledge and gained knowledge from the workshop.
10/5/2023	Urban Forestry Talk	Presentation	30	Stratford Stem Juniors	General Stormwater Pollution	Sarah gave a presentation to students to talk about the new planting project with Root Nashville that will be going on at Stratford STEM. Her presentation also talked about her journey through school, how she ended up at MWS in UF, and what UF is all about.
10/5/2023	SESWA Conference Presentation	Presentation	75	SESWA Conference Attendees	MS4 Permit Compliance	Julie presented on different evaluation techniques for public education and outreach beyond just reporting numbers with a focus on qualitative and experiential results.



NPDES Public Education Activities during FY24 (Continued)

Date	Event	Education Type	Audience #	Audience	Target Audience/ Pollutant	Notes
10/12/2023	Tennessee Women in Green	Presentation	45	residents interested in sustainability and TNSY	General Stormwater Pollution	Julie gave a presentation on TN Smart Yards for the US Green Building Council/Tennessee Women in Green event at the Turnip Green Creative Reuse.
10/14/2023	TN STEAM Festival	Citywide Event	158	children and parents coming to ASC	Construction/ Development Education	Julie, Carol, and Gretchen partnered with the Adventure Science Center to participate in the statewide TN STEAM Festival that promotes educational opportunities in science for kids. Envirosapes were used to explain how sediment control measures work and are necessary in keeping our waterways clean both at construction sites and other businesses. A soil tunnel was also available to walk through.
10/24/2023	TNSA Conference Panel	Presentation	125	TNSA Conference Attendees	MS4 Permit Compliance	Michael Hunt represented MWS in an "Ask Me Anything" panel that allows conference attendees to ask questions. Michael specifically spoke about various MS4 topics including land development and SCM oversight processes
10/26/2023	TNSA Conference Panel	Presentation	125	TNSA Conference Attendees	MS4 Permit Compliance	Mary Bruce represented MWS on a panel to discuss the Urban Waters Report Card and how it benefits MS4s.
10/27/2023	Ghertner & Co Trade Show	Educational Booth	80	HOA board members of Ghertner & Co property managers	SCM Inspection/ Maintenance	Julie, Matthew, and Gretchen staffed an educational booth at the annual Ghertner & Co HOA meeting to educate HOA board members on TN Smart Yards and sustainable landscaping as well as SCM maintenance requirements. Contacts were made with Ghertner & Co and landscaping companies to do further education on TNSY and SCM regulations
10/27/2023	Ghertner & Co Workshop	Presentation	12	HOA Board Members for Ghertner & Co properties	General Stormwater Pollution	Julie presented on how HOA communities can use TN Smart Yards to save on landscaping costs as well as make their communities more inviting to environmentally conscious homeowners. She also brief discussed SCM regulations during the Q&A portion.



NPDES Public Education Activities during FY24 (Continued)

Date	Event	Education Type	Audience #	Audience	Target Audience/ Pollutant	Notes
10/28/2023	Barks and Treats Event	Educational Booth	24	Pet Owners	General Stormwater Pollution	NPDES provided dog waste bag dispensers and informational signage about bacteria in dog waste for the Zero Waste booth at the 2nd annual barks and treat event where community members could bring their dogs for a costume contest, treats, parade, photobooth, etc.
11/2/2023	TSTA Conference Workshops	Presentation	77	TSTA Conference Attendees	General Stormwater Pollution	Julie presented two- 3-hour interactive workshops (55 and 22 attendees) to show science teachers how the Enviroscope models and Watershed game can help fulfill their curriculum while teaching students about pollution, flooding, erosion controls, and watershed/land management.
11/3/2023	TSTA Conference Session	Presentation	13	TSTA Conference Attendees	General Stormwater Pollution	Julie presented a 1-hour session on the Watershed Game, allowing science teachers to play the game to see how it can fit into their curriculum and teach students about watershed management.
11/6/2023	NACWA Annual Conference	Presentation	100	Conference Attendees	General Stormwater Pollution	Michael Hunt Participated on a Panel Discussion at the Annual NACWA Conference
11/14/2023	West Fork Browns Algae Mailout	Mail-out	341	Homeowners near West Fork Browns Creek	Fertilizer/Pesticides	Larry brought to attention an abundance of algal growth in a certain section of West Fork Browns Creek. Gretchen created a mailout to be sent to the homeowners in the surrounding areas informing them about proper fertilizer applications and the consequences of algal blooms.
12/5/2023	Program Evaluation Presentation	Presentation	22	Vanderbilt Graduate Students and Community Partners	MS4 Permit Compliance	Gretchen partnered with the Fall 2023 program evaluation course for Vanderbilt graduate students. The 4 students working with Gretchen to create an evaluation guide for NPDES's public education and outreach program presented their materials to the class comprised of 18 students and 4 other community partners. The presentation consisted of information about NPDES and why we exist and recommendations for measuring qualitative data.



NPDES Public Education Activities during FY24 (Continued)

Date	Event	Education Type	Audience #	Audience	Target Audience/ Pollutant	Notes
12/6/2023	Leaves in Drainage Ditch	Brochure/ Door Hanger Distribution	17	Homeowners	Leaves/Brush/ Trash Dumping	Kevin distributed 14 door hangers and spoke with 3 homeowners in the area surrounding the above address due to a complaint received 12/5 reporting two people raking and dumping leaves into the drainage ditch.
12/9/2023	Winter Sowing Workshop	Presentation	22	Community Members	General Stormwater Pollution	Julie hosted a winter sowing workshop at the Bellevue library to show community members how to start their seedlings overwinter. She also spoke about TNSY.
12/14/2023	Metro Dept SCM Presentation	Presentation	24	Metro Dept Heads	SCM Inspection/ Maintenance	Josh presented on the importance and function of SCMs focusing on common issues seen and required maintenance. The meeting was meant to inform Metro Depts about the metro owned SCMs that can easily become nonfunctional if routine maintenance is not required. The presentation referenced the action plans required for red sites and emphasized improved communication between Metro depts and SCM inspectors.
1/6/2024	Winter Sowing Workshop	Presentation	55	Community Members	General Stormwater Pollution	Julie hosted a winter sowing workshop at the Nature Center to show community members how to start their seedlings overwinter. She also spoke about TNSY and had the rain barrel giveaway QR
1/9/2024	Mobile Food Vendors Mailout	Mail-out	401	Mobile Food Vendors	General Stormwater Pollution	Gretchen created a mailout for Mobile Food Vendors to inform them about the consequences of illicit discharges and the best housekeeping practices for their businesses. The mailout included English, Spanish, and Arabic, to reach multiple backgrounds.



NPDES Public Education Activities during FY24 (Continued)

Date	Event	Education Type	Audience #	Audience	Target Audience/ Pollutant	Notes
1/9/2024	Development Services Lunch and Learn	Presentation	8	MWS Development Services Staff	MS4 Permit Compliance	Josh gave a presentation discussing lessons learned for the long-term success of SCMs and their maintenance. The meeting agenda is provided via the hyperlink. 7 NPDES staff were also present for the meeting.
1/24/2024	Ghertner & Co SCM Webinar	Presentation	39	Ghertner & Co Property Managers	SCM Inspection/ Maintenance	Gretchen, Ajuuah, and Rob spoke to managers for their continuing education credits about why we require SCMs, how SCMs work, the process MWS goes through when inspecting SCMs, regular maintenance concerns seen during the inspection, and the annual reporting process. Attendees received handouts including the list of SCM maintenance companies, annual report form, approved proprietary devices with manufacturer contact info, SCM fact sheets, and a user guide for Parcel Viewer to show where the SCMs on their properties are
1/27/2024	Winter Sowing Workshop	Presentation	7	Community Members	General Stormwater Pollution	Julie hosted a winter sowing workshop to show community members how to start their seedlings overwinter. She also spoke about TNSY
1/27/2024	Winter Sowing Workshop	Presentation	25	Community Members	General Stormwater Pollution	Julie hosted a winter sowing workshop to show community members how to start their seedlings overwinter. She also spoke about TNSY
1/31/2024	Winter Sowing Workshop	Presentation	11	Amazon Sustainability	General Stormwater Pollution	Julie hosted a winter sowing workshop to show Amazon Sustainability members how to start their seedlings overwinter. She also spoke about TNSY and coordinated for future events.



NPDES Public Education Activities during FY24 (Continued)

Date	Event	Education Type	Audience #	Audience	Target Audience/ Pollutant	Notes
2/10/2024	TWISTER Conference	Presentation	19	8th to 12th grade girls	General Stormwater Pollution	Julie, Gretchen, and Jennifer Ward (Central Plant Engineer) had hands-on activities to showcase different careers within MWS. We had a pipe connecting station, reading E.coli samples, testing for chlorine in water, and using a probe to match the sample. Graphics and instructions for students are in the event folder.
2/14/2024	Master Gardeners Class	Presentation	30	Master Gardeners	General Stormwater Pollution	Julie hosted a Master Gardener Class on the TNSY practice of sketching your lawn to determine what plants and practices are best for each area of their lawn. She also discussed other aspects of NPDES such as inspections, illicit, etc.
2/20/2024	Perennial Plant Society TNSY Talk	Presentation	65	Perennial Plant Society Members	General Stormwater Pollution	Julie talked about how TNSY encourages healthy land, water, and wildlife. She taught members how to become TNSY certified by adding to what they were already doing.
2/22/2024	Metro Dept SCM Webinar	Presentation	9	Metro Employees	SCM Inspection/ Maintenance	Matthew presented the same presentation from December 14th via Webex for those that were not able to attend the in-person meeting. The presentation went over the SCM inspection and maintenance process including the Action Plan requirement for Metro sites.
2/24/2024	Seed Swap	Presentation	40	Community Members	General Stormwater Pollution	Julie tabled on TNSY at the Seed Swap and distributed seeded bookmarks.
2/28/2024	TNSA TN AFPM Confluence: A Stormwater and Floodplain Summit	Presentation	130	TNSA/AFPM Membership	General Stormwater Pollution	Michael Hunt presented on the history of Stormwater Regulations at the conference. Attendees received swag bags with Music City Gold samples and Black-Eyed Susan Seed packets



NPDES Public Education Activities during FY24 (Continued)

Date	Event	Education Type	Audience #	Audience	Target Audience/ Pollutant	Notes
3/1/2024	Pet Waste Bags and Signage	Flyer Display	108	Pet Owners	Pet Waste	Gretchen put out signage and pet waste bags to encourage people to watch their dogs and pick up after them in the park as Shelby Nature Center manager mentioned an ongoing problem in the area with pet waste. Bags refilled 3/6/2024
3/6/2024	Scout Meeting	Presentation	65	Scouts and Adults	Soil and Water Conservation	Carol presented to 22 scouts and 43 adults on water quality, treatment, and preserving natural resources.
3/6/2024	TDEC Level 1 Certification	Presentation	105	Proposed Level 1 EPSC Professionals	Construction/Development Education	Denice Johns presented Metro Grading Permit information to people seeing Level 1 EPSC Certification.
3/14/2024	Car Maintenance in Street	Brochure/Door Hanger Distribution	10	Homeowners	Oil and Grease	Kevin distributed 10 door hangers to the homes around the above address in response to a HUB Nashville complaint about car maintenance in the street with unknown liquids.
3/14/2024	O&M Facility Annual Training	Presentation	4	NDOT South 5th St Maintenance Employees	Maintenance Activities	Gretchen created site-specific annual training videos for each Metro facility with a Runoff Management Plan. Videos posted to https://metronashville.sharepoint.com/sites/MetroStormwaterOperationsandMaintenanceTraining
3/15/2024	O&M Facility Annual Training	Presentation	11	Cedar Hill Park Maintenance Employees	Maintenance Activities	Gretchen created site-specific annual training videos for each Metro facility with a Runoff Management Plan. Videos posted to https://metronashville.sharepoint.com/sites/MetroStormwaterOperationsandMaintenanceTraining . Site watched their video and sent in the sign in training sheet.



NPDES Public Education Activities during FY24 (Continued)

Date	Event	Education Type	Audience #	Audience	Target Audience/ Pollutant	Notes
3/18/2024	O&M Facility Annual Training	Presentation	7	Ted Rhodes Golf Course Maintenance Employees	Maintenance Activities	Gretchen created site-specific annual training videos for each Metro facility with a Runoff Management Plan. Videos posted to https://metronashville.sharepoint.com/sites/MetroStormwaterOperationsandMaintenanceTraining . Site watched their video and sent in the sign in training sheet.
3/18/2024	O&M Facility Annual Training	Presentation	12	Two Rivers Golf Course Maintenance Employees	Maintenance Activities	Gretchen created site-specific annual training videos for each Metro facility with a Runoff Management Plan. Videos posted to https://metronashville.sharepoint.com/sites/MetroStormwaterOperationsandMaintenanceTraining . Site watched their video and sent in the sign in training sheet.
3/18/2024	O&M Facility Annual Training	Presentation	12	Shelby Park Maintenance Employees	Maintenance Activities	Gretchen created site-specific annual training videos for each Metro facility with a Runoff Management Plan. Videos posted to https://metronashville.sharepoint.com/sites/MetroStormwaterOperationsandMaintenanceTraining . Site watched their video and sent in the sign in training sheet.
3/19/2024	O&M Facility Annual Training	Presentation	48	Centennial and Warner Parks Maintenance Employees	Maintenance Activities	Josh presented to Centennial and Warner Parks Maintenance facility employees about best housekeeping during maintenance activities detailed in RMPs and general info regarding SCMs on Metro property. This in-person presentation followed content in training videos posted to SharePoint Site



NPDES Public Education Activities during FY24 (Continued)

Date	Event	Education Type	Audience #	Audience	Target Audience/ Pollutant	Notes
3/20/2024	O&M Facility Annual Training	Presentation	12	Cane Ridge Maintenance Employees	Maintenance Activities	Gretchen created site-specific annual training videos for each Metro facility with a Runoff Management Plan. Videos posted to https://metronashville.sharepoint.com/sites/MetroStormwaterOperationsandMaintenanceTraining . Site watched the Cedar Hill training video since their operations are similar and sent in their training sign in sheet. Site will have RMP and training video created.
3/20/2024	O&M Facility Annual Training	Presentation	9	McCabe Golf Course Maintenance Employees	Maintenance Activities	Gretchen created site-specific annual training videos for each Metro facility with a Runoff Management Plan. Videos posted to https://metronashville.sharepoint.com/sites/MetroStormwaterOperationsandMaintenanceTraining
3/22/2024	TNSY Talk and SW Building Tour	Presentation	15	Metro Parks Nature Centers	General Stormwater Pollution	Julie presented on TN Smart Yards and gave a tour of the green infrastructure at the new building.
3/23/2024	Rain Barrel Pickup Event	Citywide Event	785	Davidson County Residents that Purchased a Rain Barrel	General Stormwater Pollution	Metro Nashville's Rain Barrel Subsidy Program sold 785 rain barrels to interested Davidson County Residents at a discounted rate. Total barrels sold was 868
3/23/2024	Shelby Recreation Open House	Educational Booth	41	Community Members	Pet Waste	Julie and Sarah staffed a booth focused on pollution from pet waste and encouraging community members to pick up after their pets. Julie had polls at the booth (see linked folder) to determine what knowledge they already had and what they do with their pet waste.



NPDES Public Education Activities during FY24 (Continued)

Date	Event	Education Type	Audience #	Audience	Target Audience/ Pollutant	Notes
3/23/2024	Shelby Recreation Open House	Survey	30	Community Members	Pet Waste	Sarah surveyed 30 people at the open house to determine if they had been to our booth and could remember something they learned. She learned from them what barriers prevent them from picking up their pet waste and if they have seen was at other events or on social media. Link will take you to survey, and responses are stored in google sheets
3/26/2024	O&M Facility Annual Training	Presentation	7	Harpeth Hills Golf Course Maintenance Employees	Maintenance Activities	Gretchen created site-specific annual training videos for each Metro facility with a Runoff Management Plan. Videos posted to https://metronashville.sharepoint.com/sites/MetroStormwaterOperationsandMaintenanceTraining
3/29/2024	Trash in Storm Drains	Brochure/ Door Hanger Distribution	30	Homeowners	Leaves/Brush/ Trash Dumping	Kevin responded to a complaint of someone dumping used car oil down a storm drain. Evidence of oil was not found, but lots of trash and dirt were in the drains around the above address. Kevin distributed 30 door hangers.
4/3/2024	TN AWRA Public Education Presentation	Presentation	45	TN AWRA Conference Attendees	MS4 Permit Compliance	Gretchen gave a presentation about the Vanderbilt Evaluation Plan and attempts to switch from quantitative to qualitative reporting for the program.
4/3/2024	TN AWRA Urban Forestry Presentation	Presentation	88	TN AWRA Conference Attendees	General Stormwater Pollution	Eric gave a presentation on using trees to control stormwater runoff, citing data from previous studies and the urban tree canopy results.
4/9/2024	National Watershed and Stormwater Presentation	Presentation	40	National Watershed and Stormwater Presentations	MS4 Permit Compliance	Julie gave a presentation talking about our switch to qualitative data and trying to get away from only reporting numbers for permit compliance



NPDES Public Education Activities during FY24 (Continued)

Date	Event	Education Type	Audience #	Audience	Target Audience/ Pollutant	Notes
4/14/2024	TNSY Pop Up Booth	Educational Booth	23	Customers in the Garden Center	General Stormwater Pollution	Gretchen staffed a table in the garden center to promote TNSY and reducing polluted runoff during gardening/lawn care activities.
4/16/2024	Lunch and Learn	Presentation	8	MWS Development Services Plan Review Section	SCM Inspection/Maintenance	Josh Hayes and Matthew Lockhart presented lessons learned in several years of inspections of proprietary devices and some ideas on how to improve more feasible maintenance-type units are installed into the future.
4/17/2024	Motor Oil in Drain Complaint	Brochure/Door Hanger Distribution	10	Homeowners	General Stormwater Pollution	Kevin distributed 10 door hangers on the side street after not finding material in the catch basin despite some staining on the grate.
4/19/2024	Evaluation Presentation	Presentation	50	Iowa Stormwater Group	MS4 Permit Compliance	Julie gave a presentation to the Iowa Stormwater Group, a non-profit that works with MS4s, on our evaluation plan and changes to qualitative reporting.
4/20/2024	Earth Day	Citywide Event	448	Earth Day Attendees	General Stormwater Pollution	Gretchen and Julie staffed a TNSY booth offering seed packets in exchange for taking the Smart Yard Action Poll. Jennifer staffed the MTAC booth discussing various tree topics. Gretchen surveyed 38 people separate from the booth using the Public Education survey on the google drive. Audience determined via tallies at TNSY booth (205) and approximation of visitors to MTAC booth (same as TNSY booth).
4/21/2024	Native Plant Sale	Brochure/Door Hanger Distribution	30	Shoppers at Nashville for Neighbors Sale	General Stormwater Pollution	Julie spoke to 30 people about TNSY and distributed TNSY brochures while they were in line to pick up/purchase native plants. She also left TNSY brochures at the information table for native plants.



NPDES Public Education Activities during FY24 (Continued)

Date	Event	Education Type	Audience #	Audience	Target Audience/ Pollutant	Notes
4/23/2024	Central Plant Dog Park Opening	Citywide Event	50	Council Members and Residents	Pet Waste	Gretchen provided 50 pet waste bag dispensers and our pet waste educational signage to Communications for the grand opening of the dog park at the Central WWTP
4/23/2024	Alcohol Manufacturer Presentation	Presentation	11	Alcohol Manufacturer in Davidson County	Industrial Runoff	Kevin Turner gave a presentation to alcohol manufacturers about illicit discharges and required TMSF or No Exposure regulations. Sites will have to be covered under one by the end of May. TDEC representatives John Leffew and Vojin Janic were present as well.
4/27/2024	Seed Swap	Educational Booth	20	Gardeners/ New gardeners	General Stormwater Pollution	Julie staffed a booth at the Seed Swap to discuss TNSY and gave away seed packets and MCG samples.
4/27/2024	Richland Park Farmers Market	Educational Booth	25	Nashville residents	General Stormwater Pollution	Gretchen cohosted a booth with Simone from Zero Waste to talk to residents about TN Smart Yards and reducing stormwater pollution at home. Pet waste bags, seed packets, and MCG samples were given out. Rain gauges were given to people who completed our Public Education survey at the booth.
5/11/2024	Park Explorer Family Day	Educational Booth	4	families of students in the park explorer program	Pet Waste	Julie and Gretchen had a booth discussing scooping the poop and had visitors take a pet waste poll to determine their scooping habits. Children who came to collect pet waste bags for their families were not included in attendance tallies.
5/12/2024	HWEN Garden Tour	Educational Booth	20	community members	General Stormwater Pollution	HWEN Garden Tour at Portland Pollinator Park/A Smart Yard
5/14/2024	MS4 Permit Training for Stormwater Maintenance Staff	Presentation	50	Stormwater Operations and Maintenance Staff	MS4 Permit Compliance	Josh Hayes presented MS4 Compliance requirements for maintenance operations that includes proper housekeeping of facility grounds and following SOPs for field operations.



NPDES Public Education Activities during FY24 (Continued)

Date	Event	Education Type	Audience #	Audience	Target Audience/ Pollutant	Notes
5/14/2024	TDEC Level 1 Certification	Presentation	125	Proposed Level 1 EPSC Professionals	Construction/Development Education	Shawn Herman presented Metro Grading Permit Information to people seeking Level 1 EPSC Certification.
5/16/2024	Tree Canopy Study Webinar	Presentation	77	Arborist and TUFC Members	General Stormwater Pollution	Sarah presented on the Urban Tree Canopy Study for a Tennessee Urban Forestry Council Webinar.
5/18/2024	2024 Waterfest	Citywide Event	550	General Public	Soil and Water Conservation	Jesse Hunter hosted an educational booth on soil and water conservation techniques.
5/18/2024	TNSY Festival	Citywide Event	150	Residents interested in TNSY Certification	General Stormwater Pollution	Julie, Gretchen, and Jesse organized and attended the TNSY Festival with the UT Extension Office and TNSY Lead Andrea Ludwig. Residents attended 4 demonstrations (rain gauge, rain barrel, composting, and providing for wildlife) where they learned about different sustainable practices within TNSY. Each demonstration had a raffle prize provided by Metro Water. 26 people interacted with the Stormwater booth at the festival. Gretchen gave the presentation for the rain gauge.
6/7/2024	Summer Reading Kick-Off Party	Educational Booth	31	Madison residents	Pet Waste	Julie and Gretchen staffed the booth discussing pet waste and having people take our pet waste poll to learn facts about pet waste pollution. Waste bags were handed out along with Black Eyed Susan seed packets to people interested in TNSY.
6/30/2024	Amqui Farmers Market	Educational Booth	19	Market Attendees	Pet Waste	Julie and Gretchen attended the market with Simone from Zero Waste. Visitors took the pet waste facts poll and learned about TNSY.
Total Estimated Audience Reached:			6,288			

Note: Social Media Posts, Water Bill Inserts, TN Smart Yard Newsletters (monthly), and MWS External (quarterly) and Internal (monthly) Newsletters were not included in this report. NPDES can provide metrics for each of these activities upon request.



Metro Department Stormwater Control Measures In-Person Training Sign-in Sheets

Sign In Form			
Mero Departments Stormwater Control Measure Workshop			
			Date: Thursday, December 14th, 2023
Name (Printed)	Signature	Metro Department	Email Address-Optional
Jessie Edgin	<i>Jessie Edgin</i>	Public Schools	
Chris Ford	<i>Chris Ford</i>	Public Schools	
Tatum Madden	<i>T.M. Madden</i>	MNPS	Tatum.madden@abm.com
Scott Ross	<i>Scott Ross</i>	MDHA	ross@nashville-mdha.org
Thomas Raybon	<i>Thomas Raybon</i>	MDHA	traybon@nashville-mdha.org
Jerry Cathey	<i>Jerry Cathey</i>	Library	jerry.cathey@nashville.gov
Jeremy Spires	<i>Jeremy Spires</i>	MNPA	Jeremy.Spires@FlyNashville.com
MARK STANGIS	<i>Mark Stangis</i>	HEALTH	Mark.stangis@nashville.gov
VALORIE Gilley	<i>Valorie Gilley</i>	MWS	
DAVID AMPURUEN	<i>David Ampuruen</i>	MWS KCH	
Joanie McNight	<i>Joanie McNight</i>	Parks	Joanie.McNight@nashville.gov
Anthony Hoyle	<i>Anthony Hoyle</i>	Parks	Anthony.Hoyle@nashville.gov
RONNIE HAYWARD	<i>Ronnie Hayward</i>	Metro Fair Ground	ronnie.hayward@nashville.gov
Shawn Johnson	<i>Shawn Johnson</i>	Georges Park	sjohnson@NASHVILLEWSC.com
Bennie Plunkett	<i>Bennie Plunkett</i>	Georges Park	bplunkett@nashvilleWSC.com
Rob Helbig	<i>Rob Helbig</i>	NES	rhelbig@nespower.com
Terry VanDergrift	<i>Terry VanDergrift</i>	Parks	Terry.VanDergrift@nashville.gov
Casper Buttrick	<i>Casper Buttrick</i>	Parks	Casper.Buttrick@nashville.gov
Jesse Hunter	<i>Jesse Hunter</i>	Omohundro	jesse.hunter@nashville.gov
Liz Sherstraw	<i>Liz Sherstraw</i>	General Services	liz.sherstraw@nashville.gov
Louis Burnett	<i>Louis Burnett</i>	MNPS	Louis.burnett@MNPS.org
Shawn Thomas	<i>Shawn Thomas</i>	MNPS	robert.thomas@mnps.org
JAMES AUMAS	<i>James Aumas</i>	NASHVILLE ZOO	
Dale McComity	<i>Dale McComity</i>	Nashville Zoo	dmcgimity@nashvillezoo.org



Photo of the Metro Department Stormwater Control Measures In-Person Training



**Metro Operation and Maintenance Facility Annual Training Sign-in Sheets
Centennial and Warner Park – In Person Training**

Employee Stormwater Training Sign-in Sheet

(Maintenance Employees to be trained on each Stormwater SOP located within Appendix once per calendar year. Employee sign-in sheets shall be kept within Appendix C of this document for a Period of no less than 3 years)

Metro Facility Name	Year of the Training	Supervisor Performing Training
Centennial	2024	William Powell
Employee Name	Employee Signature	Date Trained
KYLE CLARKE	<i>[Signature]</i>	3/19/2024
David Vaughn	<i>[Signature]</i>	
Darrell Sheffield	<i>[Signature]</i>	
William Powell	<i>[Signature]</i>	
David Manning	<i>[Signature]</i>	
CHARLES MCNEEL	<i>[Signature]</i>	
CHRISTOPHER MAWITT	<i>[Signature]</i>	
Donald Moody Jr	<i>[Signature]</i>	
Sebastian Brauner	<i>[Signature]</i>	
Sidney English	<i>[Signature]</i>	
Brandon Adams	<i>[Signature]</i>	
Quinn Harrison	<i>[Signature]</i>	
Ryan Nguyen	<i>[Signature]</i>	



**Metro Operation and Maintenance Facility Annual Training Sign-in Sheets
Centennial and Warner Park – In Person Training (Continued)**

Metro Parks' Operations and Maintenance Facilities

Annual Stormwater Training

March 19th, 2024 - 8am

Name	Signature	Maintenance Facility
William H Mitchel	<i>William H Mitchel</i>	Cent Rec
Deary Campbell	<i>Deary Campbell</i>	Cent. PARK 10
LARRY FLOWERS	<i>Larry Flowers</i>	CENT.
Steven Vadner	<i>Steven Vadner</i>	Cent. Park
Aaron Lindsay	<i>Aaron Lindsay</i>	Cent. Park.
Tony Weight	<i>Tony Weight</i>	Cent. Park
Danny O'Neal	<i>Danny O'Neal</i>	cent Park
Robert ^{son} Scott	<i>Robert Scott</i>	cent park
Logan Nightingale	<i>Logan Nightingale</i>	center. Park
Jeff Garvin	<i>Jeff Garvin</i>	center park
MIKE STEWART	<i>Mike Stewart</i>	Cent. Parks
Mark Foltan	<i>Mark Foltan</i>	cent park
Russell Dante	<i>Russell Dante</i>	Cent Landscaping
M. Lahey	<i>M. Lahey</i>	Cent LANDSCAPING
Cesar Brito	<i>Cesar Brito</i>	Cent park



Metro Operation and Maintenance Facility Annual Training Sign-in Sheets
 Centennial and Warner Park – In Person Training (Continued)

NAME OF TRAINING			Instructor:
Last Name	First Name	Work Location	Date/Time
1 DAY	Brian	Centennial	2/19/24 8:00AM
2 Tippit	Rich	Centennial	3/19/24 8:00AM
3 Lane	James	Centennial	3/19/24 8:00
4 Cooper	Matt	Downtown	3-19-24 8:00 AM
5 Smith-roman	Carl	Down Town	3-19-24 8:00am
6 Cross	Myles	Down Town	3-19-24 8:00am
7 Pierce	Danill	Centennial	3/19-24 8:00am
8 Newsome	David	Centennial	3/19/24 08:00
9 Bryant M.	William	Centennial	3/19/24 8:00
10 TiBBS	Wayne	Centennial	3/19/24 8:00
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**Metro Operation and Maintenance Facility Annual Training Sign-in Sheets
Stormwater Maintenance – In Person Training**

May 14, 2024 MS4 Permit Training by Josh Hayes
Roll Call Room Building B 6:00AM – 6:30AM

PRINT NAME	SIGN TO ATTEND	EMPLOYEE ID
Amos, Rodney	Rodney Amos	925000
Beamer, Anthony	Anthony Beamos	4013918
Bogle, Keith	Keith Bogle	343466
Brown, Carlos	C. Brown	479306
Brownlow, Ronnie		
Briggs, Teresa	Teresa Briggs	344884
Bullock, Quintin	Quintin Bullock	340407
Burnett, Denarius	D. Burnett	4000389
Cage, James	J. Cage	576114
Chambliss, Robert	Robert Chambliss	4611559
Cotton, Eric	Eric Cotton	340406
Davis, Malik	Malik Davis	402843
Dedmon, Jason	Jason Dedmon	187159
Dobbins, Brandon	Brandon Dobbins	783025
Dorris, Christopher	Christopher Dorris	450997
Edwards, Richard	Richard Edwards	4011557
Eldridge, Hakeem	Hakeem Eldridge	229446
Fedun, Joe	Joe Fedun	431178
Fleming, Robert	Robert Fleming	335296
Gaddes, Vincent	Vincent Gaddes	383409
Glenn, Christopher	Christopher Glenn	612038
Gooch, Terry	Terry Gooch	390408
Graves, Spencer	Spencer Graves	4012524
Green, Jamie	Jamie Green	344310
Henning, Joshua	Joshua Henning	562313



**Metro Operation and Maintenance Facility Annual Training Sign-in Sheets
Stormwater Maintenance – In Person Training (Continued)**

May 14, 2024 MS4 Permit Training by Josh Hayes
Roll Call Room Building B 6:00AM – 6:30AM

PRINT NAME	SIGN TO ATTEND	EMPLOYEE ID
Hines, Arther		
Hobbs, Darrell	Darrell Hobbs	4011533
Jackson, Mickey		
Johnson, Dewayne	Dewayne Johnson	4018925
Johnson, Gary	GARY JOHNSON	382455
Johnson, Mingo	MINGO JOHNSON	4014180
Jordon, Marcus	Marcus	329804
Kinley, Justin	Justin Kinley	4000980
Lavender, Loquez	Loquez	440052
Lindsley, William	William Lindsley	4011120
Lyons, Faith	Faith Lyons	434126
Madden, John	John Madden	452194
McElhiney, Kyle	Kyle McElhiney	619552
McKibben, Darryl	Darryl McKibben	344428
Newsom, Winston	Winston Newsom	4015930
Pace, Tiffany	Tiffany Pace	757051 545051
Peaks, Thomas	Thomas Peaks	278984
Peebles, Jamesha	Jamesha Peebles	4012685
Ragland, Keith	Keith Ragland	434666
Reneau, Austin	Austin Reneau	4015470
Ross, Lemicah	Lemicah Ross	4012523
Shelton, Steve	Steve Shelton	403562
Smith, Mackenze	Mackenze Smith	4015801
Teeter, Kenneth	Kenneth Teeter	4012687
Thompson, Donald	Donald Thompson	551815



**Metro Operation and Maintenance Facility Annual Training Sign-in Sheets
Stormwater Maintenance – In Person Training (Continued)**

May 14, 2024 MS4 Permit Training by Josh Hayes
Roll Call Room Building B 6:00AM – 6:30AM

PRINT NAME	SIGN TO ATTEND	EMPLOYEE ID
Vaughn, Isaac	<i>Isaac Vaughn</i>	4002640
Walker, Brian	<i>Brian Walker</i>	4006320
Wells, Lonnie	<i>Lonnie Wells</i>	469207
Young, Alan	<i>Alan Young</i>	343204
Page, Felecia A	<i>Felecia Page</i>	239423



**Metro Operation and Maintenance Facility Annual Training Sign-in Sheets
Shelby Park – SharePoint Video Training**

Employee Stormwater Training Sign-in Sheet

(Maintenance Employees to be trained on each Stormwater SOP located within Appendix once per calendar year. Employee sign-in sheets shall be kept within Appendix C of this document for a Period of no less than 3 years)

Metro Facility Name	Year of the Training	Supervisor Performing Training
Shelby Maintenance	2024	Michael Ernst Per Video
Employee Name	Employee Signature	Date Trained
Tony Lewis	<i>Tony Lewis</i>	3-12-2024
GEORGE HARDIN	<i>George Hardin</i>	3-12-2024
MICHAEL ERNST	<i>Michael Ernst</i>	3-12-24
Jesse Daniels	<i>Jesse Daniels</i>	3-14-24
Chance Perseman	<i>Chance Perseman</i>	3-14-24
Mark Hoover	<i>Mark Hoover</i>	3-14-24
Darryl Walker	<i>Darryl Walker</i>	3-14-24
Kristopher Nelson	<i>Kristopher Nelson</i>	3-14-24
Deonte Wright	<i>Deonte Wright</i>	3-14-24
Thomas Medina	<i>Thomas Medina</i>	3/15/24
John Stovall	<i>John Stovall</i>	3-18-24
Brett Baker	<i>Brett Baker</i>	3-18-24



**Metro Operation and Maintenance Facility Annual Training Sign-in Sheets
Two Rivers Park – SharePoint Video Training**

Employee Stormwater Training Sign-in Sheet
(Maintenance Employees to be trained on each Stormwater SOP located within Appendix once per calendar year. Employee sign-in sheets shall be kept within Appendix C of this document for a Period of no less than 3 years)

Metro Facility Name	Year of the Training	Supervisor Performing Training
Employee Name	Employee Signature	Date Trained
Sammie Coins	<i>Sammie Coins</i>	3-16-24
Scott	Scott	3-15-24
Scott Scott s.coff s.m.t.H	<i>Scott Scott</i>	3-15-24
Jalmani Henderson	<i>Jalmani Henderson</i>	3-16-24
James Tamantola	<i>James Tamantola</i>	3-15-24
Wesley Cross	<i>Wesley Cross</i>	3/15/24
Jerry Rahn	<i>Jerry Rahn</i>	3-15-24
Jesse Borch	<i>Jesse Borch</i>	3-15-24
Henry Poe	<i>Henry Poe</i>	3-15-24
Diego Penaherrera	<i>Diego Penaherrera</i>	15 MARCH 2024
TERESA MITCHELL	<i>Teresa Mitchell</i>	MAR. 15, 2024
Nancy Roes	<i>Nancy Roes</i>	3-18-2024





Metro Nashville Municipal Separate Storm Sewer System Permit Public Information & Education Plan

Created: August 2012

Updated: July 2024 – (New Outreach Strategies)

1.0 INTRODUCTION:

With issuance of the third cycle of Metro Nashville’s Municipal Separate Storm Sewer System (MS4) permit, there is an increased emphasis on the amount of public education and outreach Metro Water Services (MWS) will be responsible for overseeing. The first major undertaking will involve developing a Public Information and Education (PIE) plan. The PIE plan will outline the stormwater educational strategies, identify targeted educational approaches, and list yearly goals and accomplishments. A majority of MS4 permit items are coordinated and overseen by the MWS Stormwater NPDES Section. However, development and implementation of the PIE plan will be a joint effort between NPDES and the MWS Communications Section.

The main goals of stormwater education activities will be to increase public awareness for purposes of eliminating illicit discharges and improper disposals, reducing nonpoint source pollutants through better land management practices (i.e., fertilizer, sediment, oil, etc.), reducing overall runoff quantities through innovative development strategies, and ultimately improving water quality of receiving streams. In the new permit, Stormwater is required to target specific “hot areas”, which are defined in the permit as: *“an area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater. Examples might include operations producing concrete or asphalt, auto repair shops, auto supply shops, large commercial parking areas and restaurants.”* In some of Nashville’s sub-watersheds, public education will be the primary Best Management Practice (BMP) implemented for improving stormwater runoff quality, therefore, improving receiving water quality. For example, if NPDES staff or a received complaint finds that a stream segment or sub-watershed is impacted by a specific pollutant, targeted public education will be distributed to the surrounding community aimed at reducing non-point source runoff from that specific pollutant (i.e., pet waste, fertilizer, etc.).

1.1 RESPONSIBLE PERSONNEL:

While the entire NPDES Section and MWS Communications Section will be contributing to implementing PIE plan objectives, specific personnel within each department have been identified to oversee certain aspects of the plan. Table 1 depicts general PIE plan objectives and responsible personnel.



Public Information and Education Plan – Updated FY24 (Continued)

Table 1 – PIE Plan Responsible Party

Personnel	PIE Plan Responsibility	Contact Information
Communications Team	Reviews/Approves all distribution of public information/education materials Promotion of education and outreach events on social media outlets Assists in the updating of NPDES web pages	615-862-4494
NPDES Education Coordinator	Coordinates MS4 permit specific educational activities (industrial, commercial, construction education) Assists with coordinating and participating in major public education events Documents public education events and activities for Annual Report submittals Coordinates targeted mail-outs and outbound calling public education activities Develops public education materials Assists in the updating of NPDES web pages	615-880-2420
NPDES Education Specialist	Oversees school-specific education programs Oversees/coordinates the MWS implementation of the Tennessee Smart Yards Program Assists, as needed in the development of public educational materials	615-880-2420
NPDES Permit Group Supervisor	Reviews/Oversees PIE Plan objectives to be consistent MS4 permit requirements. Assists with Public Education coordination as needed.	615-880-2420

1.2 PIE PLAN GOALS AND TIMEFRAMES:

Goals for the PIE plan will be broken up into the following three main categories:

Goal 1: Meet and/or exceed MS4 permit requirements

Goal 2: Increase the fundamental understanding of water pollution for Nashville students, residents, businesses, and municipal employees.

Goal 3: Encourage use of better management practices that result in improved water quality of runoff from MS4 and private facilities within Metro’s MS4 jurisdiction.

Measuring the success of each goal will involve different evaluation procedures. Goal 1 will be, perhaps, the easiest objective to measure. While some of the MS4 permit language is vague, there are some identified milestones and deadlines that can be assessed in each MS4 annual report for completeness. Assessing the effectiveness of the PIE plan in accomplishing Goals 2 and 3 will be more difficult and are discussed in greater detail in Section 5 of this document.



2.0 Targeted Audience Groups:

In order to accomplish the PIE plan objectives, the first step is to identify targeted audiences for which education delivery methods will be tailored towards. The targeted audience will be determined based on a variety of factors, some of which will include general land use, business/community types, geographical areas, previous complaints, and perceived educational needs.

2.1 School Groups/Youth Camps

School children and youth are perhaps one of the most important demographics to target for stormwater education, as they will shape the future of water quality within Metro. MWS will engage school classes in projects and programs that connect students to the social, economic, and environmental impacts of stormwater issues and solutions, and to related careers.

2.2 “Hot Areas” within Metro

As discussed in Section 1, the new MS4 permit requires Metro to target “hot areas” as we designate. MWS NPDES will utilize its vast monitoring data, general knowledge from field investigations, and citizen complaints to aid in determining “hot areas”. The determined “hot areas” can often be classified into three main categories based on overall land use associated pollutants of concern. Table 2 refers to the typical pollutants expected in runoff from each major urban land use category. For purposes of public education, the three major urban land use categories have been identified to target specific messages: Residential, Commercial, and Industrial. These targeted educational messages will be included in the educational material (i.e. mailouts, brochures, door hangers) developed specifically for each category.



Table 2 - Typical Pollutant Runoff from Major Land Use Categories

Major Land Use	Typical Pollutants	Typical Source	Resulting Water Quality Degradation to Target in Educational Messages
Residential	<ol style="list-style-type: none"> 1. Nutrients 2. Sediment 3. Pathogens 4. Organics 	<ol style="list-style-type: none"> 1. Over-fertilization, Pet Waste, Human Waste and Detergents from failing septic systems 2. Grading areas without maintained controls and removing stream bank vegetation 3. Failing septic systems, illegal cross-connections of sanitary and stormwater, and pet waste 4. Dumping of leaves/grass clippings in conveyances 	<ol style="list-style-type: none"> 1. Increased algal blooms, depleted dissolved oxygen levels from decaying algae 2. Reduced water clarity for aquatic plants, smothers aquatic life, transports other pollutants 3. Potentially harmful to human health 4. Decomposition depletes dissolved oxygen levels within streams
Light Commercial	<ol style="list-style-type: none"> 1. Hydrocarbons (Oil & Grease) 2. Trash 3. Nutrients 4. Sediment 	<ol style="list-style-type: none"> 1. High-traffic parking lot areas, leaking storage tanks, etc. 2. Poor grounds upkeep, especially in parking areas and around dumpsters 3. Landscaping/golf courses 4. Grading/developing without maintained controls and removing stream bank vegetation. 	<ol style="list-style-type: none"> 1. Toxic to aquatic life and impact drinking water supplies 2. Aesthetically displeasing, can block drainage pipes causing erosion, can be harmful to wildlife 3. Increased algal blooms, depleted dissolved oxygen levels from decaying algae 4. Reduced water clarity for aquatic plants, smothers aquatic life, transports other pollutants.
Industrial/ Heavy Commercial	<ol style="list-style-type: none"> 1. Metals 2. Sediment 3. Hydrocarbons (Oil & Grease) 	<ol style="list-style-type: none"> 1. Exposed industrial processes/improper disposal 2. Exposed industrial processes/improper disposal and gravel parking lots with heavy truck traffic 3. Equipment leakage, leaking storage containers, high-traffic pervious areas 	<ol style="list-style-type: none"> 1. Acute or chronic toxic impacts to aquatic wildlife 2. Reduced water clarity for aquatic plants, smothers aquatic life, transports other pollutants 3. Toxic to aquatic life and impact drinking water supplies

2.3 Business Type/Community “Hot Areas”

There are certain types of businesses scattered throughout the county in which MWS NPDES have found to have a high potential for polluted runoff. MWS will conduct targeted educational campaigns towards these respective businesses. Business types that will be recipients of targeted education will include:



- ☛ Ready Mix Concrete Plants – focus on sediment runoff;
- ☛ Asphalt Mixing Plants – focus on sediment and oil & grease runoff;
- ☛ Recycling Centers – focus on sediment, metals, and trash runoff;
- ☛ Automotive Salvage Yards – focus on sediment and automotive fluid runoff;
- ☛ Large Automotive Repair Shops – focus on automotive fluid runoff; and
- ☛ Landscaping companies – focus on sediment runoff and application of pesticides, herbicides, fertilizers, and fungicides

2.4 High Citizen Complaint Zones

MWS receives numerous complaints about a variety of issues throughout the county. Complaints range from people dumping materials in storm ditches (leaves, limbs, trash, etc.) to people discharging illegal substances to the storm system. Upon analysis of complaints, MWS may choose to target certain areas for localized education. Depending on the magnitude and type of pollutant found in the waterway, MS4, or adjacent areas, NPDES will determine the necessary extent of the public education campaign. For example, if multiple residents on multiple streets are found to be dumping yard waste into a stormwater ditch, the whole community will receive educational material on proper disposal requirements and harmful impacts the waste can contribute to waterways. This type of education will be performed on a case-by-case basis.

2.5 Large Civic Educational Events

MWS Stormwater has fulfilled this requirement in the past by participating in a minimum of six large community events that relate to environmental awareness. Upon analysis of this tactic, MWS Stormwater learned that these large community events often attract out-of-town attendees who are not the intended audience of Nashville's NPDES Public Education Program. MWS Stormwater instead will focus on attending local community events that allow for a deeper connection to Nashville's residents. Moving away from environmentally themed events will allow MWS Stormwater to promote the message of pollution reduction at events where that is not the overarching theme and allocate resources to parts of the county that are not already receiving the message of pollution reduction from partner organizations.

As MWS Stormwater continues to critically evaluate Nashville's NPDES Public Education Program as required by the permit, the events attended are subject to change due to evaluation of booth interactions and the receptiveness of the audiences. Due to this constraint, MWS Stormwater is unable to definitively state which events will be attended each reporting year. However, the following events which align with these goals of Nashville's NPDES Public Education Program were completed in the previous reporting year:

1. Local Farmers Markets
2. TN STEAM Festival
3. TN Smart Yards Festival
4. Local Community Center Events
5. Local Library Events
6. Pop-Up Booths at Local Home Improvement Stores



2.6 Post Construction Treatment Devices (SCM) Owners

Developing sites that meet certain thresholds within the county are required to install permanent stormwater treatment devices, otherwise referred to as Stormwater Control Measures (SCMs), that are usually designed to treat stormwater runoff for water quality and quantity purposes. Once the site is completely developed, the property owner becomes responsible for permanent maintenance of SCMs. Metro will specifically target owners of BMPs to achieve proper maintenance.

2.7 Grading Contractors/Development Community

The development community, including land developers and grading contractors, will be the target of specific educational outreach. Education geared toward the development community will be focused on the impacts of sediment runoff during construction and general pollutant runoff from pervious surfaces after construction is completed.

2.8 Municipal Maintenance Employees

All Metro departments with field maintenance staff will be a key target audience for distributing stormwater education materials. As prescribed in the MS4 permit, municipal maintenance employees shall be trained on potential stormwater impacts that could result from maintenance activities. In addition, municipal field staff shall be trained on identifying and reporting occurrences of illicit discharges.

2.9 General Metro Residency

Perhaps the most important constituency within Metro to educate for stormwater quality purposes is the general residents within Metro. While there may exist overlap within the above-described target areas, Metro will also implement techniques to try to reach the masses on more general terms.

2.10 Social Media Community

Stormwater-focused posts are developed to reach a broad audience on MWS Facebook, Instagram, Twitter, and NextDoor to address both general pollution concerns and promote NPDES's educational opportunities and materials. MWS Stormwater works with the MWS Communications section to ensure posts are effective and easily understood. NextDoor can also be used to target specific neighborhood water quality concerns via posting in a specified geographic location. Promotion of workshops, events where MWS will participate or host, and other presentations is completed using the social media platforms.

3.0 Education Techniques for Targeted Audiences:

MWS will utilize a variety of tools to perform stormwater education. Education delivery methods will be designed to achieve maximum distribution to the targeted audiences. For example, educational efforts for the above-described “hot areas” may include mail-outs, outbound calling, coordinating with local non-profit watershed groups, and possibly holding community meetings. Table 3 matches the potential educational technique to the specific targeted audiences. As the MS4 public information plan proceeds, new techniques may be utilized for specific targeted audiences and the PIE Plan will be updated accordingly.

Table 3 – Educational Delivery Methods For Each Targeted Audience Group

Targeted Audience Group	Public Education/Outreach Technique
School Groups/Youth Camps	<ul style="list-style-type: none"> ☛ In-person or virtual presentations/demonstrations ☛ Distribution of educational materials designed for youth. (i.e., games, puzzles, tests, etc.)
General “Hot Areas”	<ul style="list-style-type: none"> ☛ Mail-outs (area-specific) ☛ Social Media (NextDoor used for specific neighborhoods) ☛ Outbound calling (area-specific) ☛ Soliciting help from local non-profit watershed groups in distributing educational materials ☛ Co-host community meetings with local non-profit watershed groups
Community/Business Type “Hot Areas”	<ul style="list-style-type: none"> ☛ Mail-outs (business-specific) ☛ Handing out materials (Dry-Weather Field Screening and Industrial Inspection Program) ☛ Hosting workshops
High Citizen Complaint Zones	<ul style="list-style-type: none"> ☛ Mail-outs (problem/complaint-specific) ☛ Outbound calling (problem/complaint specific) ☛ Social Media Posts
Large Community Events	<ul style="list-style-type: none"> ☛ Staffing stormwater educational booths ☛ Performing stormwater demonstrations ☛ Handing out educational materials
Post Construction BMP Owners	<ul style="list-style-type: none"> ☛ Mail-outs ☛ Handing out materials/Drop in visits by NPDES
Grading Contractors/Development Community	<ul style="list-style-type: none"> ☛ Face to face during Grading Permit process ☛ Participate in TDEC’s Level 1 EPSC Workshop
Municipal Maintenance Employees	<ul style="list-style-type: none"> ☛ In-person presentations/video ☛ Handing out materials
General Metro Residency (General Stormwater Education)	<ul style="list-style-type: none"> ☛ Hosting workshops ☛ Channel 3 Public Service Announcements (PSAs) ☛ Public signage (vehicle decals, billboards, etc.) ☛ Website and social media
Social Media Audience	<ul style="list-style-type: none"> ☛ Develop stormwater specific posts for MWS’s Facebook, Instagram, Twitter, and NextDoor



4.0 Education Implementation Schedule:

PIE Plan implementation will be based, first and foremost, on MS4 Permit deadlines. In order to keep track of stormwater education deadlines and responsibilities, a Public Education Implementation Table has been developed that will be the blueprint for yearly public education activities. The Public Education Implementation Table incorporates at least one type of education activity geared toward each Targeted Audience Group.

Table 4 – Public Education Implementation Examples

Task	Activity	Frequency
1.	Give out stormwater educational materials at every pre-construction meeting for Grading Permits.	Annually
2.	Present at all TDEC Level 1 EPSC workshops in Nashville.	As Scheduled by TDEC
3.	Perform in-person training or provide maintenance personnel with stormwater educational materials.	As Deemed Necessary
4.	Send mail-outs or perform outbound calling to high complaint zones as determined necessary.	As Deemed Necessary
5.	Perform dry-weather field screening on businesses with increased potential for stormwater pollution runoff.	Routinely
6.	Send mail-outs to critical post-construction BMP owners that were installed as per Metro’s grading permit requirements to treat water quality and quantity runoff.	As Deemed Necessary
7.	Make updates to MWS stormwater website pages to reflect latest regulations, program updates, new material, etc.	As Deemed Necessary
8.	Host TN Smart Yards Workshops in-person or virtually.	Monthly/Quarterly
9.	Participate in or host at least 6 large community/civic events.	Annually
10.	Provide public notice for all large Metro construction projects (possible website postings).	Annually
11.	Host an industrial stormwater workshop for all current TMSP sites and provide recording when necessary.	Every Permit Cycle
12.	Provide opportunity for public participation/involvement for stormwater awareness projects (i.e., stream clean-ups, tree plantings)	Annually
13.	Post to social media routinely about stormwater pollutant concerns, public education opportunities, and any other updates on the program.	Routinely
14.	Presentation and demonstrations focusing on stormwater education at Metro Nashville Public Schools.	Annually
15.	Distribute stormwater educational materials to building permit applicants for single family homes.	Annually
16.	Present each Annual Report to a public forum (i.e., Stormwater Management Commission).	Annually



Public Information and Education Plan – Updated FY24 (Continued)

5.0 PIE Plan Effectiveness Assessment:

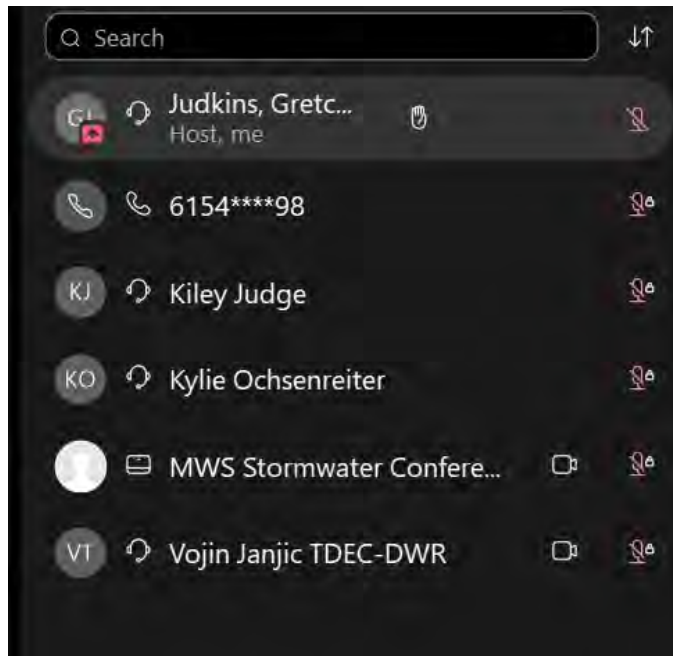
Throughout implementation of the PIE Plan, MWS will attempt to assess the effectiveness of the educational messages. Some potential assessment methods may include performing surveys to certain target audiences during presentations and analyzing monitoring data before and after targeted education has been performed.

5.1 PIE Database

A Microsoft Access Database has been developed to track and maintain records for each public education opportunity. The database includes the event name, date of event, type and focus of stormwater education, staff involved, and the audience number. The database will also link to any documentation connected to the event (i.e., presentation, pictures). This tracking will give MWS Stormwater an accurate estimate on audience size for each event and for the public involvement and education effectiveness.



Online Attendees of Alcohol Manufacturers Educational Meeting in FY24



DRAFT



Follow-up Letter sent to Alcohol Manufacturers Invited to the FY24 Workshop

FREDDIE O'CONNELL
MAYOR



METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY

DEPARTMENT OF WATER AND SEWERAGE SERVICES
Stormwater Division - NPDES
1607 A County Hospital Road
Nashville, TN 37218

April 25th, 2024

To Whom It May Concern:

The purpose of this letter is to give your alcohol manufacturing facility the information presented at the educational meeting hosted by Metro Water Services (MWS) on April 23rd. A copy of the presentation can be found [here](#), and my availability can be found [here](#) if you would like to schedule another meeting to discuss the contents of the presentation and this letter.

The National Pollutant Discharge Elimination System (NPDES) Program at Metro Water Services is federally required to maintain a Municipal Separate Storm Sewer (MS4) permit with the Tennessee Department of Environment and Conservation (TDEC). The overall goal of this permit is to reduce water pollution throughout Nashville and Davidson County. Two aspects of the NPDES program are illicit discharge investigations and industrial inspections.

Illicit discharges include anything except uncontaminated stormwater that enters community waters, waters of the state, or the MS4 system (storm drains, ditches, etc.). Illicit discharges are detailed in [Municipal Code 15.64.205](#). There have been some alcohol manufacturing facilities that have had illicit discharges from their sites, which was typically, but not limited to, spent grain, or other wastes, from the manufacturing process.

MWS inspects industrial facilities that are permitted with TDEC for stormwater discharges via the Tennessee Multi-Sector Permit (TMSP). This is a general permit with different sectors (each with specific requirements) based on the Standard Industrial Classification (SIC) codes. In other words, a site's SIC code will place them into the appropriate sector of the TMSP. MWS inspects these facilities on a routine basis to ensure all permit-required documentation is up-to-date and to determine if pollutants are being allowed to discharge from the site.

Alcohol manufacturing facilities would fall into [Sector U](#) of the TMSP due to the SIC codes 2082-2085. A site requiring a TMSP would need to apply via a Notice of Intent with TDEC and create a Stormwater Pollution Prevention Plan based off the language in Sector U of the TMSP. Sector U sites are required to complete monthly dry weather site inspections to look for potential pollutants draining off-site. These sites are also required to inspect their outfalls (where stormwater leaves your property) on a quarterly basis and take a sample of the stormwater to check for pollutants (turbidity, odor, floating solids, etc.). A thorough site inspection must be completed annually during dry weather as well. Analytical monitoring of the stormwater must be completed annually to report the Total Suspended Solids concentration in the site's stormwater. TMSP sites must pay annual permit maintenance fees based on the acreage of their site and are subject to compliance inspections with TDEC and/or MWS.

A [No Exposure Certification](#) (NEC) excludes your site from the above TMSP requirements. To qualify for a NEC, all industrial materials and activities must be protected by a storm-resistant shelter. This shelter can be covered and walled, and top-only shelters must ensure that precipitation cannot reach the material. Industrial materials or activities that need to be protected include material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of

**Follow-up Letter sent to Alcohol Manufacturers Invited to the FY24 Workshop
(Continued)**

any raw material, intermediate product, final product, or waste product. Storm-resistant shelters are not required for:

- Drums, barrels, tanks, and similar containers that are tightly sealed, have clean exteriors, are not deteriorated, and do not leak
 - “Sealed” meaning banded or otherwise secured and without operational taps or valves
- Clean pallets that are free of residuals
- Adequately maintained vehicles used in material handling
- Final products, other than products that would be mobilized in stormwater discharges (e.g., sand, spent grain, etc.)

Please submit a Corrective Action Plan (CAP) using the included Adobe form to our department, by no later than **May 31st, 2024**, that specifically addresses whether your facility will pursue a TMSP or NEC. Applications for the TMSP and NEC can be found [here](#). A copy of this letter will be provided to TDEC.

We thank you for your cooperation thus far, and we look forward to future coordination. If you have any questions, please feel free to call me at (615) 906-6325.

Sincerely,



Gretchen Judkins
Metro Water Services
Stormwater Division

cc: Josh Hayes – Metro Water Services, Stormwater NPDES
Kevin Turner – Metro Water Services, Stormwater NPDES
John Leffew – TDEC, Nashville Field Office



**Follow-up Letter sent to Alcohol Manufacturers Invited to the FY24 Workshop
(Continued)**

Corrective Action Plan for Alcohol Manufacturers

Due by May 31st, 2024

Please submit one Corrective Action Plan for each facility.
Send completed forms to Gretchen.Judkins@Nashville.gov.

Facility Name:

Facility Address:

Facility Contact

Name:

Title:

Phone:

Email:

Please answer the following questions regarding the above facility:

1. Will this site pursue a Tennessee Multi-Sector Permit or a No Exposure Certification?
2. What controls are you installing to become compliant with the TMSP or NEC requirements (e.g., covering a dumpster, changing loading/unloading procedures, etc.)? Please be specific here.
3. By what date will you have these controls installed? If they have already been installed, please provide the install date below. If these are physical controls, such as dumpster covers or silos, please include photos in your email submission of this form.
4. By what date will you have applied for the TMSP or NEC? If you have already applied, please provide the submission date. If you have applied and already received approval from TDEC, please provide your permit number (beginning in TNR-).

Signature _____

Date _____



Various Stats Tracked for the Current Water Quality Improvement Project Contract with the Cumberland River Compact as of the Date the Annual Report was Compiled.

MWS/CRC Partnership Agreement	Current Project			Agreement 2			Agreement 1	Total of All Projects	
Data as of: 06/30/2024	05/06/20 - 05/05/25			3/1/15-2/28/20			3/1/09-3/1/15	3/12/09-Present	
Partnership Progress Summary Table	W-QIP			W-QIP			SEP	Total	
WQIP Goal Criteria	W-QIP Goal	Current # Done	% Done	W-QIP Goal	Current # Done	% Done	SEP Total	Completed to date	SEP Goal Criteria
Facilitate rain garden builds	50	74	148%	250	257	103%	300	631	Facilitate 50 rain gardens being built/yr for 5 years
Facilitate planting of trees 1" or greater	2500	15120	605%	12,500	27,606	221%	12,486	55,212	Facilitate planting of 12,500 trees 1/2" or greater
Educate Davidson County residents about green infrastructure & reach Title 1 school students with stream ecosystem education	15000	29153	194%	12,500	44,005	352%	69,115	142,273	Educate 10,000 Davidson County residents about green infrastructure
Davidson County residents reached through articles, news stories, and other media.	NA	77543850	NA	NA	NA	NA	NA	77,543,850	
Recreation Opportunities on the River (People engaged)	10000	1893	19%	12,500	22,864	183%	NA	24,757	Recreation Opportunities on the River (People engaged)
Facilitate the adoption of stream segments	25	51	204%	25	69	276%	16	136	Facilitate the adoption of at least 25 stream segments
Remove impermeable pavement (reporting square footage removed)	NA	54000	NA	NA	3,000	NA	0	57,000	Remove impermeable pavement (reporting square footage removed)
Stream Cleanup Requests Received	NA	24	NA	NA	NA	NA	NA	24	Stream Cleanup Requests Received
Stream Cleanup Events Held	160	244	153%	NA	139	NA	NA	383	Stream Cleanup Events Held
Stream Banks Stabilized (linear ft)	250	2810	1124%	NA	NA	NA	NA	2,810	Stream Banks Stabilized (linear ft)
start date =				5/6/2020					
end date =				5/5/2025					



Example Stormwater Management Commission Meeting Agenda posted on the MWS Website during FY24

STORMWATER MANAGEMENT COMMISSION MEETING DETAILS for 01-MAY-2024

Case # 202400008 Gay Street Park
Council District: 19 (Jacob Kupin)
Address: 428 and 510 1st Avenue North
APN: 08214003801 and 08214003800

Case Description: Variance request is to allow the following:

- Disturbance of the floodway buffers of the Cumberland River to construct: Landscaped areas, permeable pavers, a bioretention pond, a sports court, ball field, greenway, and pavilion.
- Continuous mowing and maintenance of the floodway buffers.
- Modified buffer signage (educational signage proposed).

Case # 202400009 Nashville Zoo Bridge Expansion
Council District: 26 (Courtney Johnston)
Address: 3777 Nolensville Pike
APN: 13300000400

Case Description: Variance request is to allow the following:

- Disturbance of the stream buffers of Cathy Jo Branch to expand an existing boardwalk.

Case # 202400010 Davidson Branch Pump Station
Council District: 35 (Jason Spain)
Address: 6950 Charlotte Pike
APN: 10200008800

Case Description: Variance request is to allow the following:

- Allowance of 550 cubic yards of uncompensated fill to remain within the floodplain.

Case # 202300011 Opry Mills Greenway Connector
Council District: 15 (Jeff Gregg)
Address: 433 Opry Mills Drive
APN: 07300001700

Case Description: Variance request is to allow the following:

- Disturbance of the floodway and floodway buffers to construct a greenway and associated appurtenances.
- Continuous mowing and maintenance of the floodway and floodway buffer.
- Modified location of buffer signage, proposed as educational signage.



Metro Water Services Waste Services Division – Material Management Report (FY24)

Recycling Tons	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Metro Curbside	982.56	1,136.34	918.44	927.51	1,039.11	1,049.07	1,013.47	1,082.70	994.57	1,045.14	1,078.71	953.15	12,220.77
Drop-offs	457.57	447.95	495.51	477.82	530.13	534.10	418.68	514.30	505.97	388.08	436.53	528.12	5,734.76
Centers	122.01	148.97	180.52	185.73	161.56	152.36	130.18	163.96	142.32	154.13	170.26	144.34	1,856.34
Front Loader	3.24	-	-	-	3.60	-	-	-	-	-	-	-	6.84
Metro Buildings	-	-	-	3.46	1.26	1.80	-	-	-	-	-	-	6.52
Hazardous	4.37	-	6.79	-	-	-	-	-	1.09	2.72	-	-	14.97
Electronics	-	-	11.71	11.78	15.00	10.78	13.08	9.44	21.87	17.04	23.83	18.45	152.98
Food Waste	5.50	-	4.47	3.25	3.25	9.15	7.22	7.74	8.54	9.05	6.70	6.68	71.55
Special Events	-	-	-	-	-	5.52	-	-	-	-	-	-	5.52
Tires	558.26	530.95	474.32	623.97	775.58	425.35	263.05	445.32	486.76	467.29	502.01	466.39	6,019.25
Total Recycling	2,133.51	2,264.21	2,091.76	2,233.52	2,529.49	2,188.13	1,845.68	2,223.46	2,161.12	2,083.45	2,218.04	2,117.13	26,089.50
Landfill Tons	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Contract Curbside	10,853.97	11,339.24	9,684.04	11,739.69	10,593.47	10,021.62	10,355.01	9,926.15	10,071.98	10,795.10	11,489.71	10,239.69	127,109.67
Metro Curbside	174.85	135.46	112.51	129.70	109.78	170.58	223.87	113.14	66.98	56.55	67.13	90.73	1,451.28
Centers	1,437.19	1,492.94	1,273.23	1,231.38	1,109.14	1,063.70	700.03	898.79	900.07	940.45	976.80	849.24	12,872.96
Metro Front Loader	1,224.63	616.70	551.39	597.56	591.31	553.81	567.93	583.58	564.12	649.12	709.22	545.16	7,754.53
Contract Front Loader	-	829.35	708.59	692.32	718.79	702.58	741.19	717.01	753.71	808.15	809.54	682.86	8,164.09
Downtown	572.86	492.62	523.40	604.98	464.83	347.94	424.25	464.84	622.45	664.80	660.14	611.15	6,454.26
Metro Buildings	33.55	40.65	43.82	36.05	26.81	24.44	36.27	32.66	17.41	22.15	28.68	27.75	370.24
Special Events	10.64	2.14	4.12	-	16.75	8.16	20.66	-	18.53	8.33	10.69	13.97	113.99
Total Waste	14,307.69	14,949.10	12,901.10	15,031.68	13,630.88	12,892.83	13,069.21	12,736.17	13,015.25	13,944.65	14,751.91	13,060.55	164,291.02
Other Programs	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Mattress	-	760	677	1,463	1,110	1,417	705	969	1,268	1,080	1,134	1,112	11,695



Metro Nashville Department of Transportation Hazardous Spills Responses to Large Spills on Metro Roadways During FY24

ID	Date	Origin	Notified	Location	Situation	Arrived	Actions
2073	4/25/2024	Matt Ryman	13:50	71 Old Hermitage Ave	Hydraulic fluid spill on roadside	14:00	Applied 300 lbs. Of absorbent
2071	12/8/2023	Ernie Kurgan	23:10	Pin Hook Rd & Chutny Dr	Hydraulic spill on road	23:40	Applied 1600 lbs. Absorbent
2070	11/14/2023	Ernie Kurgan	13:15	Ewing Dr	Oil spill on road	13:45	Applied 200 lbs. Of absorbent
2065	11/3/2023	Ernie Kurgan	11:00	740 South5th St. Back Parking Lot	Oil spill on parking lot	12:00	1500 lbs. of absorbent
2064	11/3/2023	Ernie Kurgan	11:00	740 South 5th. St On Road	Oil spill on road from trash truck	11:30	Applied 500 lbs. Of absorbent to spill
2066	11/3/2023	Ernie Kurgan	11:00	Oil Spill On East Center Parking Lot & Road Out Side Center 943 Dr. Richard Adams Dr.	Oil spill on lot and road	11:30	Put down 2000 lbs. Absorbent
2062	10/22/2023	Ernie Kurgan	12:30	Jefferson St. Bridge	Oil spill on road	12:45	Applied 20 lbs. Absorbent
2061	10/18/2023	OEM	18:45	Lebanon Pk & Graylynn Dr	Hydraulic spill on road	19:00	Applied 300 lbs. Absorbent
2060	10/12/2023	OEM	17:30	2827 Smith Springs Rd	Fuel spill at Mapco spill on road	17:45	150 lbs. of absorbent
2059	10/11/2023	OEM	14:15	1801 21st. Ave	Diesel spill on road	14:32	Applied 150 lbs. Of absorbent
2058	10/10/2023	OEM	15:00	219 Blackman Rd	Hydraulic oil spill on road	15:30	Put down 450 lbs. Absorbent
2057	9/7/2023	OEM	15:20	608 Harding Pl.	Accident oil spill on road	15:30	Put down 150 lbs. Absorbent
2056	8/19/2023	OEM	17:50	2421 Powell Ave	Oil spill on road	18:40	Put down 50 lbs. Of absorbent
2055	8/13/2023	OEM	3:30	Jefferson St. & 17th Ave N.	Oil spill on road from wreck	3:50	Applied 75 lbs. Absorbent
2052	8/10/2023	OEM	17:14	1200 E. Old Hickory Blvd.	Oil spill on road from car fire	17:24	Applied 100 lbs. Of absorbent
2053	8/10/2023	OEM	15:15	Old Hickory Blvd. & Dickerson Pk	Hydraulic oil spill on road from wreck	15:20	Applied 100 lbs. Of absorbent
2047	7/13/2023	Metro Water	12:00	704 51st Ave N.	Grease spill in alley on road	12:20	Covered with 2,500 lbs. Of absorbent

Website Public Notice Posting for the FY23 Draft Annual Report

The screenshot shows a web browser window displaying the Nashville.gov website. The URL in the address bar is <https://www.nashville.gov/departments/water/news/public-notice-metro-nashvilles-stormwater-ms4-permit-annual-report>. The page features a blue header with the Nashville.gov logo and navigation links for Services, Government, and Jobs. A search bar is also present. The main content area has a blue wave graphic at the top. The title of the page is "Public Notice of Metro Nashville's Stormwater MS4 Permit Annual Report". Below the title is a sub-header: "Metro Nashville is welcoming comments, questions, or feedback on implementation of specific MS4 Permit provisions". The date is "November 9, 2023". A breadcrumb trail reads: Home > Departments > Water > Newsroom. The main text explains that the Metropolitan Government of Nashville and Davidson County holds a Municipal Separate Storm Sewer System (MS4) Permit issued by the Tennessee Department of Environment and Conservation (TDEC), which authorizes the discharge of stormwater runoff from all portions of the MS4, owned or operated by Metropolitan Government of Nashville to Waters of the State of Tennessee. The MS4 permit prescribes specific pollution control provisions and monitoring requirements that Metro Nashville must implement on a yearly basis. Each year, Metro Nashville is required to submit an annual report summarizing the performance of specific program requirements. The permit also requires all annual reports to be made available for public review and feedback prior to submitting to Tennessee Department of Environment and Conservation. The notice states that Metro Nashville is welcoming comments, questions, or feedback on implementation of specific MS4 Permit provisions detailed in the [Draft Fiscal Year 2023 Nashville MS4 Annual Report](#). Comments, questions, concerns, or requests for a specific meeting, shall be submitted by November 30, 2023 in writing, to the below contacts: Metro Water Services, Stormwater NPDES Section, 1607 County Hospital Road, Bldg. A, Nashville, TN 37218. Attn: Michael Hunt and Josh Hayes. Email: Michael.Hunt@nashville.gov and Josh.Hayes@nashville.gov.

ATTACHMENT A – Protected Species Report

Draft



Metro Nashville Municipal Separate Storm Sewer System Permit Federal or State-Protected Species Impact assessment

(Reporting Period 07/01/2023 – 06/30/2024)

Reviewed and Updated:
October 2024

Introduction:

As per the Municipal Separate Storm Sewer System (MS4) permit, Metro Nashville is required to perform an annual assessment of potential Stormwater impacts to federal and state-protected aquatic species known to exist within Metro Nashville Davidson County (Metro). In order to perform the assessment, the Metro Water Services (MWS) Stormwater NPDES Section downloaded a list of aquatic species located within Davidson County. In order to assess potential impacts to rare species, the list of rare aquatic species was analyzed and broken into specific habitat categories. Table 1 details the list of rare aquatic species that have been known to occur within Davidson County. According to the Tennessee Department of Conservation (TDEC) Natural Heritage Program (NHP), Rare Species Inventory Program there are 18 aquatic species rare or protected aquatic species that occur or have historically occurred within Davidson County.

Only five of the 18 rare aquatic species have a federal protection status, all of which are listed as “Endangered”, while remaining 13 of the rare aquatic species have been listed by the state of Tennessee with one of the following legal protection status:

“D” Deemed in Need of Management,
“E” Endangered,
“T” Threatened,
“S” Special Concern species, and
Rare, Not State Listed

Typical Habitat Requirements:

While the 18 species may require specific aquatic habitat conditions, the general type of aquatic habitat can be broken into three main categories:

- Large River/Lake – The Cumberland River is the only large river system within Davidson County. The Cumberland River has portions of two impoundments (Cheatham Lake and Old Hickory Lake) within Davidson County. Due to the dilution factor, Nashville’s Stormwater runoff would have negligible effects of the water quality/habitat of the Cumberland River.
- Small Streams to Small/Medium Rivers – This particular habitat represents all of the smaller headwater streams, creeks, and small rivers that drain into the Cumberland River. The small streams/rivers are more susceptible to impacts from Stormwater runoff from the MS4.
- Ponds/Wetlands/Springs – This particular habitat describes floodplain wetlands, farm ponds, and springheads located throughout the county, which would have the potential of being impacted by MS4 runoff.



Table 1 – List of Rare Aquatic Species for Davidson County Tennessee – FY24

General Aquatic Resource	Type	Scientific Name	Common Name	Global Rank	Fed. Status	St. Status	Habitat	State Rank
Small Headwater Streams to Small/Medium Rivers	Invertebrate Animal	<i>Sphalloplana buchanani</i>	A Cave Obligate Planarian	G1G2	No Status	Rare, Not State Listed	Aquatic cave obligate; northern Central Basin; Davidson County; taxonomy poorly understood.	S1
	Vertebrate Animal	<i>Ambystoma barbouri</i>	Streamside Salamander	G4	No Status	D	Seasonally ephemeral karst streams; middle Tennessee.	S2
	Vertebrate Animal	<i>Cryptobranchus alleganiensis</i>	Hellbender	G3	No Status	E	Rocky, clear creeks and rivers with large shelter rocks.	S3
	Vertebrate Animal	<i>Etheostoma luteovinctum</i>	Redband Darter	G4	No Status	D	Limestone streams; Nashville Basin & portions of Highland Rim.	S4
	Vertebrate Animal	<i>Etheostoma microlepidum</i>	Smallscale Darter	G2G3	No Status	D	Small rivers, in deep, strongly flowing riffles with gravel, boulder, and coarse rubble substrates; Cumberland River drainage.	S2
	Vertebrate Animal	<i>Percina phoxocephala</i>	Slenderhead Darter	G5	No Status	D	Small-large rivers with moderate gradient in shoal areas with moderate-swift currents; portions of Tenn. & Cumb. river watersheds.	S3
	Invertebrate Animal	<i>Faxonius shoupi</i>	Nashville Crayfish	G1G2	LE, PDL	E	1st-order & larger streams, generally with bedrock bottom, under slab rock; endemic to Mill Creek watershed; Davidson & William. cos.	S3
	Invertebrate Animal	<i>Epioblasma florentina walkeri</i>	Tan Riffleshell	G1	LE	E	Found in river headwaters, in riffles and shoals in sand and gravel substrates; Tennessee & Cumberland river systems.	S1
	Invertebrate Animal	<i>Simpsonaias ambigua</i>	Salamander Mussel	G1G2	No Status	Rare, Not State Listed	In sand or silt under large, flat stones in areas of swift current; occurred historically in E Fk Stones R; 2005 obs in lower Duck R.	S1
	Invertebrate Animal	<i>Lithasia duttoniana</i>	Helmet Rocksnail	G2	No Status	Rare, Not State Listed	Rocky substrates in riffle systems; bedrock in flowing water below main section of riffles; Duck River (TN River system).	S2
	Vertebrate Animal	<i>Acipenser fulvescens</i>	Lake Sturgeon	G3G4	UR	E	Bottoms of large, clean rivers and lakes.	S1
	Vertebrate Animal	<i>Carpodes velifer</i>	Highfin Carpsucker	G4G5	No Status	D	Large rivers, mostly in Tennessee River drainage.	S2
	Vertebrate Animal	<i>Cycleptus elongatus</i>	Blue Sucker	G3G4	No Status	T	Swift waters over firm substrates in big rivers.	S2
	Vertebrate Animal	<i>Macrochelys temminckii</i>	Alligator Snapping Turtle	G3	PT	T	Slow moving, deep water of rivers, sloughs, oxbows, swamps, and lakes; middle and west Tennessee; obscure.	S2
	Invertebrate Animal	<i>Epioblasma brevidens</i>	Cumberlandian Combshell	G1	LE, XN	E	Large creeks to large rivers, in coarse sand or mixtures of gravel, cobble, or rocks; Tennessee & Cumberland river systems.	S1
	Invertebrate Animal	<i>Lampsilis abrupta</i>	Pink Mucket	G1G2	LE	E	Generally a large river species, preferring sand-gravel or rocky substrates with mod-strong currents; Tennessee & Cumberland river systems.	S2
	Invertebrate Animal	<i>Plethobasus cooperianus</i>	Orangefoot Pimpleback	G1	LE, XN	E	Large rivers in sand-gravel-cobble substrates in riffles and shoals in deep flowing water; Cumberland & Tennessee river systems.	S1
Ponds/Wetlands/Springs	Vascular Plant	<i>Ranunculus aquatilis var. diffusus</i>	White Water-buttercup	G5T5	No Status	E	Ponds and Streams	S1



Potential Impacts from MS4 Runoff:

Rare species that inhabit smaller streams and rivers, ponds, wetlands, and springs would be the most vulnerable to potential impacts from MS4 runoff. Impacts from MS4 runoff includes:

- Increased sediment loads smothering natural stream substrate;
- Increased nutrient runoff that cause sporadic algal blooms and accompanying reductions in available oxygen;
- Increased levels of toxic chemicals such as pesticides, oils, etc.;
- General loss of habitat from development activities.

Metro Nashville's Measures to Prevent Impacts to Aquatic Rare Species:

Metro Nashville's MS4 program employs a simple technique to protect against impacts to rare aquatic species: "*Protect all of Nashville's Aquatic Habitat*". In order to protect Nashville's aquatic habitat, a multi-prong approach is in place:

- Control Future Development – Establish local regulations that prevent future development from destroying aquatic habitat. Monitor runoff during construction to prevent the destruction of aquatic habitat
- Enforce on developments that violate local construction regulations that could lead to the further destruction of aquatic resources.
- Control the quality of Stormwater runoff from existing properties
- Establish local regulations that prevent the discharging of pollutants to MS4 and/or waterways
- Monitor existing properties to ensure pollutants are not being discharged to the MS4 and/or waterways.
- Enforce on properties/individuals that violate local water pollution laws that could potentially impact aquatic habitat.
- Monitor the overall water quality and health of Nashville's streams
- Analytical sampling of certain water quality parameters
- Rotating biological surveys of Davidson County streams.

Controlling Future Development

Metro Nashville has established strict regulations protecting aquatic resources from impacts associated with development activities. All development or redevelopment activities that are over 10,000 square feet in overall footprint or involve more than 100 cubic yards of fill are required to obtain grading permits from the Metro Water Services (MWS) Stormwater Division. In order to obtain a grading permit from MWS, engineered plans have to be developed that illustrate how Stormwater runoff will be managed during and after development. Strict erosion and sediment control measures are required at all grading permit properties during construction. In order to ensure that erosion and sediment controls are maintained throughout construction, NPDES has eleven inspectors that inspect grading permit site construction control measures.

Metro Nashville also requires protection from impacts to aquatic resources after the construction phase of projects by requiring grading permit properties to install permanent Stormwater treatment measures that are designed to treat/address both the volume and quality of runoff from the property.



In addition to requiring development or redevelopment activities to obtain permits and treat Stormwater runoff, Metro Nashville was also one of the first municipalities in the state to establish no-disturb buffers along streams and other water resources within Metro Nashville, Davidson County. Development activities that demonstrate a hardship requiring some impacts to the no-disturb riparian buffer (i.e., for a bridge crossing, etc.) are required to go through a strict variance appeal process via the Metro Stormwater Management Commission. Variance requests for stream crossings or other direct impacts to water resources are not granted unless any necessary TDEC Aquatic Resource Alteration Permits (ARAPs) or Section 404 permits from the U.S. Army Corps of Engineers (USACOE) are obtained, which cannot be issued if protected species are impacted.

Controlling the Quality of Stormwater Runoff from Existing Properties

Metro Nashville has the following specific ordinance in place that prevents the discharge of pollutants to storm drains or community waters:

15.64.205 - Non-Stormwater discharges.

A. Definitions.

"Community waters" means any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wetland, wells and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the Metropolitan Government of Nashville and Davidson County.

"Contaminant" means any physical, chemical, biological or radiological substance or matter.

"Director" means the Director of the Metropolitan Government of Nashville and Davidson County's Department of Water and Sewerage Services, or his designee.

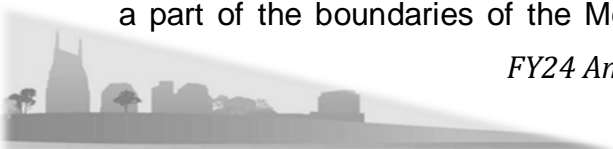
"Discharge" means any substance disposed, deposited, spilled, poured, injected, seeped, dumped, leaked, or placed by any means, intentionally or unintentionally, into community waters, the waters of the state, or any area draining directly or indirectly into the municipal Stormwater system of the metropolitan government.

"Metropolitan government" means the Metropolitan Government of Nashville and Davidson County.

"Municipal separate storm sewer system of the metropolitan government" means a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, and storm drains) designed or used for collecting or conveying Stormwater; provided, however, that sanitary and combined sewers are not included in the definition of the municipal separate storm sewer system.

"Non-Stormwater discharge" means any discharge to the municipal separate storm sewer system except as permitted by subsection C of this section.

"Waters of the state" means any water, surface or underground, lying within or forming a part of the boundaries of the Metropolitan Government of Nashville and Davidson



County, over which the Tennessee Department of Environment and Conservation exercises primary control with respect to Stormwater permits.

B. Except as hereinafter provided, all non-Stormwater discharges into community waters, into the waters of the state, or into the municipal separate storm sewer system of the metropolitan government are prohibited and are declared to be unlawful.

C. Unless the director has identified them as a source of contaminants to community waters, the waters of the state, or the municipal separate storm sewer system of the metropolitan government, the following discharges are permitted:

1. Stormwater as defined in TCA Section 68-221-1102(5);
2. Water line flushing;
3. Landscape irrigation;
4. Diverted stream flows;
5. Rising ground waters;
6. Uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers;
7. Uncontaminated pumped groundwater;
8. Discharges from potable water sources;
9. Foundation drains;
10. Air conditioning condensate;
11. Irrigation water;
12. Springs;
13. Water from crawl space pumps;
14. Footing drains;
15. Lawn watering;
16. Individual residential car washing;
17. Flows from riparian habitats and wetlands;
18. Dechlorinated swimming pool discharges;
19. Street wash waters resulting from normal street cleaning operations;
20. Discharges or flows from emergency firefighting activities.

D. The director, with the approval of the mayor, shall have authority to implement this section by appropriate regulations. Such regulations may include but are not limited to provisions for inspection of points of origin of known or suspected non-permitted discharges by appropriate personnel of the metropolitan government.

E. Discharges pursuant to a valid and effective NPDES permit issued by the State of Tennessee are not prohibited by this section.

F. The provisions of this section, including subsection C of this section, shall not apply to sanitary or combined sewers, which are governed by Chapter 15.40 of the Metropolitan Code of Laws.

G. Violation of this section shall subject the violator to a civil penalty of not less than fifty dollars nor more than five thousand dollars per day for each day of violation. Each day of violation may constitute a separate violation.



NPDES issues enforcement notices and administrative penalties to existing facilities found to be in violation of the above non-Stormwater discharge code.

In addition to controlling polluted runoff from construction activity, NPDES implements various other pollution prevention programs:

- Industrial Inspection/Monitoring Program
- Proactive Field Screening/Illicit Discharge Detection Elimination Program
- Pollution Reporting Hotline
- Sewer Leak Detection Program (Using Thermography Technology)
- Post-Construction Stormwater Treatment SCM inspection/maintenance verification program
- Public Involvement/Education

Monitoring the Overall Water Quality and Health of Nashville's Streams

NPDES performs intense monitoring of Metro Nashville, Davidson County streams. Veronica Logue of the NPDES Office retained a permit/certification from the USFWS/TWRA to perform surveys within the Mill Creek watershed (home to the endangered Nashville Crayfish). The following programs involve field assessments of streams:

- Ambient Sampling - Seasonal water quality samples are taken and analyzed for potential pollutants. Various streams are sampled each year on a rotating basis.
- TMDL Monitoring – Quarterly flow weighted samples are collected and analyzed for bacterial and TSS of various/rotating stream segments in which TMDLs have been developed.
- Visual Stream Assessments – All State-listed 303(d) stream segments with MS4 outfalls are visually inspected on a 5-year cycle.
- Benthic Surveys – Seasonal benthic surveys are performed on various streams each year. The benthic sampling coincides with the same stream rotation schedule as the ambient sampling.

If abnormalities are found in any of the above monitoring results, individual investigations are initiated to find and eliminate potential sources of pollution.

Conclusion:

Metro Nashville's MS4 program has taken substantial steps to protect aquatic resources within Metro Nashville, Davidson County. By virtue of protecting the Metro Nashville's water resources, critical habitat required for aquatic species has also been preserved/protected. During this permit year, there have not been any known discharges from the MS4 that have caused the destruction of a rare species or their critical habitat.



**ATTACHMENT B – Coordination with TDEC on MS4
Compliance During Administrative Extension Period of MS4
Permit**

DRAFT



MEGAN BARRY
MAYOR

METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY



DEPARTMENT OF WATER AND SEWERAGE SERVICES
STORMWATER DIVISION
NPDES OFFICE
1607 COUNTY HOSPITAL ROAD
Nashville, Tennessee 37218

January 31, 2017

Re: Nashville Phase 1 MS4 Permit Reissuance – TNS068047

Vojin Janjic | Manager, Water-Based Systems
Division of Water Resources
William R. Snodgrass Tennessee Tower, 11th Floor
312 Rosa L. Parks Ave, Nashville, TN 37243

Dear Mr. Janjic,

We are writing you to request specific clarification on the permit reissuance process for the Metropolitan Government of Nashville, Davidson County (Metro) Municipal Separate Storm Sewer System, which expires as of today, January 31, 2017. As we approach this reissuance process and period between expired permit and reissued permit, it is our intentions to propose the following path going forward to ensure MS4 Permit compliance is maintained throughout the transition period and to ensure coordination occurs between the Division and key Metro staff to incorporate changes to specific terms and conditions of the MS4 permit.

Transition Period:

As you are aware, most of the specific requirements of the MS4 permit are ongoing and do not have certain deadlines by which to be completed. Among these, include programs such as administering stormwater management regulations requirements for post-construction stormwater controls, overseeing a vigorous inspection and oversight program for construction activities, performing public education/public involvement activities, ensuring municipal maintenance operations are not impacting stormwater runoff, and implementation of various Illicit Discharged Detection and Elimination (IDDE) programs. Metro proposes to continue these ongoing programs as prescribed in the existing active permit until the new permit becomes effective.

If you need assistance or an accommodation, please contact Metro Water Services, 615-259-8622, 1600 Second Avenue North, Nashville, Tennessee 37208.

There are some MS4 permit requirements, however, that list specific target dates or timeframes for the activities to be completed per Metro's active permit. Specific requirements within the MS4 permit that have declared deadlines are listed below:

- **Dry Weather Outfall Screening**
 - *Screen one outfall within every ¼ mile commercial/industrial grid once per permit term.*
- **Industrial Inspection/Monitoring Program**
 - *Inspect industrial high risk sites as identified by the MS4 permit (i.e. SARA Title 3, TSD sites, etc.) once every 3 years.*
- **Post Construction Stormwater Control Measure (SCM) Inspection and Maintenance Oversight Program**
 - *Implement permittee-defined program by the end of year 5.*
- **Various MS4 Permit-Prescribed Monitoring Activities.**
 - *Sampling programs (i.e. wet weather, ambient, visual stream assessments, etc.) prescribed in the permit to be completed on a 5 year permit term.*

It is our understanding through conversations with TDEC staff, that it may be late 2017 or possibly even next year, before our MS4 permit is reissued. With that said, we would like to propose the following compliance activities to be performed in the transition period.

- **Dry Weather Outfall Screening**
 - *Test our newly proposed field screening protocol (i.e. screen 3 business/industrial sites for site management/housekeeping procedures in each ¼ commercial/industrial-zoned grid.) Transition period goal would be to screen at least 50 grids each year prior to the new permit being issued.*
- **Industrial Inspection/Monitoring Program**
 - *Re-inspect only industrial sites in which issues were noted during the original inspections and/or those involved with compliant investigations. Identify and perform inspections on industrial facilities (not required to be inspected by the original MS4 permit (i.e. auto salvage lots, ready-mix facilities, etc. not identified as SARA Title 3 or TSD facilities)). A list of industrial facilities to be inspected would be sent to the TDEC Nashville Field Office. Goal would be to inspect 10 industrial facilities each year.*
- **Post Construction Stormwater Control Measure (SCM) Inspection and Maintenance Oversight Program**
 - *Continue to respond to citizen complaints of SCM structures not being maintained properly. In addition, would inspect and enforce (if necessary) on at least 50 SCM structures per year. Currently and during the transition period, Metro will continue to build its SCM Inspection & Maintenance oversight process.*
- **Various MS4 Permit-Prescribed Monitoring Activities.**
 - *Discontinue the following sampling activities until the new MS4 permit is issued:*
 - *Wet Weather Homogenous Land Use Sampling*
 - *Wet Weather SCM Discharge Grab Sampling*
 - *Wet Weather Industrial Sampling (1 TMSR/RMCP site per year).*



- Continue routine ambient monitoring/sampling programs (ambient chemical/bacteriological sampling and visual stream assessments) as well as any site-specific sampling as required in the course of routine investigations. The MWS Stormwater NPDES Watershed Group would coordinate with TDEC Nashville Field Office staff on monitoring schedules (which watersheds they will be monitoring during the transition period).

New Permit Coordination

As stated above, Metro is requesting coordination on developing specific terms and conditions of the reissued MS4 permit in an ongoing effort to improve our permit compliance activities. In particular there are several program activities that Metro is interested in modifying to make more efficient and effective. Some of these proposed changes would involve changes to MS4 permit requirements as well, if implemented. Specific changes Metro are requesting to individually listed permit requirements were included in Metro's most recent Annual Report submittal (see attachment). Metro is requesting specific meetings to be arranged between appropriate TDEC permit writer staff and MWS Stormwater NPDES personnel so that these proposed changes can be explored and discussed.

Sincerely,


Michael Hunt
Metro Water Services, Stormwater, NPDES
Program Manager

Encl. - Nashville Phase 1 MS4 Permit Application Section of MS4 Annual Report

CC:

April Grippo – TDEC Nashville Field Office
Jennifer Dodd – TDEC Central Office
John Leffew -- TDEC Nashville Field Office



DAVID BRILEY
MAYOR



METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY

DEPARTMENT OF WATER AND SEWERAGE SERVICES
STORMWATER DIVISION
NPDES OFFICE
1607 COUNTY HOSPITAL ROAD
Nashville, Tennessee 37218

March 30, 2018

Re: Nashville Phase 1 MS4 Permit Reissuance – TNS068047

Vojin Janjic | Manager, Water-Based Systems
Division of Water Resources
William R. Snodgrass Tennessee Tower, 11th Floor
312 Rosa L. Parks Ave, Nashville, TN 37243

Dear Mr. Janjic,

We are writing you to provide an update to the Metropolitan Government of Nashville, Davidson County (Metro) Municipal Separate Storm Sewer System (MS4) permit compliance activities. As you are aware, Metro's MS4 permit expired on January 31, 2017 and prior to the expiration, Metro submitted several requests to alter specific permit compliance activities (See Attached letter dated January 31, 2017. As a follow-up to proposed MS4 permit compliance activities, Metro hosted a meeting with Jennifer Dodd and Karina Bynum from the Tennessee Department of Environment and Conservation to discuss the proposed changes. As a result of the meeting, TDEC provided positive feedback to the changes and requested Metro to provide an update on the proposed changes in the first quarter of 2018. The following paragraphs describe some of the already observed benefits to changes to MS4 permit compliance activities that were implemented during this transition period between permits.

Summary Transition Period MS4 Compliance Changes:

The majority of the MS4 permit compliance programs have continued without adjustment as these activities are considered as ongoing within the MS4 permit. There are a few activities that were required to be completed by year 5 of the permit, which were completed, but Metro found to be very beneficial in identifying and eliminating stormwater pollution. As such, Metro proposed changes to the following programs:



If you need assistance or an accommodation, please contact Metro Water Services, at 615-862-4862, 1600 Second Avenue North, Nashville, Tennessee 37208.

- **Dry Weather Outfall Screening**

- Previous MS4 Permit Requirements

- Screen one outfall within every 1/4 mile commercial/industrial grid once per permit term.

- New More Efficient Proposed Field Screening Program

- Screen 3 business/industrial sites for site management/housekeeping procedures in each 1/4 commercial/industrial-zoned grid.) Transition period goal would be to screen at least 50 grids each year prior to the new permit being issued.

- Initial Findings:

- This process has proven to be much more effective than looking specifically at outfalls. In the few months of testing, several poor site management practices have been found such as improper management of dumpster pads and grease recycling bins. This has allowed Metro to be more effective and proactive in talking with these businesses to educate them on proper site management issues to prevent these exposed materials from washing off to the MS4 during a rain event. It is important to note that while we are looking at business practices within grids, we still spot check stormwater infrastructure to see if there is any suspicious dry weather, potentially "illicit discharge" flow.

- Adjustments Made to New Approach

- The only adjustment made was going from screening 3 businesses within a 1/4 mile grid to screening 3 businesses within a 1/2 mile grid. Upon implementing, we quickly realized that 1/4 mile grids were too limiting and in many cases did not encompass multiple parcels that could be screened.

- **Industrial Inspection/Monitoring Program**

- Previous MS4 Permit Requirements

- Inspect industrial high risk sites as identified by the MS4 permit (i.e. SARA Title 3, TSD sites, etc.) once every 3 years.

- New More Efficient Proposed Industrial Inspection Program

- Re-inspect only industrial sites in which issues were noted during the original inspections and/or those involved with compliant investigations. Identify and perform inspections on industrial facilities (not required to be inspected by the original MS4 permit (i.e. auto salvage lots, ready-mix facilities, etc. not identified as SARA Title 3 or TSD facilities)). A list of industrial facilities to be inspected would be sent to the TDEC Nashville Field Office. Goal would be to inspect 10 industrial facilities each year.

- Initial Findings:

- This process has proven to be much more effective as we have been able, during this transition period, to focus resources on industrial activities that have the highest potential for stormwater pollution such as Ready Mix Concrete facilities, chrome-plating facilities, etc. This new approach has allowed us to prioritize inspections and coordinate with TDEC field office staff as needed to perform co-inspections.



Adjustments Made to New Approach

- There are no proposed refinements to the new approach.

- **Post Construction Stormwater Control Measure (SCM) Inspection and Maintenance Oversight Program**

Previous MS4 Permit Requirements

- Implement permittee-defined program by the end of year 5.

New More Efficient Proposed SCM Inspection and Maintenance Oversight Program

- Continue to respond to citizen complaints of SCM structures not being maintained properly. In addition, would inspect and enforce (if necessary) on at least 50 SCM structures per year. Currently and during the transition period, Metro will continue to build its SCM Inspection & Maintenance oversight process.

Initial Findings:

- Metro's NPDES program has vastly expanded resources dedicated to ensuring post construction SCMs are being properly inspected and maintained. As it currently stands, Metro inspects an average of 75 SCM structures each month, which is well above the pace that we originally proposed. This new approach of focusing on NPDES program inspection findings and following-up with property owners on the proper maintenance has proven very beneficial to achieving maintenance on Post-Construction SCMs.

Adjustments Made to New Approach

- Metro is constantly evaluating the inspection and report documentation process and will continue to adjust the program, as necessary, to achieve the highest efficiency to ensure post-construction SCM structures are maintained properly.

- **Various MS4 Permit-Prescribed Monitoring Activities.**

Previous MS4 Permit Monitoring Requirements

- Sampling programs (i.e. wet weather, ambient, visual stream assessments, etc.) prescribed in the permit to be completed on a 5 year permit term.

New More Efficient Proposed MS4 Permit Monitoring Program

- Discontinue the following sampling activities until the new MS4 permit is issued:
 - Wet Weather Homogenous Land Use Sampling
 - Wet Weather SCM Discharge Grab Sampling
 - Wet Weather Industrial Sampling (1 TMSR/RMCP site per year).
- Continue routine ambient monitoring/sampling programs (ambient chemical/bacteriological sampling and visual stream assessments) as well as any site-specific sampling as required in the course of routine investigations. The MWS Stormwater NPDES Watershed Group would coordinate with TDEC Nashville Field Office staff on monitoring schedules (which watersheds they will be monitoring during the transition period).

Initial Findings:

- Elimination of the wet weather monitoring has allowed for more resources to be spent on assessing streams for various impairments. Eight biological assessments have been performed on streams that Metro hadn't previously assessed. This provides a more comprehensive and up to date watershed assessment countywide and will additionally provide TDEC with more data than they would otherwise be able to collect. In addition to the biological assessment, nutrient samples are collected at the same time.



- *Monitoring of 2 projects has been initiated and a total of 8 samples have been collected. Both of the projects are located on Cathy Jo Branch. One of the projects is a dam removal and the other is a retrofit to a stormwater outfall that reduced sheer flow during storm events. Samples were collected before work began and will continue in order to show the effectiveness of the projects.*
 - *There have been 2 investigations within the past year as a result of our regular monitoring. Both of these investigations concluded that repairs needed to be made to sewers and thus we are preventing long term discharges to nearby streams.*
- Adjustments Made to New Approach*
- *There have not been adjustments made to the new approach. Projects are continually being considered for monitoring in order to show project effectiveness.*

Metro is requesting specific meetings to be arranged between appropriate TDEC permit writer staff and MWS Stormwater NPDES personnel so that these proposed changes can be explored and discussed.

Sincerely,



Michael Hunt
Metro Water Services, Stormwater, NPDES
Program Manager

Encl. - January 31, 2018 Letter to TDEC of Proposed Changes to MS4 Permit Compliance Activities.
Attachment C of Year 5 MS4 Annual Report

CC:

April Grippo – TDEC Nashville Field Office
Jennifer Dodd – TDEC Central Office
Karina Bynum – TDEC Central Office
John Leffew – TDEC Nashville Field Office



Hayes, Joshua (WS)

From: Hunt, Michael (WS)
Sent: Friday, March 30, 2018 2:02 PM
To: 'Karina Bynum'
Cc: 'Jennifer Dodd'; 'Ann Morbitt'; 'Wade Murphy'; 'Robert Karesh'; 'Jimmy R. Smith'; 'April Grippo'; 'Bill Murph'; 'John Leffew'; Hayes, Joshua (WS); Dohn, Rebecca (WS); Bruce, Mary (WS); Binder, Dale (WS)
Subject: RE: 16NOV17 Meeting Follow-up
Attachments: Permit Re-issuance and Transition Period_TDEC_Update_Final.pdf

Good afternoon Karina:

Per your email below, find the requested info attached (red text on pages 2-4 of attached pdf). If you have any questions, don't hesitate to let us know.

Thanks, Michael

From: Karina Bynum [<mailto:Karina.Bynum@tn.gov>] **Sent:** Friday, November 17, 2017 9:44 AM **To:** Hunt, Michael (WS); Hayes, Joshua (WS); Dohn, Rebecca (WS); Bruce, Mary (WS); Binder, Dale (WS) **Cc:** Jennifer Dodd; Ann Morbitt; Wade Murphy; Robert Karesh; Jimmy R. Smith; April Grippo; Bill Murph; John Leffew **Subject:** 16NOV17 Meeting Follow up

Hello Michael,

Thank you for the invitation to meet and discuss the program update you send us on January 31, 2017, regarding the Transition Period for Metro's Stormwater Program. It was very helpful to hear from your staff about the program adjustments specified in the letter and to discuss the monitoring your program is undertaking. As you conclude the year of gathering information during the transition period, **please compile your findings and send them to us in the first quarter of the year 2018.** Please give us about a month to review and then reach out to us to schedule a meeting to discuss your findings.

Thank you,



Karina Bynum, Ph.D., P. E. | Integrated Water Resources Engineer

Division of Water Resources

1221 South Willow Avenue, Cookeville, TN 38506

p. 931 - 520 - 6688

karina.bynum@tn.gov

tn.gov/environment

From: Hunt, Michael (WS) <Michael.Hunt@nashville.gov>
Sent: Tuesday, November 14, 2017 3:06 PM
To: Karina Bynum
Subject: letter...

*** This is an EXTERNAL email. Please exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. - STS Security ***

Michael Hunt CSM, CPMSM, CPSWQ, CFM
Program Manager
Metro Water Services - Storm Water Div. - NPDES Office
[1607 A County Hospital Road](http://www.nashville.gov/stormwater/)
Nashville, TN 37218
Phone: (615) 880-2420
<http://www.nashville.gov/stormwater/>

If you see water pollution in Metro Nashville, call (615) 313-PURE or (615) 880-2420 or email stormwaterquality@nashville.gov



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

Nashville Environmental Field Office
711 R.S. Gass Boulevard
Nashville, TN 37216
Phone 615-687-7000 Statewide 1-888-891-8332 Fax 615-687-7078

May 31, 2018

Mr. Scott Potter
Director of Metro Water Services
1600 2nd Avenue North
Nashville, TN 37208

Certified Mail Receipt
7014 2870 0001 3600 2906

**RE: Compliance Evaluation Inspection
Nashville/Davidson County Municipal Separate Storm Sewer System (MS4)
NPDES Permit Tracking Number TNS068047, Davidson County**

Dear Mr. Potter:

On May 16, 2018, Karina Bynum, John Leffew and Ann Morbitt with the Division of Water Resources (division) met with Michael Hunt, Rebecca Dohn, Joshua Hayes, Dale Binder, Steve Mishu and Shawn Herman with Metro Water Services to perform a routine Compliance Evaluation Inspection. The inspection included a review of regulatory mechanisms, records, procedures and other documents related to the construction site stormwater runoff control program required under the NPDES Permit TNS068047 for Discharges from the MS4 owned and operated by the Metropolitan Government of Nashville (Metro).

The construction site stormwater runoff control program is well established, the staff is trained and certified, and the program implementation is compliant with the requirements of the NPDES Permit TNS068047. The division greatly appreciates the time and commitment from your staff in their preparation before and participation during the inspection. Their availability and knowledge of the program ensured it was conducted in an efficient manner.

Permit Review

The NPDES Permit TNS068047 for stormwater discharges from Metro MS4 was issued and became effective on February 1, 2012. The permit expired on January 31, 2018, and has been administratively extended until a new permit is issued.

Records Review

The MS4 permit requires Metro to continue to implement and enforce its existing construction site stormwater runoff control program. The implementation of the following required elements was reviewed:

- Regulatory mechanisms requiring erosion prevention and sediment control for land disturbance greater than one (1) acre or less than one (1) acre if part of a larger common plan



Mr. Scott Potter
NPDES Permit Number TNS068047
May 31, 2018
Page 2 of 2

of development are published in the Volume 1 of the *Metro's Stormwater Management Manual*.

- An inventory of all construction sites is provided in the City Works tracking system. All active sites are identified as priority sites and pre-construction meetings for all priority sites are held.
- Education of construction site operators is provided during certification classes for Erosion Protection Sediment Control (EPSC) professionals that are held in the Nashville region. Pre-construction meetings for all priority sites assure EPSC Level 1 is held by on-site operators.
- Control of waste materials is addressed in the stormwater management plan and is required in Volume 1 of the *Metro's Stormwater Management Manual* (section 6.10.8).
- Site plan review and approval procedures are coordinated with the plans review group. Qualified staff reviews plans. The review includes approval of the EPSC design and water quality buffers.
- Site inspections are conducted monthly for all priority sites. Enforcement procedures and all required sanctions are identified in the Enforcement Response Plan (Appendix D of the Stormwater Management Plan) and are outlined in the regulatory mechanisms published in the Volume 1 of the *Metro's Stormwater Management Manual*.
- Public input may be provided by phone, web page or public notice announcements.

Construction Site Visit

Site inspection procedures were evaluated by performing a site visit at the Magnolia Farms Subdivision construction site (TNR241924 and TNR242096). The stormwater program inspector, Shawn Herman, demonstrated a good working knowledge of erosion prevention and sediment control practices, and performed a comprehensive inspection with appropriate documentation and on-site communication.

Again, we would like to thank Mr. Hunt and his staff for the assistance and courtesy extended to us during our inspection. If you have any questions or need additional information, please contact John Leffew at the Nashville Environmental Field Office by email at john.leffew@tn.gov or by telephone at (615) 687-7106, or you may contact me by email at april.grippo@tn.gov or by telephone at 615-687- 7018.

Sincerely,



April Grippo
Environmental Manager
Division of Water Resources
Nashville Environmental Field Office

e-cc: Mr. Michael Hunt, Michael.Hunt@nashville.gov - Metro Water Services
Mr. John Leffew, john.leffew@tn.gov- DWR Nashville EFO
Ms. Ann Morbitt, ann.morbitt@tn.gov – DWR statewide
Ms. Karina Bynum, karina.bynum@tn.gov – DWR statewide
Ms. Jessica Murphy, jessica.murphy@tn.gov – DWR Compliance and Enforcement





STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
Nashville Environmental Field Office
711 R.S. Gass Blvd., Nashville, TN 37216
Phone 615-687-7000 Statewide 1-888-891-8332 Fax 615-687-7078

September 15, 2020

Mr. Scott Potter
Director of Metro Water Services
1600 2nd Avenue North
Nashville, TN 37208

Certified Mail Receipt
7014 2120 0004 1565 6563

RE: Compliance Evaluation Inspection
Nashville/Davidson County Municipal Separate Storm Sewer System (MS4)
NPDES Permit Tracking Number TNS068047, Davidson County

Dear Mr. Potter:

On July 16, 2020, Ann Morbitt and Karina Bynum with the Division of Water Resources (division) met virtually with Michael Hunt, Joshua Hayes, Kevin Turner, and Alicia Davis with Nashville Davidson County Metro Water Services to perform a routine Compliance Evaluation Inspection. The inspection was performed using WebEx and included a review of regulatory mechanisms, records, procedures and other documents related to the illicit discharge detection and elimination program required under the NPDES Permit TNS068047 for discharges from the MS4 owned and operated by the Metropolitan Government of Nashville (Metro). Following the inspection additional requested program documentation was provided to the division on July 24, 2020.

Overall, the illicit discharge detection and elimination program is well established, the staff is trained, and the program implementation is compliant with the requirements of the NPDES Permit TNS068047. Some updates to the program's Stormwater Management Plan and Enforcement Response Plan are required, specifically timeframes for complaint investigations and responses to public inquiries. The division greatly appreciates the time and commitment from your staff in their preparation before and participation during the inspection. Their availability and knowledge of the program ensured it was conducted in an efficient manner.

Permit Review

The NPDES Permit TNS068047 for stormwater discharges from Metro's MS4 was issued and became effective on February 1, 2012. The permit expired on January 31, 2017 and has been administratively extended until a new permit is issued. The Compliance Evaluation Inspection (CEI) for Metro's IDDE program covered compliance from the permit effect date, February 1, 2012, to the date of this CEI.

Records Review

The MS4 permit requires Metro to continue to implement and enforce its illicit discharge detection and elimination program. The implementation of the following required elements was reviewed:

- How Metro informs public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste specifically related to illicit discharges.
- How Metro processes are used to identify, prioritize and select opportunities for public involvement. Specifically related to illicit discharge identification and elimination.
- Ordinances, or other regulatory mechanisms, related to non-stormwater discharges



Mr. Scott Potter
NPDES Permit Number TNS068047
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- Enforcement response plan and implementation procedures.
- Interagency coordination of hazardous waste or material spills response and cleanup.
- Mechanism for the public to report suspected illicit discharges.
- Summary of illicit discharge education and training.
- Updates to the illicit discharge identification and elimination procedures.
- Updates to the MS4 mapping and field screening plans.
- Identification of sanitary sewer overflows.
- Metro's mapping specific to priority areas with older infrastructure that are more likely to have illicit connections and areas with past illicit discharges.
- Metro's contacts and procedures for reporting an illicit discharge.
- Metro's education program for municipal field staff that identify illicit discharge or connection and reports/responses to the illicit discharge or connection.
- Implementation and improvements of the Stormwater Management Plan that determine whether non-stormwater entries are present in the storm drainage system and identification of locations and sources.
- Prioritization of areas for inspection and monitoring based on watershed or land uses or on previous field screening results, spills, complaints, illicit discharges, etc.
- Updates to illicit discharge identification procedures.
- Illicit discharges observed and samples necessary for source tracking.

Again, we would like to thank Mr. Hunt and his staff for the assistance and courtesy extended to us during our inspection. If you have any questions or need additional information, please contact Ann Morbitt by email at Ann.Morbitt@tn.gov or by telephone at (615) 687-7119, or you may contact me by email at Tim.Jennette@tn.gov or by telephone at 615-687-7060.

Sincerely,



Timmy Jennette
Environmental Manager
Division of Water Resources
Nashville Environmental Field Office

e-cc: Mr. Michael Hunt, michael.hunt@nashville.gov - Metro Water Services
Mr. Josh Hayes, joshua.hayes@nashville.gov - Metro Water Services
Mr. John Leffew, john.leffew@tn.gov - DWR Nashville EFO
Mr. Bill Murph, bill.murph@tn.gov - DWR Nashville EFO
Ms. Ann Morbitt, ann.morbitt@tn.gov - DWR statewide
Ms. Karina Bynum, karina.bynum@tn.gov - DWR statewide
Ms. Jessica Murphy, jessica.murphy@tn.gov - DWR Compliance and Enforcement



ATTACHMENT C – WIES Database Pollutant Loading Reduction Estimates of SWMP

As required in Section 3.3.2 of the MS4 Permit, Metro is required to develop Event Mean Concentrations (EMC's) for all parameters listed in Table 2 of the MS4 Permit. In year 5 of the MS4 permit, Metro was required to report Seasonal Pollutant Loadings (SPL) from the MS4. The methodology for performing this calculation can be found in the year 5 annual report. In performing this calculation, Metro hired a contractor (Paradigm Environmental) to, not only, develop the EMC and SPL calculations, but to also generate a database that would allow Metro to produce reports on estimated SPLs for each sub-watershed within Metro's jurisdiction on an annual basis. As such, the web-based Davidson County Watershed Improvement Evaluation System (WIES) database was developed which also gives Metro the ability to track stormwater loading reductions achieved through the implementation of Metro Nashville's SWMP. These calculations/estimations are based on structural and non-structural stormwater controls that Metro implements as prescribed by the MS4 permit.

While these calculations are considered to be estimates, our contractor utilized all available documentation from Metro's tracking databases, as well as the latest hydrologic modeling programs to refine the estimates as much as possible. For example, stormwater pollutant and volume reduction numbers for structural SCMs were calculated utilizing Loading Simulation Program – C+ (LPSC) and System for Urban Stormwater Treatment Analysis and Integration (SUSTAIN) modelling programs, which take into account varying land uses and mapped soil types for each watershed and the pollutant and performance efficiencies of each type of SCMs. The modeling for SCMs even considers the effects underdrains have on bioretention basins as far as how much runoff reduction is accomplished.

Metro expends many resources implementing non-structural stormwater control measures of the SWMP, such as the IDDE complaint response program, construction inspections and oversight, FEMA home buyout program, street sweeping program, etc. While we know these non-structural programs have been extremely beneficial in improving the quality of water resources within Metro Nashville/Davidson County over time, it has proven difficult to quantify the loading reductions of these non-structural controls. WIES tracks pollution reduction efforts of these non-structural programs by importing data from various Metro databases that track items such as number of construction sites inspected, number of water quality/construction complaint investigations, number of FEMA floodplain buyout properties, etc. In some of these programs, assumptions are applied so loading reduction can best be effectively calculated. The tables within this section depict the calculated SPLs per each sub-watershed and the estimated loading reduction efforts of the SWMP over the last permit

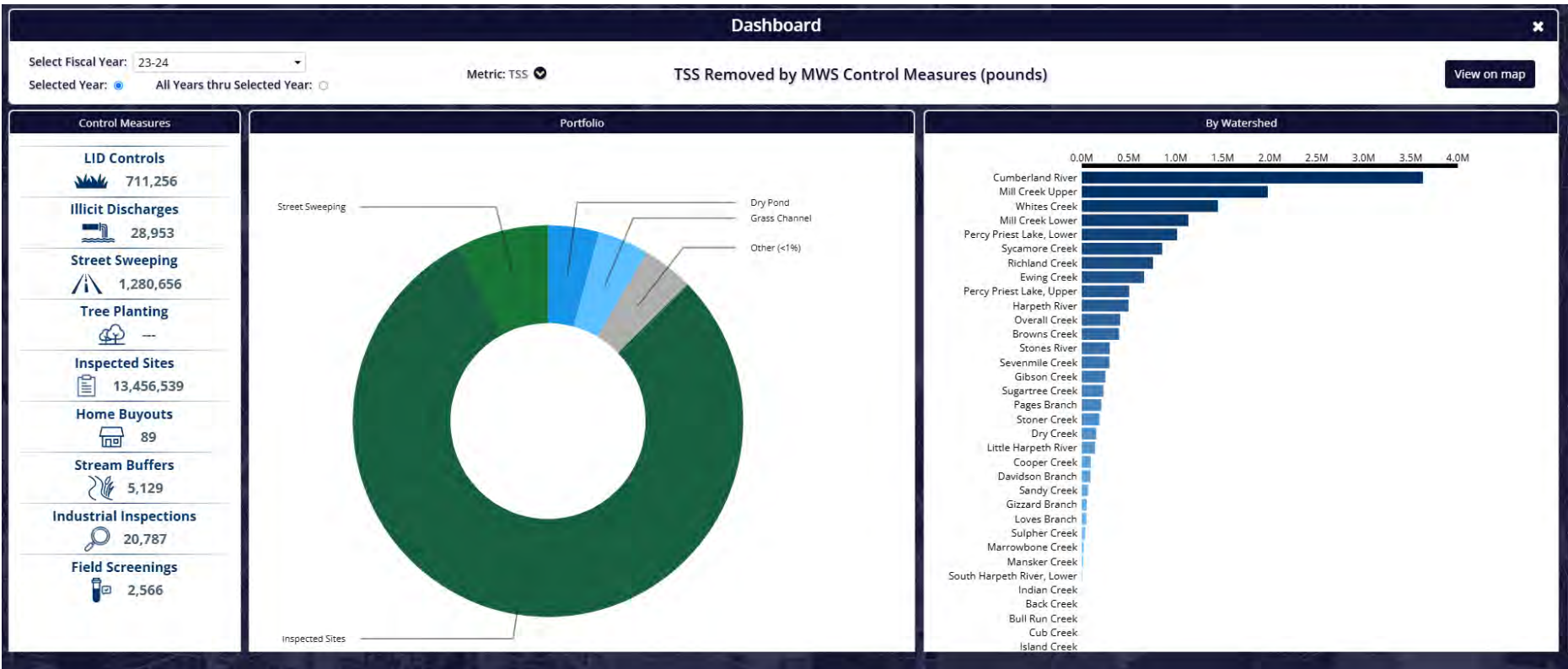


reporting period (fiscal year). Please note that importing data into WIES is somewhat dependent on geo-location information available within Metro's databases, which is the source of the data. Due to this, there may be a small discrepancy in numbers between WIES and the actual Metro documentation databases when some data is unable to be imported into WIES. For example, not all of the tree planting numbers could be imported into WIES due to lack of some geolocation data available from the Metro database. Also, the illicit discharge calculations take into account all water quality complaint responses involving either general pollution concerns, grading without permit concerns, or spill responses in which NPDES controlled/prevented material from draining to the MS4 such as sediment from non-permitted construction activities, spill response coordination, and general water quality complaint responses.

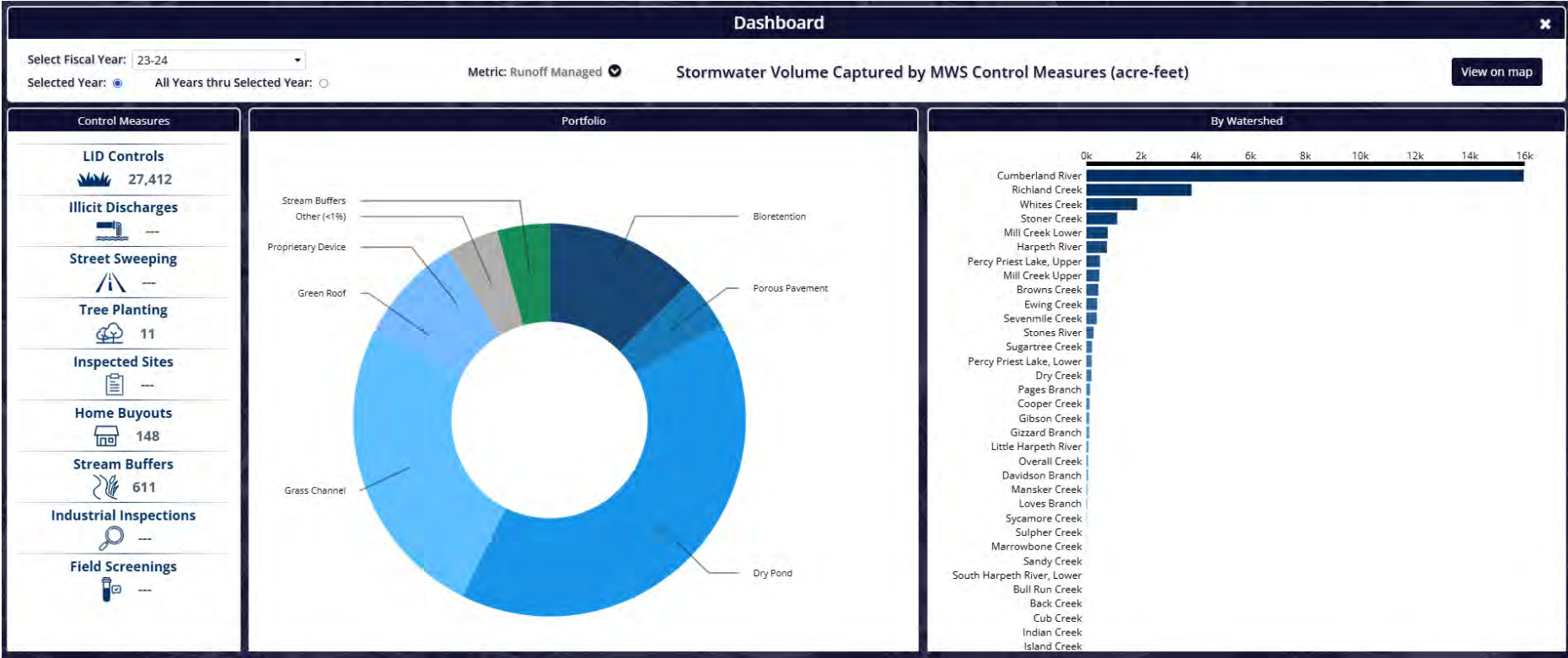
In addition to the annual reporting tables, Metro is able to generate dashboard views on various SWMP loading reductions, WIES also gives stormwater managers the ability to review the pollution and runoff reduction effects of individual structural SCMs through a dashboard view of a variety of different parameters (depicted in the following pages).

DRAFT





As Depicted Above - Inspection Oversight of Construction Projects and Operation of the Street Sweeping Program Result in the Largest Benefit to TSS Reduction.



As Depicted Above – SCMs such as Dry Ponds, Grass Channels, and Bioretention Basins Provide the Greatest Benefit to Managing the Quantity of Stormwater Runoff.

Structural Control Measure Project Page Save Delete ✕

Required Information

BMP Type: Dry Pond | Level: No Level | Total Capture Area by SCM (acres): 8

Predominant Land Use of Capture Area: Commercial | Program Type: Non-Regulatory/Proactive


Project Completion Date: 06/28/2024 | Planned or Built?: Built

Optional Information

Location

Latitude: 36.156712 | Longitude: -86.732921

Precipitation Zone	Soil Type	Watershed
Nashville Airport	C	Cumberland River



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Project Benefits

Runoff and Pollutant Reduction Benefits ⓘ

Hover to see pollutant reductions by the project. The length of the asters reflects the percentile performance of the project's pollutant reduction compared to all other projects in WIES. Reductions are also shown in the tables below.

Runoff Capture Info ⓘ

SCM Effectiveness	Estimate	Units
Total Inflow	15.15	ac-ft
Retained	3.09	ac-ft
Treated	10.87	ac-ft
Bypass	1.18	ac-ft
Soil Infiltration	2.00	in-hr

Pollutant Reduction Benefits ⓘ

Pollutant	BMP Effect	Load Unit	Estimated Inflow Concentration	Concentration Unit
E. coli	56.23	MPN 10e9	337	MPN/100 mL
BOD5	217.25	lbs	10	mg/L

WIES Calculated/Estimated Runoff Captured/Treated for FY24 Dry Pond WIF Project Installed at the Police Impound Lot

FY24 Annual Report (Page 194)

WIES Calculated MS4 Program Pollutant Loading Reductions in FY24

The below tables represent the FY24 MS4 Program Elements implemented per watershed and the calculated Pollutant Loading Reductions in each watershed from implementation of the MS4 Program Elements.

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Watershed	New SCMs	Total SCMs	Tons Swept from Streets	Floodplain Homes/ Properties Bought	Permitted Construction Sites Inspected	Complaint Investigations (Illicit Discharge/ Unpermitted Construction/ Spill Response)	Trees Planted (FY22)	Industrial Inspections	Field Screenings	Total Floodplain Homes/ Properties Bought	Total Trees Planted	Total Stream Buffers Preserved
Back Creek	-	-	-	-	1	-	-	-	-	-	8	-
Browns Creek	-	405	125	-	104	12	440	7	64	37	2,285	8
Bull Run Creek	-	-	-	-	2	-	18	-	-	-	18	-
Cooper Creek	-	92	37	-	38	1	80	-	-	5	695	3
Cub Creek	-	-	-	-	-	-	-	-	-	-	2	-
Cumberland River	2	2,506	698	1	652	46	3,615	40	48	72	17,876	71
Davidson Branch	-	60	9	-	31	1	160	-	-	-	429	2
Dry Creek	-	76	40	-	13	3	295	2	12	4	671	8
Ewing Creek	-	227	107	2	25	7	42	2	-	32	726	28
Gibson Creek	-	80	40	-	17	5	206	1	17	57	1,219	4
Gizzard Branch	-	51	9	-	5	-	13	1	4	-	110	7
Harpeth River	-	283	198	-	21	4	413	-	-	3	1,126	30
Indian Creek	-	-	-	-	1	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	-	73	12	-	6	1	231	-	-	-	549	12
Loves Branch	-	38	12	-	8	-	218	-	1	1	700	-
Mansker Creek	-	39	-	-	8	4	8	2	-	-	215	3
Marrowbone Creek	-	9	-	-	6	2	73	-	-	-	92	-
Mill Creek Lower	-	603	387	2	70	30	355	7	216	60	1,685	43
Mill Creek Upper	-	513	116	-	26	9	19	1	6	2	2,328	63
Overall Creek	-	71	6	-	8	1	247	2	-	1	398	13
Pages Branch	-	95	46	-	34	12	41	2	-	7	343	5
Percy Priest Lake, Lower	-	202	247	-	13	5	78	-	23	6	503	9
Percy Priest Lake, Upper	-	293	34	-	11	7	316	4	6	-	580	43
Pond Creek	-	-	-	-	1	-	-	-	-	-	-	1
Richland Creek	-	618	213	8	202	12	2,050	7	-	77	4,573	21
Sevenmile Creek	-	360	229	5	55	13	564	3	47	66	2,127	26
South Harpeth River, Lower	-	15	9	-	1	1	48	-	-	-	101	4
Stoner Creek	-	227	183	-	10	7	-	-	-	13	733	13
Stones River	-	194	119	-	11	6	446	-	26	2	1,886	18
Sugartree Creek	-	220	52	-	47	2	274	-	-	1	601	6
Sulpher Creek	-	14	-	-	1	1	279	-	-	-	338	-
Sycamore Creek	-	15	-	-	9	-	1	-	-	-	28	9
Whites Creek	-	203	110	-	46	16	240	4	-	70	1,244	32
Sandy Creek	-	29	12	-	41	4	8	-	-	-	82	-
All Watersheds	2	7,611	3,049	18	1,524	212	10,778	85	470	516	44,271	482

Note: SCMs include regulatory SCMS installed per grading permit and proactive SCMs installed or facilitated by MWS.

Not all MS4 Program Elements transferred to the WIES database for pollutant loading calculations, as program elements with invalid X,Y coordinates could not be imported into WIES for calculation purposes.

Construction sites inspected includes Grading Permits and Single Family Infill permits.

While stream buffers have been protected since the late 1990s, MWS only started mapping the Buffers for WIES calculations in FY21 and due to staffing issues, new buffers were not mapped in FY24.

Watershed	Pollutant: Runoff									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (Acre-foot)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	0.00	-	-	-	0.00
Browns Creek	422.92	-	-	-	8.97	0.75	7.75	-	-	440.40
Bull Run Creek	-	-	-	-	-	0.00	-	-	-	0.00
Cooper Creek	109.84	-	-	-	4.11	0.14	0.72	-	-	114.82
Cub Creek	-	-	-	-	-	0.00	-	-	-	0.00
Cumberland River	15,818.39	-	-	-	24.51	5.25	116.02	-	-	15,964.17
Davidson Branch	64.61	-	-	-	-	0.09	0.49	-	-	65.19
Dry Creek	175.38	-	-	-	1.04	0.17	12.94	-	-	189.52
Ewing Creek	341.66	-	-	-	7.72	0.20	46.40	-	-	395.97
Gibson Creek	87.52	-	-	-	14.83	0.26	5.31	-	-	107.94
Gizzard Branch	87.92	-	-	-	-	0.03	18.03	-	-	105.98
Harpeth River	718.54	-	-	-	0.74	0.20	35.52	-	-	755.00
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	68.05	-	-	-	-	0.11	11.34	-	-	79.51
Loves Branch	28.77	-	-	-	0.24	0.14	-	-	-	29.15
Mansker Creek	38.39	-	-	-	-	0.05	-	-	-	38.45
Marrowbone Creek	12.35	-	-	-	-	0.02	-	-	-	12.37
Mill Creek Lower	687.95	-	-	-	20.75	0.33	70.35	-	-	779.37
Mill Creek Upper	395.63	-	-	-	1.94	0.36	74.86	-	-	472.79
Overall Creek	57.89	-	-	-	0.25	0.09	7.10	-	-	65.33
Pages Branch	130.50	-	-	-	1.69	0.11	7.10	-	-	139.40
Percy Priest Lake, Lower	187.93	-	-	-	1.33	0.12	6.37	-	-	195.74
Percy Priest Lake, Upper	452.08	-	-	-	-	0.07	47.35	-	-	499.49
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	3,803.55	-	-	-	18.65	1.07	18.95	-	-	3,842.22
Sevenmile Creek	341.55	-	-	-	15.92	0.32	26.20	-	-	383.99
South Harpeth River, Lower	4.56	-	-	-	-	0.02	0.98	-	-	5.56
Stoner Creek	1,097.92	-	-	-	2.67	0.14	27.20	-	-	1,127.93
Stones River	242.73	-	-	-	0.48	0.25	22.23	-	-	265.70
Sugartree Creek	201.92	-	-	-	0.25	0.10	3.68	-	-	205.95
Sulphur Creek	14.41	-	-	-	-	0.05	-	-	-	14.46
Sycamore Creek	14.11	-	-	-	-	0.01	2.58	-	-	16.69
Whites Creek	1,793.85	-	-	-	21.74	0.29	41.06	-	-	1,856.94
Sandy Creek	11.51	-	-	-	-	0.01	-	-	-	11.52
All Watersheds	27,412.45	-	-	-	147.83	10.73	610.54	-	-	28,181.55

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: BOD5									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (pounds)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	-	-	-	-	-
Browns Creek	4,535.23	-	0.32	1,525.20	12.02	-	-	21.09	22.22	6,116.08
Bull Run Creek	-	-	-	-	-	-	-	-	-	-
Cooper Creek	1,289.41	-	0.01	446.40	9.48	-	-	-	-	1,745.30
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	108,404.81	-	6.84	8,518.80	53.82	-	-	210.10	10.39	117,204.76
Davidson Branch	552.20	-	0.01	111.60	-	-	-	-	-	663.81
Dry Creek	1,315.71	-	-	483.60	2.06	-	-	45.03	-	1,846.39
Ewing Creek	4,287.71	-	0.06	1,302.00	10.49	-	-	45.03	-	5,645.29
Gibson Creek	583.15	-	3.78	483.60	18.17	-	-	45.03	6.73	1,140.46
Gizzard Branch	628.03	-	-	111.60	-	-	-	-	4.50	744.13
Harpeth River	7,019.02	-	0.02	2,418.00	5.22	-	-	-	-	9,442.26
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	409.25	-	0.92	148.80	-	-	-	-	-	558.97
Loves Branch	245.76	-	-	148.80	0.86	-	-	-	-	395.43
Mansker Creek	425.55	-	2.03	-	-	-	-	-	-	427.58
Marrowbone Creek	58.78	-	0.01	-	-	-	-	-	-	58.79
Mill Creek Lower	6,253.58	-	9.26	4,724.40	46.22	-	-	44.43	43.45	11,121.34
Mill Creek Upper	2,907.64	-	0.15	1,413.60	44.21	-	-	259.40	2.33	4,627.33
Overall Creek	433.62	-	0.01	74.40	0.85	-	-	-	-	508.88
Pages Branch	1,180.24	-	0.02	558.00	2.33	-	-	10.54	-	1,751.14
Percy Priest Lake, Lower	1,377.22	-	0.09	3,013.20	0.75	-	-	-	-	4,391.26
Percy Priest Lake, Upper	4,362.77	-	0.30	409.20	-	-	-	23.34	-	4,795.62
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	22,571.15	-	0.15	2,604.00	13.31	-	-	10.54	-	25,199.15
Sevenmile Creek	2,258.50	-	0.51	2,790.00	30.67	-	-	10.54	6.78	5,097.01
South Harpeth River, Lower	47.61	-	0.01	111.60	-	-	-	-	-	159.22
Stoner Creek	9,868.74	-	0.14	2,232.00	2.87	-	-	-	-	12,103.75
Stones River	2,509.47	-	0.10	1,450.80	0.57	-	-	-	4.22	3,965.16
Sugartree Creek	1,268.85	-	0.18	632.40	0.35	-	-	-	-	1,901.78
Sulphur Creek	132.07	-	-	-	-	-	-	-	-	132.07
Sycamore Creek	73.92	-	-	-	-	-	-	-	-	73.92
Whites Creek	10,241.53	-	0.11	1,339.20	82.90	-	-	90.06	-	11,753.80
Sandy Creek	143.53	-	0.10	148.80	-	-	-	-	-	292.43
All Watersheds	195,385.06	-	25.12	37,200.00	337.16	-	-	815.17	100.63	233,863.13

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: COD									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (pounds)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	-	-	-	-	-
Browns Creek	37,925.87	-	0.85	3,050.40	-	-	87.91	211.77	223.09	41,499.89
Bull Run Creek	-	-	-	-	-	-	-	-	-	-
Cooper Creek	9,522.23	-	0.02	892.80	36.84	-	0.51	-	-	10,452.40
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	897,415.33	-	17.99	17,037.60	156.61	-	826.35	2,109.75	104.36	917,667.98
Davidson Branch	4,523.44	-	0.02	223.20	-	-	2.06	-	-	4,748.73
Dry Creek	9,956.19	-	-	967.20	-	-	56.78	452.20	-	11,432.37
Ewing Creek	34,074.49	-	0.14	2,604.00	-	-	428.56	452.20	-	37,559.40
Gibson Creek	4,427.37	-	9.94	967.20	18.37	-	25.30	452.20	67.59	5,967.96
Gizzard Branch	5,286.30	-	-	223.20	-	-	134.76	-	45.22	5,689.49
Harpeth River	50,572.60	-	0.05	4,836.00	-	-	121.37	-	-	55,530.02
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	3,529.01	-	2.42	297.60	-	-	69.97	-	-	3,898.99
Loves Branch	2,139.84	-	-	297.60	-	-	-	-	-	2,437.44
Mansker Creek	3,338.76	-	5.34	-	-	-	-	-	-	3,344.11
Marrowbone Creek	444.66	-	0.02	-	-	-	-	-	-	444.69
Mill Creek Lower	52,396.90	-	24.35	9,448.80	38.75	-	732.43	446.19	436.33	63,523.76
Mill Creek Upper	24,205.45	-	0.39	2,827.20	178.80	-	924.03	2,604.86	23.44	30,764.16
Overall Creek	3,341.96	-	0.02	148.80	-	-	47.49	-	-	3,538.27
Pages Branch	11,030.00	-	0.05	1,116.00	-	-	60.78	105.89	-	12,312.72
Percy Priest Lake, Lower	16,572.13	-	0.24	6,026.40	-	-	62.30	-	-	22,661.08
Percy Priest Lake, Upper	34,038.25	-	0.80	818.40	-	-	379.62	234.42	-	35,471.48
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	151,215.70	-	0.39	5,208.00	-	-	275.18	105.89	-	156,805.16
Sevenmile Creek	21,694.63	-	1.35	5,580.00	-	-	519.94	105.89	68.06	27,969.86
South Harpeth River, Lower	324.87	-	0.02	223.20	-	-	8.55	-	-	556.64
Stoner Creek	68,227.88	-	0.36	4,464.00	-	-	371.08	-	-	73,063.32
Stones River	21,034.54	-	0.27	2,901.60	-	-	432.82	-	42.35	24,411.57
Sugartree Creek	10,135.01	-	0.48	1,264.80	-	-	55.68	-	-	11,455.98
Sulpher Creek	1,011.85	-	-	-	-	-	-	-	-	1,011.85
Sycamore Creek	626.91	-	-	-	-	-	30.62	-	-	657.54
Whites Creek	67,550.74	-	0.29	2,678.40	141.25	-	513.80	904.40	-	71,788.87
Sandy Creek	1,153.07	-	0.27	297.60	-	-	-	-	-	1,450.94
All Watersheds	1,547,715.97	-	66.08	74,399.99	570.62	-	6,167.89	8,185.64	1,010.45	1,638,116.64

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: NH3									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (pounds)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	-	-	-	-	-
Browns Creek	129.02	-	0.01	-	0.00	-	-	0.35	0.37	129.76
Bull Run Creek	-	-	-	-	-	-	-	-	-	-
Cooper Creek	24.85	-	0.00	-	0.22	-	-	-	-	25.06
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	3,290.22	-	0.26	-	0.93	-	-	3.50	0.17	3,295.09
Davidson Branch	15.69	-	0.00	-	-	-	-	-	-	15.69
Dry Creek	36.00	-	-	-	0.00	-	-	0.75	-	36.75
Ewing Creek	115.99	-	0.00	-	0.00	-	-	0.75	-	116.75
Gibson Creek	17.47	-	0.15	-	0.11	-	-	0.75	0.11	18.59
Gizzard Branch	21.66	-	-	-	-	-	-	-	0.08	21.73
Harpeth River	137.57	-	0.00	-	0.00	-	-	-	-	137.57
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	14.90	-	0.04	-	-	-	-	-	-	14.94
Loves Branch	7.44	-	-	-	0.00	-	-	-	-	7.44
Mansker Creek	12.27	-	0.08	-	-	-	-	-	-	12.35
Marrowbone Creek	2.03	-	0.00	-	-	-	-	-	-	2.03
Mill Creek Lower	201.70	-	0.36	-	0.24	-	-	0.74	0.72	203.76
Mill Creek Upper	89.51	-	0.01	-	1.06	-	-	4.32	0.04	94.94
Overall Creek	10.67	-	0.00	-	0.00	-	-	-	-	10.68
Pages Branch	46.47	-	0.00	-	0.00	-	-	0.18	-	46.65
Percy Priest Lake, Lower	37.74	-	0.00	-	0.00	-	-	-	-	37.74
Percy Priest Lake, Upper	108.24	-	0.01	-	-	-	-	0.39	-	108.64
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	516.24	-	0.01	-	0.00	-	-	0.18	-	516.43
Sevenmile Creek	69.67	-	0.02	-	0.00	-	-	0.18	0.11	69.99
South Harpeth River, Lower	1.04	-	0.00	-	-	-	-	-	-	1.04
Stoner Creek	261.89	-	0.01	-	0.00	-	-	-	-	261.89
Stones River	77.89	-	0.00	-	0.00	-	-	-	0.07	77.96
Sugartree Creek	38.23	-	0.01	-	0.00	-	-	-	-	38.23
Sulpher Creek	3.67	-	-	-	-	-	-	-	-	3.67
Sycamore Creek	1.86	-	-	-	-	-	-	-	-	1.86
Whites Creek	224.10	-	0.00	-	0.85	-	-	1.50	-	226.45
Sandy Creek	4.08	-	0.00	-	-	-	-	-	-	4.09
All Watersheds	5,518.13	-	0.97	-	3.42	-	-	13.59	1.68	5,537.79

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: TKN									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (pounds)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	-	-	-	-	-
Browns Creek	676.85	-	0.10	-	0.93	-	0.55	-	-	678.43
Bull Run Creek	-	-	-	-	-	-	-	-	-	-
Cooper Creek	202.29	-	0.00	-	0.37	-	-	-	-	202.66
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	16,072.64	-	2.17	-	2.61	-	5.62	-	-	16,083.04
Davidson Branch	68.41	-	0.00	-	-	-	-	-	-	68.41
Dry Creek	182.14	-	-	-	0.16	-	0.35	-	-	182.66
Ewing Creek	474.78	-	0.02	-	0.82	-	2.62	-	-	478.23
Gibson Creek	104.26	-	1.20	-	1.23	-	0.16	-	-	106.85
Gizzard Branch	94.59	-	-	-	-	-	0.86	-	-	95.45
Harpeth River	1,093.26	-	0.01	-	0.41	-	2.74	-	-	1,096.41
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	82.14	-	0.29	-	-	-	0.42	-	-	82.85
Loves Branch	26.03	-	-	-	0.07	-	-	-	-	26.10
Mansker Creek	56.37	-	0.64	-	-	-	-	-	-	57.01
Marrowbone Creek	11.20	-	0.00	-	-	-	-	-	-	11.21
Mill Creek Lower	906.49	-	2.93	-	3.15	-	15.22	-	-	927.79
Mill Creek Upper	529.32	-	0.05	-	1.64	-	11.67	-	-	542.68
Overall Creek	54.32	-	0.00	-	0.07	-	0.23	-	-	54.61
Pages Branch	189.14	-	0.01	-	0.18	-	0.37	-	-	189.70
Percy Priest Lake, Lower	266.59	-	0.03	-	0.06	-	0.28	-	-	266.96
Percy Priest Lake, Upper	499.59	-	0.10	-	-	-	2.22	-	-	501.91
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	2,456.48	-	0.05	-	1.04	-	2.39	-	-	2,459.95
Sevenmile Creek	418.86	-	0.16	-	2.39	-	3.29	-	-	424.69
South Harpeth River, Lower	7.22	-	0.00	-	-	-	-	-	-	7.22
Stoner Creek	1,465.52	-	0.04	-	0.22	-	2.37	-	-	1,468.16
Stones River	313.86	-	0.03	-	0.04	-	2.68	-	-	316.61
Sugartree Creek	197.54	-	0.06	-	0.03	-	0.35	-	-	197.97
Sulphur Creek	15.66	-	-	-	-	-	-	-	-	15.66
Sycamore Creek	12.09	-	-	-	-	-	0.20	-	-	12.29
Whites Creek	1,035.71	-	0.03	-	5.03	-	2.53	-	-	1,043.30
Sandy Creek	19.40	-	0.03	-	-	-	-	-	-	19.43
All Watersheds	27,532.73	-	7.95	-	20.44	-	57.11	-	-	27,618.24

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: NO2+NO3									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during F24 (pounds)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	-	-	-	-	-
Browns Creek	217.21	-	0.00	-	-	-	0.04	0.83	0.88	218.97
Bull Run Creek	-	-	-	-	-	-	-	-	-	-
Cooper Creek	64.79	-	0.00	-	0.08	-	0.00	-	-	64.87
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	7,953.40	-	0.03	-	0.34	-	0.52	8.32	0.41	7,963.02
Davidson Branch	36.21	-	0.00	-	-	-	0.01	-	-	36.22
Dry Creek	83.18	-	-	-	-	-	0.03	1.78	-	84.99
Ewing Creek	199.70	-	0.00	-	-	-	0.23	1.78	-	201.71
Gibson Creek	38.79	-	0.02	-	0.04	-	0.01	1.78	0.27	40.90
Gizzard Branch	41.27	-	-	-	-	-	0.05	-	0.18	41.51
Harpeth River	398.94	-	0.00	-	-	-	0.62	-	-	399.56
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	28.19	-	0.00	-	-	-	0.04	-	-	28.23
Loves Branch	14.19	-	-	-	-	-	-	-	-	14.19
Mansker Creek	23.98	-	0.01	-	-	-	-	-	-	23.99
Marrowbone Creek	4.48	-	0.00	-	-	-	-	-	-	4.48
Mill Creek Lower	325.59	-	0.04	-	0.08	-	2.91	1.76	1.72	332.11
Mill Creek Upper	172.63	-	0.00	-	0.39	-	1.97	10.27	0.09	185.35
Overall Creek	30.21	-	0.00	-	-	-	0.05	-	-	30.26
Pages Branch	52.40	-	0.00	-	-	-	0.03	0.42	-	52.85
Percy Priest Lake, Lower	113.60	-	0.00	-	-	-	0.07	-	-	113.67
Percy Priest Lake, Upper	230.88	-	0.00	-	-	-	0.24	0.92	-	232.04
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	2,045.78	-	0.00	-	-	-	0.29	0.42	-	2,046.49
Sevenmile Creek	173.61	-	0.00	-	-	-	0.23	0.42	0.27	174.53
South Harpeth River, Lower	3.26	-	0.00	-	-	-	0.02	-	-	3.29
Stoner Creek	780.93	-	0.00	-	-	-	0.15	-	-	781.08
Stones River	122.84	-	0.00	-	-	-	0.21	-	0.17	123.22
Sugartree Creek	97.11	-	0.00	-	-	-	0.03	-	-	97.14
Sulpher Creek	6.87	-	-	-	-	-	-	-	-	6.87
Sycamore Creek	6.59	-	-	-	-	-	0.01	-	-	6.60
Whites Creek	949.22	-	0.00	-	0.31	-	0.50	3.57	-	953.60
Sandy Creek	6.93	-	0.00	-	-	-	-	-	-	6.94
All Watersheds	14,222.82	-	0.11	-	1.25	-	8.26	32.27	3.98	14,268.69

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: TN									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (pounds)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	-	-	-	-	-
Browns Creek	759.11	-	0.07	437.56	1.10	-	0.52	-	-	1,198.36
Bull Run Creek	-	-	-	-	-	-	-	-	-	-
Cooper Creek	247.05	-	0.00	128.07	0.56	-	-	-	-	375.68
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	20,320.68	-	1.57	2,443.92	3.63	-	5.45	-	-	22,775.25
Davidson Branch	89.06	-	0.00	32.02	-	-	-	-	-	121.07
Dry Creek	201.79	-	-	138.74	0.19	-	0.34	-	-	341.06
Ewing Creek	566.56	-	0.01	373.52	0.96	-	2.50	-	-	943.56
Gibson Creek	112.74	-	0.87	138.74	1.51	-	0.15	-	-	254.01
Gizzard Branch	110.17	-	-	32.02	-	-	0.82	-	-	143.01
Harpeth River	1,331.64	-	0.00	693.69	0.48	-	2.89	-	-	2,028.70
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	84.66	-	0.21	42.69	-	-	0.40	-	-	127.96
Loves Branch	32.23	-	-	42.69	0.08	-	-	-	-	75.00
Mansker Creek	68.13	-	0.47	-	-	-	-	-	-	68.60
Marrowbone Creek	12.32	-	0.00	-	-	-	-	-	-	12.32
Mill Creek Lower	965.36	-	2.12	1,355.36	3.85	-	16.03	-	-	2,342.72
Mill Creek Upper	536.09	-	0.03	405.54	2.56	-	11.93	-	-	956.16
Overall Creek	69.04	-	0.00	21.34	0.08	-	0.22	-	-	90.68
Pages Branch	177.90	-	0.00	160.08	0.21	-	0.36	-	-	338.56
Percy Priest Lake, Lower	327.70	-	0.02	864.44	0.07	-	0.27	-	-	1,192.49
Percy Priest Lake, Upper	563.21	-	0.07	117.39	-	-	2.13	-	-	682.80
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	3,483.26	-	0.03	747.05	1.22	-	2.36	-	-	4,233.92
Sevenmile Creek	475.48	-	0.12	800.41	2.81	-	3.12	-	-	1,281.93
South Harpeth River, Lower	9.63	-	0.00	32.02	-	-	-	-	-	41.65
Stoner Creek	2,025.23	-	0.03	640.33	0.26	-	2.25	-	-	2,668.10
Stones River	362.74	-	0.02	416.21	0.05	-	2.54	-	-	781.57
Sugartree Creek	231.51	-	0.04	181.43	0.03	-	0.33	-	-	413.35
Sulphur Creek	18.45	-	-	-	-	-	-	-	-	18.45
Sycamore Creek	13.61	-	-	-	-	-	0.19	-	-	13.79
Whites Creek	1,495.70	-	0.03	384.20	6.42	-	2.41	-	-	1,888.75
Sandy Creek	22.20	-	0.02	42.69	-	-	-	-	-	64.92
All Watersheds	34,713.26	-	5.75	10,672.13	26.09	-	57.20	-	-	45,474.43

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: Diss. P									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (pounds)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	-	-	-	-	-
Browns Creek	411.98	-	0.01	175.02	1.20	-	2.11	-	-	590.33
Bull Run Creek	-	-	-	-	-	-	-	-	-	-
Cooper Creek	192.88	-	0.00	51.23	0.07	-	-	-	-	244.18
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	8,198.22	-	0.28	977.57	1.67	-	23.73	-	-	9,201.46
Davidson Branch	41.07	-	0.00	12.81	-	-	-	-	-	53.87
Dry Creek	73.69	-	-	55.50	0.21	-	2.66	-	-	132.05
Ewing Creek	192.99	-	0.00	149.41	1.05	-	18.52	-	-	361.97
Gibson Creek	42.93	-	0.15	55.50	1.38	-	0.58	-	-	100.54
Gizzard Branch	33.39	-	-	12.81	-	-	3.12	-	-	49.32
Harpeth River	983.42	-	0.00	277.48	0.52	-	4.44	-	-	1,265.86
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	27.58	-	0.04	17.08	-	-	1.51	-	-	46.20
Loves Branch	13.17	-	-	17.08	0.09	-	-	-	-	30.33
Mansker Creek	20.26	-	0.08	-	-	-	-	-	-	20.34
Marrowbone Creek	2.93	-	0.00	-	-	-	-	-	-	2.93
Mill Creek Lower	314.74	-	0.38	542.14	3.65	-	31.77	-	-	892.68
Mill Creek Upper	252.25	-	0.01	162.22	0.18	-	28.58	-	-	443.23
Overall Creek	38.08	-	0.00	8.54	0.08	-	0.82	-	-	47.52
Pages Branch	53.28	-	0.00	64.03	0.23	-	1.79	-	-	119.34
Percy Priest Lake, Lower	260.14	-	0.00	345.78	0.07	-	1.00	-	-	607.00
Percy Priest Lake, Upper	264.32	-	0.01	46.96	-	-	19.94	-	-	331.23
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	1,300.88	-	0.01	298.82	1.32	-	6.92	-	-	1,607.95
Sevenmile Creek	238.39	-	0.02	320.16	3.08	-	11.75	-	-	573.41
South Harpeth River, Lower	4.62	-	0.00	12.81	-	-	-	-	-	17.43
Stoner Creek	517.80	-	0.01	256.13	0.29	-	8.49	-	-	782.71
Stones River	127.51	-	0.00	166.49	0.06	-	10.79	-	-	304.85
Sugartree Creek	90.51	-	0.01	72.57	0.03	-	1.27	-	-	164.39
Sulpher Creek	5.57	-	-	-	-	-	-	-	-	5.57
Sycamore Creek	7.97	-	-	-	-	-	0.71	-	-	8.68
Whites Creek	575.16	-	0.00	153.68	4.92	-	12.43	-	-	746.19
Sandy Creek	8.11	-	0.00	17.08	-	-	-	-	-	25.19
All Watersheds	14,293.82	-	1.03	4,268.85	20.11	-	192.95	-	-	18,776.75

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: TP									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (pounds)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	-	-	-	-	-
Browns Creek	411.98	-	0.00	180.32	1.20	-	2.11	-	-	595.61
Bull Run Creek	-	-	-	-	-	-	-	-	-	-
Cooper Creek	192.88	-	0.00	52.78	0.07	-	-	-	-	245.73
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	8,181.45	-	0.34	1,007.14	1.63	-	23.73	-	-	9,214.29
Davidson Branch	41.07	-	-	13.19	-	-	-	-	-	54.26
Dry Creek	73.69	-	0.00	57.17	0.21	-	2.66	-	-	133.72
Ewing Creek	192.99	-	0.19	153.93	0.95	-	18.52	-	-	366.59
Gibson Creek	42.93	-	0.00	57.17	1.38	-	0.58	-	-	102.07
Gizzard Branch	33.39	-	0.00	13.19	-	-	3.12	-	-	49.70
Harpeth River	983.42	-	0.08	285.87	0.52	-	4.44	-	-	1,274.33
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	27.58	-	-	17.59	-	-	1.51	-	-	46.68
Loves Branch	13.17	-	-	17.59	0.09	-	-	-	-	30.85
Mansker Creek	20.26	-	-	-	-	-	-	-	-	20.26
Marrowbone Creek	2.93	-	-	-	-	-	-	-	-	2.93
Mill Creek Lower	314.74	-	0.13	558.54	3.38	-	31.77	-	-	908.56
Mill Creek Upper	252.25	-	0.10	167.12	0.18	-	28.58	-	-	448.23
Overall Creek	38.08	-	0.00	8.80	0.08	-	0.82	-	-	47.78
Pages Branch	53.28	-	0.01	65.97	0.23	-	1.79	-	-	121.29
Percy Priest Lake, Lower	260.14	-	0.00	356.24	0.07	-	1.00	-	-	617.45
Percy Priest Lake, Upper	264.32	-	0.02	48.38	-	-	19.94	-	-	332.65
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	1,300.83	-	0.01	307.86	1.21	-	6.92	-	-	1,616.83
Sevenmile Creek	238.39	-	0.12	329.85	2.87	-	11.75	-	-	582.99
South Harpeth River, Lower	4.62	-	-	13.19	-	-	-	-	-	17.81
Stoner Creek	517.80	-	0.08	263.88	0.29	-	8.49	-	-	790.54
Stones River	127.51	-	0.09	171.52	0.06	-	10.79	-	-	309.97
Sugartree Creek	90.51	-	0.16	74.77	0.03	-	1.27	-	-	166.74
Sulpher Creek	5.57	-	-	-	-	-	-	-	-	5.57
Sycamore Creek	7.97	-	-	-	-	-	0.71	-	-	8.68
Whites Creek	575.16	-	0.04	158.33	4.92	-	12.43	-	-	750.88
Sandy Creek	8.11	-	-	17.59	-	-	-	-	-	25.70
All Watersheds	14,277.00	-	1.37	4,397.99	19.37	-	192.95	-	-	18,888.68

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: Pb									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (pounds)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	-	-	-	-	-
Browns Creek	1.71	-	0.00	12.67	-	-	0.78	0.09	-	15.25
Bull Run Creek	-	-	-	-	-	-	-	-	-	-
Cooper Creek	0.35	-	0.00	3.71	1.84	-	0.03	-	-	5.93
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	51.06	-	0.00	70.75	7.83	-	7.27	0.88	-	137.79
Davidson Branch	0.23	-	0.00	0.93	-	-	0.12	-	-	1.27
Dry Creek	0.60	-	-	4.02	-	-	0.52	0.19	-	5.32
Ewing Creek	1.72	-	0.00	10.81	-	-	4.24	0.19	-	16.96
Gibson Creek	0.27	-	0.00	4.02	0.92	-	0.20	0.19	-	5.59
Gizzard Branch	0.31	-	-	0.93	-	-	1.01	-	-	2.24
Harpeth River	2.13	-	0.00	20.08	-	-	1.82	-	-	24.03
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	0.21	-	0.00	1.24	-	-	0.75	-	-	2.19
Loves Branch	0.11	-	-	1.24	-	-	-	-	-	1.35
Mansker Creek	0.17	-	0.00	-	-	-	-	-	-	0.17
Marrowbone Creek	0.04	-	0.00	-	-	-	-	-	-	0.04
Mill Creek Lower	2.85	-	0.00	39.24	1.94	-	4.32	0.19	-	48.52
Mill Creek Upper	1.33	-	0.00	11.74	8.94	-	8.46	1.08	-	31.55
Overall Creek	0.19	-	0.00	0.62	-	-	0.97	-	-	1.77
Pages Branch	0.60	-	0.00	4.63	-	-	0.59	0.04	-	5.87
Percy Priest Lake, Lower	0.65	-	0.00	25.02	-	-	1.39	-	-	27.07
Percy Priest Lake, Upper	1.91	-	0.00	3.40	-	-	4.46	0.10	-	9.87
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	10.76	-	0.00	21.63	-	-	2.29	0.04	-	34.71
Sevenmile Creek	1.11	-	0.00	23.17	-	-	4.34	0.04	-	28.66
South Harpeth River, Lower	0.02	-	0.00	0.93	-	-	0.49	-	-	1.43
Stoner Creek	3.84	-	0.00	18.54	-	-	2.88	-	-	25.25
Stones River	1.07	-	0.00	12.05	-	-	4.04	-	-	17.15
Sugartree Creek	0.60	-	0.00	5.25	-	-	0.47	-	-	6.33
Sulpher Creek	0.06	-	-	-	-	-	-	-	-	0.06
Sycamore Creek	0.04	-	-	-	-	-	0.23	-	-	0.27
Whites Creek	5.00	-	0.00	11.12	7.06	-	9.79	0.38	-	33.35
Sandy Creek	0.05	-	0.00	1.24	-	-	-	-	-	1.29
All Watersheds	88.97	-	0.00	308.94	28.53	-	61.45	3.40	-	491.30

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: Ni									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (pounds)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	-	-	-	-	-
Browns Creek	2.03	-	0.00	8.09	-	-	7.02	-	-	17.14
Bull Run Creek	-	-	-	-	-	-	-	-	-	-
Cooper Creek	0.28	-	0.00	2.37	-	-	0.38	-	-	3.03
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	88.49	-	0.00	45.18	-	-	83.99	-	-	217.67
Davidson Branch	0.39	-	0.00	0.59	-	-	1.53	-	-	2.52
Dry Creek	1.08	-	-	2.57	-	-	8.94	-	-	12.58
Ewing Creek	2.35	-	0.00	6.91	-	-	67.96	-	-	77.22
Gibson Creek	0.54	-	0.00	2.57	-	-	1.52	-	-	4.63
Gizzard Branch	0.56	-	-	0.59	-	-	7.70	-	-	8.85
Harpeth River	2.56	-	0.00	12.83	-	-	43.76	-	-	59.14
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	0.42	-	0.00	0.79	-	-	7.09	-	-	8.30
Loves Branch	0.14	-	-	0.79	-	-	-	-	-	0.93
Mansker Creek	0.31	-	0.00	-	-	-	-	-	-	0.31
Marrowbone Creek	0.08	-	0.00	-	-	-	-	-	-	0.08
Mill Creek Lower	4.31	-	0.00	25.06	-	-	163.18	-	-	192.55
Mill Creek Upper	2.17	-	0.00	7.50	-	-	150.64	-	-	160.31
Overall Creek	0.32	-	0.00	0.39	-	-	11.20	-	-	11.91
Pages Branch	0.75	-	0.00	2.96	-	-	6.76	-	-	10.47
Percy Priest Lake, Lower	1.56	-	0.00	15.98	-	-	16.27	-	-	33.81
Percy Priest Lake, Upper	2.65	-	0.00	2.17	-	-	83.26	-	-	88.09
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	24.35	-	0.00	13.81	-	-	26.40	-	-	64.56
Sevenmile Creek	2.50	-	0.00	14.80	-	-	34.40	-	-	51.70
South Harpeth River, Lower	0.03	-	0.00	0.59	-	-	6.35	-	-	6.98
Stoner Creek	10.61	-	0.00	11.84	-	-	21.48	-	-	43.93
Stones River	1.47	-	0.00	7.70	-	-	38.58	-	-	47.74
Sugartree Creek	1.23	-	0.00	3.35	-	-	3.94	-	-	8.52
Sulpher Creek	0.09	-	-	-	-	-	-	-	-	0.09
Sycamore Creek	0.09	-	-	-	-	-	1.75	-	-	1.84
Whites Creek	11.21	-	0.00	7.10	-	-	121.75	-	-	140.06
Sandy Creek	0.08	-	0.00	0.79	-	-	-	-	-	0.87
All Watersheds	162.66	-	0.00	197.31	-	-	915.87	-	-	1,275.84

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: Zn									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (pounds)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	-	-	-	-	-
Browns Creek	55.41	-	0.00	34.82	82.26	-	-	0.53	-	173.01
Bull Run Creek	-	-	-	-	-	-	-	-	-	-
Cooper Creek	10.53	-	0.00	10.19	120.07	-	-	-	-	140.79
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	1,178.31	-	0.00	194.47	601.75	-	-	5.25	-	1,979.79
Davidson Branch	5.70	-	0.00	2.55	-	-	-	-	-	8.25
Dry Creek	16.84	-	-	11.04	14.02	-	-	1.13	-	43.03
Ewing Creek	56.48	-	0.00	29.72	72.37	-	-	1.13	-	159.70
Gibson Creek	6.73	-	0.00	11.04	151.22	-	-	1.13	-	170.12
Gizzard Branch	7.28	-	-	2.55	-	-	-	-	-	9.83
Harpeth River	60.25	-	0.00	55.20	35.91	-	-	-	-	151.35
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	4.90	-	0.00	3.40	-	-	-	-	-	8.30
Loves Branch	2.88	-	-	3.40	5.82	-	-	-	-	12.10
Mansker Creek	5.43	-	0.00	-	-	-	-	-	-	5.43
Marrowbone Creek	0.97	-	0.00	-	-	-	-	-	-	0.97
Mill Creek Lower	89.05	-	0.00	107.85	374.38	-	-	1.11	-	572.39
Mill Creek Upper	38.35	-	0.00	32.27	570.50	-	-	6.49	-	647.60
Overall Creek	4.33	-	0.00	1.70	5.85	-	-	-	-	11.88
Pages Branch	20.70	-	0.00	12.74	15.82	-	-	0.26	-	49.52
Percy Priest Lake, Lower	12.63	-	0.00	68.78	5.88	-	-	-	-	87.30
Percy Priest Lake, Upper	59.30	-	0.00	9.34	-	-	-	0.58	-	69.23
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	225.20	-	0.00	59.44	91.94	-	-	0.26	-	376.85
Sevenmile Creek	25.37	-	0.00	63.69	207.18	-	-	0.26	-	296.51
South Harpeth River, Lower	0.38	-	0.00	2.55	-	-	-	-	-	2.93
Stoner Creek	85.96	-	0.00	50.95	19.34	-	-	-	-	156.26
Stones River	32.86	-	0.00	33.12	3.87	-	-	-	-	69.85
Sugartree Creek	13.54	-	0.00	14.44	2.38	-	-	-	-	30.35
Sulphur Creek	1.93	-	-	-	-	-	-	-	-	1.93
Sycamore Creek	0.83	-	-	-	-	-	-	-	-	0.83
Whites Creek	105.08	-	0.00	30.57	781.56	-	-	2.25	-	919.46
Sandy Creek	1.84	-	0.00	3.40	-	-	-	-	-	5.23
All Watersheds	2,129.07	-	0.00	849.20	3,162.13	-	-	20.38	-	6,160.77

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: Cr									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (pounds)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	-	-	-	-	-
Browns Creek	1.33	-	0.00	9.00	-	-	7.52	-	-	17.85
Bull Run Creek	-	-	-	-	-	-	-	-	-	-
Cooper Creek	0.39	-	0.00	2.63	-	-	0.08	-	-	3.11
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	41.27	-	0.00	50.27	-	-	75.42	-	-	166.97
Davidson Branch	0.18	-	0.00	0.66	-	-	0.32	-	-	1.16
Dry Creek	0.35	-	-	2.85	-	-	6.50	-	-	9.71
Ewing Creek	1.14	-	0.00	7.68	-	-	47.98	-	-	56.80
Gibson Creek	0.15	-	0.00	2.85	-	-	2.07	-	-	5.08
Gizzard Branch	0.21	-	-	0.66	-	-	11.05	-	-	11.92
Harpeth River	2.08	-	0.00	14.27	-	-	10.95	-	-	27.30
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	0.12	-	0.00	0.88	-	-	6.07	-	-	7.07
Loves Branch	0.09	-	-	0.88	-	-	-	-	-	0.97
Mansker Creek	0.11	-	0.00	-	-	-	-	-	-	0.11
Marrowbone Creek	0.02	-	0.00	-	-	-	-	-	-	0.02
Mill Creek Lower	1.71	-	0.00	27.88	-	-	61.95	-	-	91.55
Mill Creek Upper	0.87	-	0.00	8.34	-	-	79.70	-	-	88.92
Overall Creek	0.15	-	0.00	0.44	-	-	4.83	-	-	5.42
Pages Branch	0.33	-	0.00	3.29	-	-	5.74	-	-	9.36
Percy Priest Lake, Lower	0.85	-	0.00	17.78	-	-	6.48	-	-	25.12
Percy Priest Lake, Upper	1.30	-	0.00	2.41	-	-	48.62	-	-	52.34
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	6.45	-	0.00	15.37	-	-	22.78	-	-	44.60
Sevenmile Creek	0.92	-	0.00	16.47	-	-	42.89	-	-	60.28
South Harpeth River, Lower	0.01	-	0.00	0.66	-	-	1.34	-	-	2.01
Stoner Creek	2.30	-	0.00	13.17	-	-	30.27	-	-	45.74
Stones River	0.72	-	0.00	8.56	-	-	37.91	-	-	47.19
Sugartree Creek	0.40	-	0.00	3.73	-	-	4.65	-	-	8.79
Sulpher Creek	0.04	-	-	-	-	-	-	-	-	0.04
Sycamore Creek	0.03	-	-	-	-	-	2.51	-	-	2.54
Whites Creek	2.95	-	0.00	7.90	-	-	55.15	-	-	66.01
Sandy Creek	0.04	-	0.00	0.88	-	-	-	-	-	0.91
All Watersheds	66.52	-	0.00	219.54	-	-	572.82	-	-	858.89

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: Cu									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (pounds)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	-	-	-	-	-
Browns Creek	5.57	-	0.00	9.32	1.67	-	6.77	0.09	-	23.43
Bull Run Creek	-	-	-	-	-	-	-	-	-	-
Cooper Creek	1.12	-	0.00	2.73	12.77	-	-	-	-	16.62
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	116.68	-	0.00	52.08	56.14	-	61.88	0.88	-	287.66
Davidson Branch	0.60	-	0.00	0.68	-	-	-	-	-	1.28
Dry Creek	1.43	-	-	2.96	0.29	-	4.34	0.19	-	9.21
Ewing Creek	6.16	-	0.00	7.96	1.46	-	32.12	0.19	-	47.89
Gibson Creek	0.48	-	0.00	2.96	8.23	-	1.99	0.19	-	13.85
Gizzard Branch	0.69	-	-	0.68	-	-	10.60	-	-	11.97
Harpeth River	5.67	-	0.00	14.78	0.73	-	4.06	-	-	25.24
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	0.36	-	0.00	0.91	-	-	5.15	-	-	6.42
Loves Branch	0.36	-	-	0.91	0.12	-	-	-	-	1.39
Mansker Creek	0.51	-	0.00	-	-	-	-	-	-	0.51
Marrowbone Creek	0.07	-	0.00	-	-	-	-	-	-	0.07
Mill Creek Lower	8.22	-	0.00	28.88	18.37	-	37.75	0.19	-	93.40
Mill Creek Upper	3.08	-	0.00	8.64	61.70	-	58.47	1.08	-	132.97
Overall Creek	0.44	-	0.00	0.45	0.12	-	2.76	-	-	3.77
Pages Branch	1.79	-	0.00	3.41	0.32	-	4.58	0.04	-	10.15
Percy Priest Lake, Lower	1.67	-	0.00	18.42	0.10	-	3.46	-	-	23.66
Percy Priest Lake, Upper	6.13	-	0.00	2.50	-	-	27.17	0.10	-	35.89
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	17.13	-	0.00	15.92	1.85	-	20.05	0.04	-	54.99
Sevenmile Creek	2.26	-	0.00	17.06	4.26	-	40.58	0.04	-	64.19
South Harpeth River, Lower	0.03	-	0.00	0.68	-	-	-	-	-	0.71
Stoner Creek	6.26	-	0.00	13.64	0.40	-	29.32	-	-	49.62
Stones River	3.51	-	0.00	8.87	0.08	-	33.06	-	-	45.51
Sugartree Creek	1.10	-	0.00	3.87	0.05	-	4.29	-	-	9.31
Sulpher Creek	0.20	-	-	-	-	-	-	-	-	0.20
Sycamore Creek	0.06	-	-	-	-	-	2.41	-	-	2.47
Whites Creek	7.97	-	0.00	8.19	55.41	-	31.10	0.38	-	103.04
Sandy Creek	0.18	-	0.00	0.91	-	-	-	-	-	1.09
All Watersheds	199.73	-	0.00	227.41	224.06	-	421.91	3.40	-	1,076.51

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: O&G									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (pounds)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	-	-	-	-	-
Browns Creek	1,024.62	-	0.13	206.33	-	-	9.17	4.31	4.54	1,249.09
Bull Run Creek	-	-	-	-	-	-	-	-	-	-
Cooper Creek	192.65	-	0.00	60.39	-	-	0.22	-	-	253.26
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	37,520.63	-	2.71	1,152.44	-	-	93.64	42.90	2.12	38,814.44
Davidson Branch	172.87	-	0.00	15.10	-	-	0.87	-	-	188.85
Dry Creek	357.67	-	-	65.42	-	-	7.96	9.19	-	440.25
Ewing Creek	1,204.90	-	0.02	176.14	-	-	60.52	9.19	-	1,450.78
Gibson Creek	144.67	-	1.50	65.42	-	-	2.40	9.19	1.37	224.55
Gizzard Branch	211.48	-	-	15.10	-	-	12.65	-	0.92	240.15
Harpeth River	1,142.64	-	0.01	327.11	-	-	22.11	-	-	1,491.87
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	123.50	-	0.36	20.13	-	-	8.05	-	-	152.04
Loves Branch	92.14	-	-	20.13	-	-	-	-	-	112.27
Mansker Creek	120.44	-	0.81	-	-	-	-	-	-	121.25
Marrowbone Creek	18.67	-	0.00	-	-	-	-	-	-	18.67
Mill Creek Lower	1,712.09	-	3.67	639.12	-	-	92.23	9.07	8.87	2,465.06
Mill Creek Upper	736.58	-	0.06	191.23	-	-	113.83	52.96	0.48	1,095.14
Overall Creek	130.99	-	0.00	10.06	-	-	8.53	-	-	149.59
Pages Branch	297.10	-	0.01	75.49	-	-	7.25	2.15	-	382.00
Percy Priest Lake, Lower	896.41	-	0.04	407.63	-	-	11.93	-	-	1,316.00
Percy Priest Lake, Upper	1,253.21	-	0.12	55.36	-	-	64.55	4.77	-	1,378.00
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	7,383.67	-	0.06	352.27	-	-	28.76	2.15	-	7,766.91
Sevenmile Creek	985.00	-	0.20	377.44	-	-	50.82	2.15	1.38	1,416.99
South Harpeth River, Lower	11.09	-	0.00	15.10	-	-	3.62	-	-	29.81
Stoner Creek	3,073.16	-	0.05	301.95	-	-	34.79	-	-	3,409.96
Stones River	716.30	-	0.04	196.27	-	-	47.03	-	0.86	960.50
Sugartree Creek	405.88	-	0.07	85.55	-	-	5.60	-	-	497.10
Sulpher Creek	38.89	-	-	-	-	-	-	-	-	38.89
Sycamore Creek	30.90	-	-	-	-	-	2.87	-	-	33.77
Whites Creek	3,389.52	-	0.04	181.17	-	-	92.30	18.39	-	3,681.42
Sandy Creek	36.84	-	0.04	20.13	-	-	-	-	-	57.01
All Watersheds	63,424.50	-	9.97	5,032.47	-	-	781.70	166.43	20.54	69,435.61

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: TSS									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (pounds)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	2,231.77	-	-	-	-	-	-	-	2,231.77
Browns Creek	17,910.29	326,251.67	0.35	52,506.88	-	-	73.68	537.77	566.53	397,847.17
Bull Run Creek	-	2,219.58	-	-	-	-	-	-	-	2,219.58
Cooper Creek	3,907.22	76,521.20	0.01	15,367.87	5.76	-	0.88	-	-	95,802.94
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	434,543.44	2,890,096.29	5,199.19	293,270.13	24.47	-	692.67	5,357.53	265.00	3,629,448.72
Davidson Branch	1,993.70	88,079.46	0.01	3,841.97	-	-	3.54	-	-	93,918.67
Dry Creek	4,334.42	129,671.67	741.67	16,648.52	-	-	47.87	1,148.33	-	152,592.48
Ewing Creek	15,597.08	601,369.83	0.06	44,822.95	-	-	368.23	1,148.33	-	663,306.47
Gibson Creek	1,876.48	231,507.47	4.15	16,648.52	2.87	-	20.73	1,148.33	171.64	251,380.19
Gizzard Branch	2,548.98	46,323.74	-	3,841.97	-	-	110.01	-	114.83	52,939.53
Harpeth River	20,491.95	392,227.19	1,483.35	83,242.61	-	-	96.27	-	-	497,541.38
Indian Creek	-	3,048.87	-	-	-	-	-	-	-	3,048.87
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	1,636.75	134,431.36	1.01	5,122.62	-	-	61.16	-	-	141,252.91
Loves Branch	1,088.52	43,949.59	-	5,122.62	-	-	-	-	-	50,160.73
Mansker Creek	1,443.57	15,463.88	2.23	-	-	-	-	-	-	16,909.69
Marrowbone Creek	222.77	20,033.81	741.68	-	-	-	-	-	-	20,998.26
Mill Creek Lower	25,335.60	943,449.17	10.18	162,643.26	6.06	-	481.19	1,133.06	1,108.03	1,134,166.55
Mill Creek Upper	11,542.71	1,910,558.07	741.83	48,664.91	27.94	-	728.98	6,614.82	59.53	1,978,938.78
Overall Creek	1,573.64	405,577.58	0.01	2,561.31	-	-	49.89	-	-	409,762.43
Pages Branch	6,256.03	176,537.87	5,191.69	19,209.83	-	-	52.00	268.90	-	207,516.32
Percy Priest Lake, Lower	8,653.19	899,370.37	2,225.10	103,733.10	-	-	67.47	-	-	1,014,049.23
Percy Priest Lake, Upper	16,770.27	472,517.73	742.00	14,087.21	-	-	340.02	595.28	-	505,052.51
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	59,466.12	608,168.20	741.83	89,645.89	-	-	222.66	268.90	-	758,513.60
Sevenmile Creek	10,088.16	187,268.60	0.57	96,049.17	-	-	430.09	268.89	172.83	294,278.31
South Harpeth River, Lower	108.46	3,329.37	0.01	3,841.97	-	-	14.66	-	-	7,294.46
Stoner Creek	21,221.36	88,596.12	0.15	76,839.34	-	-	302.93	-	-	186,959.90
Stones River	10,334.46	235,375.63	2,225.11	49,945.57	-	-	366.00	-	107.55	298,354.32
Sugartree Creek	4,391.96	205,108.41	0.20	21,771.15	-	-	46.46	-	-	231,318.18
Sulphur Creek	490.24	37,063.01	741.67	-	-	-	-	-	-	38,294.92
Sycamore Creek	302.45	854,940.13	-	-	-	-	25.00	-	-	855,267.58
Whites Creek	26,609.52	1,365,088.52	8,158.45	46,103.60	22.07	-	526.27	2,296.65	-	1,448,805.09
Sandy Creek	516.16	60,162.56	0.11	5,122.62	-	-	-	-	-	65,801.45
All Watersheds	711,255.51	13,456,538.74	28,952.63	1,280,655.60	89.16	-	5,128.64	20,786.78	2,565.95	15,505,973.01

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: TDS									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (pounds)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	-	-	-	-	-
Browns Creek	53,155.75	-	-	-	-	-	531.53	-	-	53,687.29
Bull Run Creek	-	-	-	-	-	-	-	-	-	-
Cooper Creek	19,586.75	-	-	-	-	-	7.10	-	-	19,593.85
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	1,594,768.55	-	-	-	-	-	5,962.64	-	-	1,600,731.19
Davidson Branch	7,001.09	-	-	-	-	-	28.59	-	-	7,029.69
Dry Creek	10,477.63	-	-	-	-	-	678.94	-	-	11,156.56
Ewing Creek	33,143.45	-	-	-	-	-	4,827.37	-	-	37,970.83
Gibson Creek	7,117.71	-	-	-	-	-	137.51	-	-	7,255.22
Gizzard Branch	8,429.69	-	-	-	-	-	731.29	-	-	9,160.98
Harpeth River	99,638.14	-	-	-	-	-	1,267.88	-	-	100,906.02
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	6,117.00	-	-	-	-	-	417.43	-	-	6,534.42
Loves Branch	2,347.65	-	-	-	-	-	-	-	-	2,347.65
Mansker Creek	4,690.35	-	-	-	-	-	-	-	-	4,690.35
Marrowbone Creek	646.81	-	-	-	-	-	-	-	-	646.81
Mill Creek Lower	56,573.01	-	-	-	-	-	7,140.16	-	-	63,713.17
Mill Creek Upper	34,158.07	-	-	-	-	-	7,090.75	-	-	41,248.81
Overall Creek	4,757.67	-	-	-	-	-	362.23	-	-	5,119.91
Pages Branch	9,273.21	-	-	-	-	-	468.14	-	-	9,741.35
Percy Priest Lake, Lower	49,522.17	-	-	-	-	-	493.16	-	-	50,015.33
Percy Priest Lake, Upper	26,869.15	-	-	-	-	-	5,414.39	-	-	32,283.54
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	200,692.33	-	-	-	-	-	1,674.02	-	-	202,366.35
Sevenmile Creek	49,054.09	-	-	-	-	-	2,863.01	-	-	51,917.09
South Harpeth River, Lower	787.96	-	-	-	-	-	118.47	-	-	906.43
Stoner Creek	168,907.45	-	-	-	-	-	2,005.38	-	-	170,912.83
Stones River	22,859.32	-	-	-	-	-	2,769.16	-	-	25,628.48
Sugartree Creek	16,729.16	-	-	-	-	-	311.84	-	-	17,041.00
Sulpher Creek	920.59	-	-	-	-	-	-	-	-	920.59
Sycamore Creek	910.68	-	-	-	-	-	166.18	-	-	1,076.86
Whites Creek	77,457.66	-	-	-	-	-	4,637.99	-	-	82,095.65
Sandy Creek	1,422.39	-	-	-	-	-	-	-	-	1,422.39
All Watersheds	2,568,015.46	-	-	-	-	-	50,105.16	-	-	2,618,120.62

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Pollutant: E. coli									Total Pollutant Load Removed from Watershed
	Removal by MWS Control Measure Implementation during FY24 (MPN e9)									
	SCMs Removal ¹	Construction Inspection Removal ²	Illicit Discharge Removal ²	Street Sweeping Removal ²	Home Buyout Removal ¹	Tree Planting Removal ¹	Stream Buffer Removal ¹	Industrial Inspection Removal ²	Field Screening Removal ²	
Back Creek	-	-	-	-	-	-	-	-	-	-
Browns Creek	15,614.99	-	66.24	3,197.12	0.00	-	0.00	-	-	18,878.36
Bull Run Creek	-	-	-	-	-	-	-	-	-	-
Cooper Creek	8,960.12	-	1.89	935.74	0.00	-	-	-	-	9,897.75
Cub Creek	-	-	-	-	-	-	-	-	-	-
Cumberland River	210,922.31	-	1,410.07	17,857.09	0.00	-	0.00	-	-	230,189.47
Davidson Branch	1,373.74	-	1.89	233.94	-	-	-	-	-	1,609.57
Dry Creek	1,995.00	-	-	1,013.72	0.00	-	0.00	-	-	3,008.72
Ewing Creek	3,432.06	-	11.36	2,729.25	0.00	-	0.00	-	-	6,172.66
Gibson Creek	1,512.09	-	778.66	1,013.72	0.00	-	0.00	-	-	3,304.47
Gizzard Branch	613.32	-	-	233.94	-	-	0.00	-	-	847.26
Harpeth River	44,492.17	-	3.79	5,068.61	0.00	-	0.00	-	-	49,564.56
Indian Creek	-	-	-	-	-	-	-	-	-	-
Island Creek	-	-	-	-	-	-	-	-	-	-
Little Harpeth River	897.86	-	189.27	311.91	-	-	0.00	-	-	1,399.05
Loves Branch	318.21	-	-	311.91	0.00	-	-	-	-	630.12
Mansker Creek	323.04	-	418.67	-	-	-	-	-	-	741.70
Marrowbone Creek	56.61	-	1.89	-	-	-	-	-	-	58.50
Mill Creek Lower	7,211.06	-	1,908.60	9,903.28	0.00	-	0.00	-	-	19,022.95
Mill Creek Upper	11,700.35	-	30.28	2,963.19	0.00	-	0.00	-	-	14,693.82
Overall Creek	1,530.07	-	1.89	155.96	0.00	-	0.00	-	-	1,687.92
Pages Branch	781.07	-	3.79	1,169.68	0.00	-	0.00	-	-	1,954.54
Percy Priest Lake, Lower	7,817.46	-	18.93	6,316.26	0.00	-	0.00	-	-	14,152.66
Percy Priest Lake, Upper	8,138.18	-	62.46	857.76	-	-	0.00	-	-	9,058.40
Pond Creek	-	-	-	-	-	-	-	-	-	-
Richland Creek	26,686.45	-	30.28	5,458.50	0.00	-	0.00	-	-	32,175.24
Sevenmile Creek	6,544.53	-	105.99	5,848.39	0.00	-	0.00	-	-	12,498.92
South Harpeth River, Lower	189.96	-	1.89	233.94	-	-	-	-	-	425.79
Stoner Creek	8,339.11	-	28.39	4,678.71	0.00	-	0.00	-	-	13,046.21
Stones River	3,140.08	-	20.82	3,041.16	0.00	-	0.00	-	-	6,202.06
Sugartree Creek	2,894.71	-	37.85	1,325.64	0.00	-	0.00	-	-	4,258.20
Sulphur Creek	73.99	-	-	-	-	-	-	-	-	73.99
Sycamore Creek	260.93	-	-	-	-	-	0.00	-	-	260.93
Whites Creek	10,698.54	-	22.71	2,807.23	0.00	-	0.00	-	-	13,528.48
Sandy Creek	291.80	-	20.82	311.91	-	-	-	-	-	624.53
All Watersheds	386,809.80	-	5,178.44	77,978.58	0.00	-	0.00	-	-	469,966.82

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

WIES Calculated Net Pollutant Loadings During FY24

The below tables represent the actual Net Pollutant Loading Calculations after considering the Pollutant Loading Reductions from Metro Nashville MS4 Program.

Watershed	Baseline	SCM Load ¹	Pollutant: Runoff								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (Acre-foot)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	130.62	-	-	-	-	-	0.00	-	-	-	130.62
Browns Creek	13,606.56	422.92	-	-	-	8.97	0.75	7.75	-	-	13,166.16
Bull Run Creek	505.19	-	-	-	-	-	0.00	-	-	-	505.18
Cooper Creek	3,282.61	109.84	-	-	-	4.11	0.14	0.72	-	-	3,167.79
Cub Creek	140.09	-	-	-	-	-	0.00	-	-	-	140.09
Cumberland River	53,387.96	15,818.39	-	-	-	24.51	5.25	116.02	-	-	37,423.79
Davidson Branch	2,181.71	64.61	-	-	-	-	0.09	0.49	-	-	2,116.52
Dry Creek	5,197.24	175.38	-	-	-	1.04	0.17	12.94	-	-	5,007.71
Ewing Creek	11,412.46	341.66	-	-	-	7.72	0.20	46.40	-	-	11,016.48
Gibson Creek	5,570.30	87.52	-	-	-	14.83	0.26	5.31	-	-	5,462.36
Gizzard Branch	2,043.25	87.92	-	-	-	-	0.03	18.03	-	-	1,937.28
Harpeth River	12,781.63	718.54	-	-	-	0.74	0.20	35.52	-	-	12,026.63
Indian Creek	336.96	-	-	-	-	-	-	-	-	-	336.96
Island Creek	187.70	-	-	-	-	-	-	-	-	-	187.70
Little Harpeth River	2,263.74	68.05	-	-	-	-	0.11	11.34	-	-	2,184.23
Loves Branch	2,458.55	28.77	-	-	-	0.24	0.14	-	-	-	2,429.39
Mansker Creek	3,931.31	38.39	-	-	-	-	0.05	-	-	-	3,892.86
Marrowbone Creek	2,623.01	12.35	-	-	-	-	0.02	-	-	-	2,610.64
Mill Creek Lower	38,375.24	687.95	-	-	-	20.75	0.33	70.35	-	-	37,595.87
Mill Creek Upper	12,760.18	395.63	-	-	-	1.94	0.36	74.86	-	-	12,287.39
Overall Creek	2,842.05	57.89	-	-	-	0.25	0.09	7.10	-	-	2,776.72
Pages Branch	4,325.57	130.50	-	-	-	1.69	0.11	7.10	-	-	4,186.17
Percy Priest Lake, Lower	12,747.66	187.93	-	-	-	1.33	0.12	6.37	-	-	12,551.91
Percy Priest Lake, Upper	11,038.76	452.08	-	-	-	-	0.07	47.35	-	-	10,539.26
Pond Creek	230.06	-	-	-	-	-	-	-	-	-	230.06
Richland Creek	16,033.90	3,803.55	-	-	-	18.65	1.07	18.95	-	-	12,191.68
Sevenmile Creek	15,696.75	341.55	-	-	-	15.92	0.32	26.20	-	-	15,312.75
South Harpeth River, Lower	1,380.55	4.56	-	-	-	-	0.02	0.98	-	-	1,374.99
Stoner Creek	10,164.60	1,097.92	-	-	-	2.67	0.14	27.20	-	-	9,036.67
Stones River	11,744.15	242.73	-	-	-	0.48	0.25	22.23	-	-	11,478.45
Sugartree Creek	3,795.06	201.92	-	-	-	0.25	0.10	3.68	-	-	3,589.10
Sulpher Creek	818.25	14.41	-	-	-	-	0.05	-	-	-	803.79
Sycamore Creek	4,704.43	14.11	-	-	-	-	0.01	2.58	-	-	4,687.74
Whites Creek	15,000.64	1,793.85	-	-	-	21.74	0.29	41.06	-	-	13,143.70
Sandy Creek	1,007.45	11.51	-	-	-	-	0.01	-	-	-	995.93
All Watersheds	284,706.15	27,412.45	-	-	-	147.83	10.73	610.54	-	-	256,524.60

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: BOD5								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (pounds)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	1,293.01	-	-	-	-	-	-	-	-	-	1,293.01
Browns Creek	141,971.57	4,535.23	-	0.32	1,525.20	12.02	-	-	21.09	22.22	135,855.50
Bull Run Creek	4,407.71	-	-	-	-	-	-	-	-	-	4,407.71
Cooper Creek	38,856.41	1,289.41	-	0.01	446.40	9.48	-	-	-	-	37,111.11
Cub Creek	1,491.06	-	-	-	-	-	-	-	-	-	1,491.06
Cumberland River	648,144.08	108,404.81	-	6.84	8,518.80	53.82	-	-	210.10	10.39	530,939.32
Davidson Branch	25,259.38	552.20	-	0.01	111.60	-	-	-	-	-	24,595.57
Dry Creek	59,925.49	1,315.71	-	-	483.60	2.06	-	-	45.03	-	58,079.09
Ewing Creek	130,199.35	4,287.71	-	0.06	1,302.00	10.49	-	-	45.03	-	124,554.07
Gibson Creek	76,178.99	583.15	-	3.78	483.60	18.17	-	-	45.03	6.73	75,038.53
Gizzard Branch	32,371.89	628.03	-	-	111.60	-	-	-	-	4.50	31,627.76
Harpeth River	149,547.06	7,019.02	-	0.02	2,418.00	5.22	-	-	-	-	140,104.80
Indian Creek	3,604.83	-	-	-	-	-	-	-	-	-	3,604.83
Island Creek	1,343.18	-	-	-	-	-	-	-	-	-	1,343.18
Little Harpeth River	26,771.62	409.25	-	0.92	148.80	-	-	-	-	-	26,212.65
Loves Branch	26,389.31	245.76	-	-	148.80	0.86	-	-	-	-	25,993.89
Mansker Creek	39,542.70	425.55	-	2.03	-	-	-	-	-	-	39,115.12
Marrowbone Creek	27,603.78	58.78	-	0.01	-	-	-	-	-	-	27,544.98
Mill Creek Lower	445,607.44	6,253.58	-	9.26	4,724.40	46.22	-	-	44.43	43.45	434,486.10
Mill Creek Upper	156,825.61	2,907.64	-	0.15	1,413.60	44.21	-	-	259.40	2.33	152,198.27
Overall Creek	33,873.34	433.62	-	0.01	74.40	0.85	-	-	-	-	33,364.46
Pages Branch	54,933.94	1,180.24	-	0.02	558.00	2.33	-	-	10.54	-	53,182.80
Percy Priest Lake, Lower	136,424.35	1,377.22	-	0.09	3,013.20	0.75	-	-	-	-	132,033.09
Percy Priest Lake, Upper	111,918.87	4,362.77	-	0.30	409.20	-	-	-	23.34	-	107,123.25
Pond Creek	2,378.13	-	-	-	-	-	-	-	-	-	2,378.13
Richland Creek	194,435.56	22,571.15	-	0.15	2,604.00	13.31	-	-	10.54	-	169,236.41
Sevenmile Creek	192,685.37	2,258.50	-	0.51	2,790.00	30.67	-	-	10.54	6.78	187,588.36
South Harpeth River, Lower	12,593.00	47.61	-	0.01	111.60	-	-	-	-	-	12,433.78
Stoner Creek	129,869.39	9,868.74	-	0.14	2,232.00	2.87	-	-	-	-	117,765.64
Stones River	154,146.35	2,509.47	-	0.10	1,450.80	0.57	-	-	-	4.22	150,181.19
Sugartree Creek	54,828.93	1,268.85	-	0.18	632.40	0.35	-	-	-	-	52,927.15
Sulphur Creek	7,580.23	132.07	-	-	-	-	-	-	-	-	7,448.16
Sycamore Creek	49,394.36	73.92	-	-	-	-	-	-	-	-	49,320.43
Whites Creek	166,583.90	10,241.53	-	0.11	1,339.20	82.90	-	-	90.06	-	154,830.11
Sandy Creek	11,773.69	143.53	-	0.10	148.80	-	-	-	-	-	11,481.26
All Watersheds	3,350,753.90	195,385.06	-	25.12	37,200.00	337.16	-	-	815.17	100.63	3,116,890.78

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: COD								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (pounds)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	12,694.49	-	-	-	-	-	-	-	-	-	12,694.49
Browns Creek	1,289,118.52	37,925.87	-	0.85	3,050.40	-	-	87.91	211.77	223.09	1,247,618.63
Bull Run Creek	47,296.06	-	-	-	-	-	-	-	-	-	47,296.06
Cooper Creek	338,416.45	9,522.23	-	0.02	892.80	36.84	-	0.51	-	-	327,964.04
Cub Creek	14,515.56	-	-	-	-	-	-	-	-	-	14,515.56
Cumberland River	5,544,139.14	897,415.33	-	17.99	17,037.60	156.61	-	826.35	2,109.75	104.36	4,626,471.16
Davidson Branch	236,147.49	4,523.44	-	0.02	223.20	-	-	2.06	-	-	231,398.76
Dry Creek	511,914.87	9,956.19	-	-	967.20	-	-	56.78	452.20	-	500,482.50
Ewing Creek	1,151,705.82	34,074.49	-	0.14	2,604.00	-	-	428.56	452.20	-	1,114,146.42
Gibson Creek	631,112.92	4,427.37	-	9.94	967.20	18.37	-	25.30	452.20	67.59	625,144.97
Gizzard Branch	263,181.41	5,286.30	-	-	223.20	-	-	134.76	-	45.22	257,491.93
Harpeth River	1,315,633.72	50,572.60	-	0.05	4,836.00	-	-	121.37	-	-	1,260,103.70
Indian Creek	34,868.54	-	-	-	-	-	-	-	-	-	34,868.54
Island Creek	17,096.19	-	-	-	-	-	-	-	-	-	17,096.19
Little Harpeth River	259,778.62	3,529.01	-	2.42	297.60	-	-	69.97	-	-	255,879.62
Loves Branch	255,690.61	2,139.84	-	-	297.60	-	-	-	-	-	253,253.17
Mansker Creek	383,340.24	3,338.76	-	5.34	-	-	-	-	-	-	379,996.14
Marrowbone Creek	273,490.39	444.66	-	0.02	-	-	-	-	-	-	273,045.70
Mill Creek Lower	3,680,785.14	52,396.90	-	24.35	9,448.80	38.75	-	732.43	446.19	436.33	3,617,261.38
Mill Creek Upper	1,331,674.99	24,205.45	-	0.39	2,827.20	178.80	-	924.03	2,604.86	23.44	1,300,910.83
Overall Creek	291,743.60	3,341.96	-	0.02	148.80	-	-	47.49	-	-	288,205.34
Pages Branch	456,443.01	11,030.00	-	0.05	1,116.00	-	-	60.78	105.89	-	444,130.29
Percy Priest Lake, Lower	1,317,879.16	16,572.13	-	0.24	6,026.40	-	-	62.30	-	-	1,295,218.08
Percy Priest Lake, Upper	1,023,824.43	34,038.25	-	0.80	818.40	-	-	379.62	234.42	-	988,352.95
Pond Creek	22,268.31	-	-	-	-	-	-	-	-	-	22,268.31
Richland Creek	1,697,142.76	151,215.70	-	0.39	5,208.00	-	-	275.18	105.89	-	1,540,337.61
Sevenmile Creek	1,634,239.84	21,694.63	-	1.35	5,580.00	-	-	519.94	105.89	68.06	1,606,269.98
South Harpeth River, Lower	136,360.74	324.87	-	0.02	223.20	-	-	8.55	-	-	135,804.10
Stoner Creek	1,081,596.39	68,227.88	-	0.36	4,464.00	-	-	371.08	-	-	1,008,533.07
Stones River	1,316,994.10	21,034.54	-	0.27	2,901.60	-	-	432.82	-	42.35	1,292,582.52
Sugartree Creek	455,080.53	10,135.01	-	0.48	1,264.80	-	-	55.68	-	-	443,624.55
Sulpher Creek	79,588.52	1,011.85	-	-	-	-	-	-	-	-	78,576.67
Sycamore Creek	480,374.24	626.91	-	-	-	-	-	30.62	-	-	479,716.70
Whites Creek	1,541,771.16	67,550.74	-	0.29	2,678.40	141.25	-	513.80	904.40	-	1,469,982.29
Sandy Creek	100,219.75	1,153.07	-	0.27	297.60	-	-	-	-	-	98,768.81
All Watersheds	29,228,127.71	1,547,715.97	-	66.08	74,399.99	570.62	-	6,167.89	8,185.64	1,010.45	27,590,011.07

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: NH3								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (pounds)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	40.66	-	-	-	-	-	-	-	-	-	40.66
Browns Creek	4,576.18	129.02	-	0.01	-	0.00	-	-	0.35	0.37	4,446.42
Bull Run Creek	163.76	-	-	-	-	-	-	-	-	-	163.76
Cooper Creek	1,115.56	24.85	-	0.00	-	0.22	-	-	-	-	1,090.50
Cub Creek	44.75	-	-	-	-	-	-	-	-	-	44.75
Cumberland River	18,221.89	3,290.22	-	0.26	-	0.93	-	-	3.50	0.17	14,926.80
Davidson Branch	824.87	15.69	-	0.00	-	-	-	-	-	-	809.18
Dry Creek	1,687.87	36.00	-	-	-	0.00	-	-	0.75	-	1,651.12
Ewing Creek	3,857.04	115.99	-	0.00	-	0.00	-	-	0.75	-	3,740.29
Gibson Creek	2,003.65	17.47	-	0.15	-	0.11	-	-	0.75	0.11	1,985.06
Gizzard Branch	876.92	21.66	-	-	-	-	-	-	-	0.08	855.18
Harpeth River	4,136.93	137.57	-	0.00	-	0.00	-	-	-	-	3,999.37
Indian Creek	96.52	-	-	-	-	-	-	-	-	-	96.52
Island Creek	69.64	-	-	-	-	-	-	-	-	-	69.64
Little Harpeth River	780.37	14.90	-	0.04	-	-	-	-	-	-	765.43
Loves Branch	831.37	7.44	-	-	-	0.00	-	-	-	-	823.92
Mansker Creek	1,234.73	12.27	-	0.08	-	-	-	-	-	-	1,222.38
Marrowbone Creek	750.55	2.03	-	0.00	-	-	-	-	-	-	748.52
Mill Creek Lower	12,479.13	201.70	-	0.36	-	0.24	-	-	0.74	0.72	12,275.37
Mill Creek Upper	4,076.77	89.51	-	0.01	-	1.06	-	-	4.32	0.04	3,981.83
Overall Creek	926.96	10.67	-	0.00	-	0.00	-	-	-	-	916.29
Pages Branch	1,521.81	46.47	-	0.00	-	0.00	-	-	0.18	-	1,475.16
Percy Priest Lake, Lower	3,690.09	37.74	-	0.00	-	0.00	-	-	-	-	3,652.34
Percy Priest Lake, Upper	3,127.23	108.24	-	0.01	-	-	-	-	0.39	-	3,018.59
Pond Creek	63.30	-	-	-	-	-	-	-	-	-	63.30
Richland Creek	5,708.68	516.24	-	0.01	-	0.00	-	-	0.18	-	5,192.26
Sevenmile Creek	5,159.17	69.67	-	0.02	-	0.00	-	-	0.18	0.11	5,089.19
South Harpeth River, Lower	398.54	1.04	-	0.00	-	-	-	-	-	-	397.50
Stoner Creek	3,433.40	261.89	-	0.01	-	0.00	-	-	-	-	3,171.51
Stones River	4,481.13	77.89	-	0.00	-	0.00	-	-	-	0.07	4,403.17
Sugartree Creek	1,461.46	38.23	-	0.01	-	0.00	-	-	-	-	1,423.23
Sulphur Creek	264.16	3.67	-	-	-	-	-	-	-	-	260.49
Sycamore Creek	1,404.62	1.86	-	-	-	-	-	-	-	-	1,402.76
Whites Creek	4,937.90	224.10	-	0.00	-	0.85	-	-	1.50	-	4,711.45
Sandy Creek	324.26	4.08	-	0.00	-	-	-	-	-	-	320.18
All Watersheds	94,771.87	5,518.13	-	0.97	-	3.42	-	-	13.59	1.68	89,234.08

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: TKN								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (pounds)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	163.14	-	-	-	-	-	-	-	-	-	163.14
Browns Creek	15,797.76	676.85	-	0.10	-	0.93	-	0.55	-	-	15,119.33
Bull Run Creek	512.80	-	-	-	-	-	-	-	-	-	512.80
Cooper Creek	4,404.04	202.29	-	0.00	-	0.37	-	-	-	-	4,201.38
Cub Creek	191.16	-	-	-	-	-	-	-	-	-	191.16
Cumberland River	74,571.82	16,072.64	-	2.17	-	2.61	-	5.62	-	-	58,488.78
Davidson Branch	2,648.48	68.41	-	0.00	-	-	-	-	-	-	2,580.07
Dry Creek	7,080.21	182.14	-	-	-	0.16	-	0.35	-	-	6,897.55
Ewing Creek	14,853.77	474.78	-	0.02	-	0.82	-	2.62	-	-	14,375.54
Gibson Creek	8,690.90	104.26	-	1.20	-	1.23	-	0.16	-	-	8,584.05
Gizzard Branch	3,384.36	94.59	-	-	-	-	-	0.86	-	-	3,288.91
Harpeth River	17,782.29	1,093.26	-	0.01	-	0.41	-	2.74	-	-	16,685.88
Indian Creek	511.80	-	-	-	-	-	-	-	-	-	511.80
Island Creek	114.80	-	-	-	-	-	-	-	-	-	114.80
Little Harpeth River	3,310.84	82.14	-	0.29	-	-	-	0.42	-	-	3,227.99
Loves Branch	3,090.39	26.03	-	-	-	0.07	-	-	-	-	3,064.29
Mansker Creek	4,933.72	56.37	-	0.64	-	-	-	-	-	-	4,876.71
Marrowbone Creek	3,949.81	11.20	-	0.00	-	-	-	-	-	-	3,938.61
Mill Creek Lower	51,585.48	906.49	-	2.93	-	3.15	-	15.22	-	-	50,657.69
Mill Creek Upper	19,201.00	529.32	-	0.05	-	1.64	-	11.67	-	-	18,658.32
Overall Creek	4,079.84	54.32	-	0.00	-	0.07	-	0.23	-	-	4,025.23
Pages Branch	6,181.59	189.14	-	0.01	-	0.18	-	0.37	-	-	5,991.88
Percy Priest Lake, Lower	18,477.43	266.59	-	0.03	-	0.06	-	0.28	-	-	18,210.47
Percy Priest Lake, Upper	15,056.55	499.59	-	0.10	-	-	-	2.22	-	-	14,554.64
Pond Creek	330.93	-	-	-	-	-	-	-	-	-	330.93
Richland Creek	21,497.53	2,456.48	-	0.05	-	1.04	-	2.39	-	-	19,037.59
Sevenmile Creek	22,689.35	418.86	-	0.16	-	2.39	-	3.29	-	-	22,264.66
South Harpeth River, Lower	1,753.18	7.22	-	0.00	-	-	-	-	-	-	1,745.97
Stoner Creek	14,988.15	1,465.52	-	0.04	-	0.22	-	2.37	-	-	13,519.99
Stones River	16,536.90	313.86	-	0.03	-	0.04	-	2.68	-	-	16,220.28
Sugartree Creek	6,011.02	197.54	-	0.06	-	0.03	-	0.35	-	-	5,813.05
Sulphur Creek	919.07	15.66	-	-	-	-	-	-	-	-	903.41
Sycamore Creek	6,646.61	12.09	-	-	-	-	-	0.20	-	-	6,634.32
Whites Creek	19,984.25	1,035.71	-	0.03	-	5.03	-	2.53	-	-	18,940.95
Sandy Creek	1,384.06	19.40	-	0.03	-	-	-	-	-	-	1,364.63
All Watersheds	393,315.05	27,532.73	-	7.95	-	20.44	-	57.11	-	-	365,696.81

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: NO2+NO3								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (pounds)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	71.39	-	-	-	-	-	-	-	-	-	71.39
Browns Creek	7,881.00	217.21	-	0.00	-	-	-	0.04	0.83	0.88	7,662.03
Bull Run Creek	256.67	-	-	-	-	-	-	-	-	-	256.67
Cooper Creek	1,848.11	64.79	-	0.00	-	0.08	-	0.00	-	-	1,783.23
Cub Creek	80.98	-	-	-	-	-	-	-	-	-	80.98
Cumberland River	32,394.57	7,953.40	-	0.03	-	0.34	-	0.52	8.32	0.41	24,431.55
Davidson Branch	1,221.06	36.21	-	0.00	-	-	-	0.01	-	-	1,184.85
Dry Creek	3,097.32	83.18	-	-	-	-	-	0.03	1.78	-	3,012.33
Ewing Creek	6,576.80	199.70	-	0.00	-	-	-	0.23	1.78	-	6,375.09
Gibson Creek	3,404.39	38.79	-	0.02	-	0.04	-	0.01	1.78	0.27	3,363.49
Gizzard Branch	1,373.61	41.27	-	-	-	-	-	0.05	-	0.18	1,332.10
Harpeth River	7,195.04	398.94	-	0.00	-	-	-	0.62	-	-	6,795.48
Indian Creek	201.75	-	-	-	-	-	-	-	-	-	201.75
Island Creek	85.81	-	-	-	-	-	-	-	-	-	85.81
Little Harpeth River	1,389.10	28.19	-	0.00	-	-	-	0.04	-	-	1,360.86
Loves Branch	1,383.63	14.19	-	-	-	-	-	-	-	-	1,369.44
Mansker Creek	2,230.56	23.98	-	0.01	-	-	-	-	-	-	2,206.57
Marrowbone Creek	1,581.80	4.48	-	0.00	-	-	-	-	-	-	1,577.32
Mill Creek Lower	23,052.00	325.59	-	0.04	-	0.08	-	2.91	1.76	1.72	22,719.89
Mill Creek Upper	7,540.00	172.63	-	0.00	-	0.39	-	1.97	10.27	0.09	7,354.66
Overall Creek	1,671.80	30.21	-	0.00	-	-	-	0.05	-	-	1,641.54
Pages Branch	2,638.70	52.40	-	0.00	-	-	-	0.03	0.42	-	2,585.85
Percy Priest Lake, Lower	7,448.72	113.60	-	0.00	-	-	-	0.07	-	-	7,335.05
Percy Priest Lake, Upper	6,646.78	230.88	-	0.00	-	-	-	0.24	0.92	-	6,414.74
Pond Creek	129.72	-	-	-	-	-	-	-	-	-	129.72
Richland Creek	9,429.31	2,045.78	-	0.00	-	-	-	0.29	0.42	-	7,382.82
Sevenmile Creek	9,129.52	173.61	-	0.00	-	-	-	0.23	0.42	0.27	8,954.99
South Harpeth River, Lower	773.10	3.26	-	0.00	-	-	-	0.02	-	-	769.81
Stoner Creek	5,947.45	780.93	-	0.00	-	-	-	0.15	-	-	5,166.37
Stones River	7,266.97	122.84	-	0.00	-	-	-	0.21	-	0.17	7,143.75
Sugartree Creek	2,346.45	97.11	-	0.00	-	-	-	0.03	-	-	2,249.31
Sulpher Creek	440.79	6.87	-	-	-	-	-	-	-	-	433.92
Sycamore Creek	2,717.13	6.59	-	-	-	-	-	0.01	-	-	2,710.53
Whites Creek	8,633.78	949.22	-	0.00	-	0.31	-	0.50	3.57	-	7,680.18
Sandy Creek	571.28	6.93	-	0.00	-	-	-	-	-	-	564.35
All Watersheds	168,657.11	14,222.82	-	0.11	-	1.25	-	8.26	32.27	3.98	154,388.42

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: TN								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (pounds)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	228.28	-	-	-	-	-	-	-	-	-	228.28
Browns Creek	23,257.40	759.11	-	0.07	437.56	1.10	-	0.52	-	-	22,059.04
Bull Run Creek	743.87	-	-	-	-	-	-	-	-	-	743.87
Cooper Creek	6,278.40	247.05	-	0.00	128.07	0.56	-	-	-	-	5,902.72
Cub Creek	265.00	-	-	-	-	-	-	-	-	-	265.00
Cumberland River	106,799.32	20,320.68	-	1.57	2,443.92	3.63	-	5.45	-	-	84,024.08
Davidson Branch	3,832.55	89.06	-	0.00	32.02	-	-	-	-	-	3,711.47
Dry Creek	10,044.25	201.79	-	-	138.74	0.19	-	0.34	-	-	9,703.19
Ewing Creek	21,295.35	566.56	-	0.01	373.52	0.96	-	2.50	-	-	20,351.79
Gibson Creek	12,099.85	112.74	-	0.87	138.74	1.51	-	0.15	-	-	11,845.84
Gizzard Branch	4,751.02	110.17	-	-	32.02	-	-	0.82	-	-	4,608.01
Harpeth River	25,244.99	1,331.64	-	0.00	693.69	0.48	-	2.89	-	-	23,216.29
Indian Creek	693.12	-	-	-	-	-	-	-	-	-	693.12
Island Creek	190.94	-	-	-	-	-	-	-	-	-	190.94
Little Harpeth River	4,618.72	84.66	-	0.21	42.69	-	-	0.40	-	-	4,490.76
Loves Branch	4,398.77	32.23	-	-	42.69	0.08	-	-	-	-	4,323.77
Mansker Creek	6,931.56	68.13	-	0.47	-	-	-	-	-	-	6,862.96
Marrowbone Creek	5,355.38	12.32	-	0.00	-	-	-	-	-	-	5,343.06
Mill Creek Lower	73,902.09	965.36	-	2.12	1,355.36	3.85	-	16.03	-	-	71,559.38
Mill Creek Upper	26,681.44	536.09	-	0.03	405.54	2.56	-	11.93	-	-	25,725.28
Overall Creek	5,659.64	69.04	-	0.00	21.34	0.08	-	0.22	-	-	5,568.96
Pages Branch	8,805.16	177.90	-	0.00	160.08	0.21	-	0.36	-	-	8,466.60
Percy Priest Lake, Lower	26,014.45	327.70	-	0.02	864.44	0.07	-	0.27	-	-	24,821.96
Percy Priest Lake, Upper	20,971.82	563.21	-	0.07	117.39	-	-	2.13	-	-	20,289.02
Pond Creek	448.91	-	-	-	-	-	-	-	-	-	448.91
Richland Creek	31,042.64	3,483.26	-	0.03	747.05	1.22	-	2.36	-	-	26,808.72
Sevenmile Creek	32,087.35	475.48	-	0.12	800.41	2.81	-	3.12	-	-	30,805.42
South Harpeth River, Lower	2,460.22	9.63	-	0.00	32.02	-	-	-	-	-	2,418.57
Stoner Creek	21,292.96	2,025.23	-	0.03	640.33	0.26	-	2.25	-	-	18,624.85
Stones River	23,772.73	362.74	-	0.02	416.21	0.05	-	2.54	-	-	22,991.16
Sugartree Creek	8,479.08	231.51	-	0.04	181.43	0.03	-	0.33	-	-	8,065.73
Sulphur Creek	1,312.97	18.45	-	-	-	-	-	-	-	-	1,294.52
Sycamore Creek	9,102.14	13.61	-	-	-	-	-	0.19	-	-	9,088.34
Whites Creek	28,287.94	1,495.70	-	0.03	384.20	6.42	-	2.41	-	-	26,399.18
Sandy Creek	1,962.38	22.20	-	0.02	42.69	-	-	-	-	-	1,897.46
All Watersheds	559,312.71	34,713.26	-	5.75	10,672.13	26.09	-	57.20	-	-	513,838.27

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: Diss. P								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (pounds)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	116.71	-	-	-	-	-	-	-	-	-	116.71
Browns Creek	5,775.78	247.97	-	-	-	1.18	-	1.26	-	-	5,525.37
Bull Run Creek	337.00	-	-	-	-	-	-	-	-	-	337.00
Cooper Creek	2,449.00	134.67	-	-	-	0.07	-	-	-	-	2,314.26
Cub Creek	128.30	-	-	-	-	-	-	-	-	-	128.30
Cumberland River	33,030.28	4,922.97	-	-	-	1.64	-	15.02	-	-	28,090.64
Davidson Branch	1,237.08	23.74	-	-	-	-	-	-	-	-	1,213.35
Dry Creek	3,358.39	38.62	-	-	-	0.20	-	1.93	-	-	3,317.64
Ewing Creek	7,326.14	75.50	-	-	-	1.03	-	13.28	-	-	7,236.33
Gibson Creek	4,379.77	26.50	-	-	-	1.36	-	0.33	-	-	4,351.58
Gizzard Branch	1,068.80	18.04	-	-	-	-	-	1.80	-	-	1,048.96
Harpeth River	11,061.01	689.48	-	-	-	0.51	-	2.77	-	-	10,368.24
Indian Creek	366.94	-	-	-	-	-	-	-	-	-	366.94
Island Creek	51.79	-	-	-	-	-	-	-	-	-	51.79
Little Harpeth River	1,681.75	15.03	-	-	-	-	-	0.87	-	-	1,665.85
Loves Branch	1,629.86	5.67	-	-	-	0.09	-	-	-	-	1,624.10
Mansker Creek	2,818.29	10.15	-	-	-	-	-	-	-	-	2,808.14
Marrowbone Creek	2,678.99	1.51	-	-	-	-	-	-	-	-	2,677.48
Mill Creek Lower	22,105.01	143.00	-	-	-	3.58	-	20.56	-	-	21,937.86
Mill Creek Upper	11,392.47	142.37	-	-	-	0.17	-	17.63	-	-	11,232.29
Overall Creek	2,283.63	23.69	-	-	-	0.08	-	0.47	-	-	2,259.38
Pages Branch	2,725.07	19.80	-	-	-	0.23	-	1.16	-	-	2,703.88
Percy Priest Lake, Lower	12,104.99	159.34	-	-	-	0.07	-	0.58	-	-	11,945.00
Percy Priest Lake, Upper	8,004.94	120.01	-	-	-	-	-	14.93	-	-	7,870.01
Pond Creek	246.55	-	-	-	-	-	-	-	-	-	246.55
Richland Creek	9,873.34	844.82	-	-	-	1.31	-	4.05	-	-	9,023.16
Sevenmile Creek	12,804.10	143.22	-	-	-	3.03	-	6.75	-	-	12,651.11
South Harpeth River, Lower	1,202.11	3.21	-	-	-	-	-	-	-	-	1,198.90
Stoner Creek	8,403.50	349.44	-	-	-	0.28	-	4.87	-	-	8,048.90
Stones River	6,077.08	55.28	-	-	-	0.06	-	6.55	-	-	6,015.20
Sugartree Creek	2,894.83	54.37	-	-	-	0.03	-	0.73	-	-	2,839.70
Sulphur Creek	556.82	2.15	-	-	-	-	-	-	-	-	554.67
Sycamore Creek	4,481.02	4.61	-	-	-	-	-	0.41	-	-	4,476.00
Whites Creek	11,216.07	374.00	-	-	-	4.84	-	8.11	-	-	10,829.12
Sandy Creek	809.70	3.69	-	-	-	-	-	-	-	-	806.00
All Watersheds	196,677.10	8,652.88	-	-	-	19.77	-	124.04	-	-	187,880.41

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: Total P								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (pounds)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	172.80	-	-	-	-	-	-	-	-	-	172.80
Browns Creek	10,034.84	411.98	-	0.01	175.02	1.20	-	2.11	-	-	9,444.51
Bull Run Creek	517.70	-	-	-	-	-	-	-	-	-	517.70
Cooper Creek	3,843.97	192.88	-	0.00	51.23	0.07	-	-	-	-	3,599.79
Cub Creek	193.47	-	-	-	-	-	-	-	-	-	193.47
Cumberland River	54,610.91	8,198.22	-	0.28	977.57	1.67	-	23.73	-	-	45,409.45
Davidson Branch	2,071.48	41.07	-	0.00	12.81	-	-	-	-	-	2,017.61
Dry Creek	5,353.92	73.69	-	-	55.50	0.21	-	2.66	-	-	5,221.88
Ewing Creek	11,785.90	192.99	-	0.00	149.41	1.05	-	18.52	-	-	11,423.93
Gibson Creek	6,996.95	42.93	-	0.15	55.50	1.38	-	0.58	-	-	6,896.41
Gizzard Branch	1,984.52	33.39	-	-	12.81	-	-	3.12	-	-	1,935.21
Harpeth River	17,025.10	983.42	-	0.00	277.48	0.52	-	4.44	-	-	15,759.25
Indian Creek	544.00	-	-	-	-	-	-	-	-	-	544.00
Island Creek	95.37	-	-	-	-	-	-	-	-	-	95.37
Little Harpeth River	2,786.87	27.58	-	0.04	17.08	-	-	1.51	-	-	2,740.66
Loves Branch	2,644.32	13.17	-	-	17.08	0.09	-	-	-	-	2,613.99
Mansker Creek	4,373.63	20.26	-	0.08	-	-	-	-	-	-	4,353.29
Marrowbone Creek	4,041.25	2.93	-	0.00	-	-	-	-	-	-	4,038.32
Mill Creek Lower	35,765.66	314.74	-	0.38	542.14	3.65	-	31.77	-	-	34,872.98
Mill Creek Upper	17,439.02	252.25	-	0.01	162.22	0.18	-	28.58	-	-	16,995.78
Overall Creek	3,511.00	38.08	-	0.00	8.54	0.08	-	0.82	-	-	3,463.49
Pages Branch	4,467.00	53.28	-	0.00	64.03	0.23	-	1.79	-	-	4,347.66
Percy Priest Lake, Lower	18,779.29	260.14	-	0.00	345.78	0.07	-	1.00	-	-	18,172.29
Percy Priest Lake, Upper	12,374.89	264.32	-	0.01	46.96	-	-	19.94	-	-	12,043.66
Pond Creek	359.78	-	-	-	-	-	-	-	-	-	359.78
Richland Creek	16,361.41	1,300.88	-	0.01	298.82	1.32	-	6.92	-	-	14,753.46
Sevenmile Creek	19,982.28	238.39	-	0.02	320.16	3.08	-	11.75	-	-	19,408.87
South Harpeth River, Lower	1,847.46	4.62	-	0.00	12.81	-	-	-	-	-	1,830.03
Stoner Creek	13,170.26	517.80	-	0.01	256.13	0.29	-	8.49	-	-	12,387.55
Stones River	10,735.70	127.51	-	0.00	166.49	0.06	-	10.79	-	-	10,430.85
Sugartree Creek	4,761.72	90.51	-	0.01	72.57	0.03	-	1.27	-	-	4,597.33
Sulphur Creek	870.03	5.57	-	-	-	-	-	-	-	-	864.46
Sycamore Creek	6,750.52	7.97	-	-	-	-	-	0.71	-	-	6,741.84
Whites Creek	17,649.35	575.16	-	0.00	153.68	4.92	-	12.43	-	-	16,903.16
Sandy Creek	1,242.18	8.11	-	0.00	17.08	-	-	-	-	-	1,216.99
All Watersheds	315,144.55	14,293.82	-	1.03	4,268.85	20.11	-	192.95	-	-	296,367.80

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: Pb								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (pounds)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	7.38	-	-	-	-	-	-	-	-	-	7.38
Browns Creek	69.74	1.71	-	0.00	12.67	-	-	0.78	0.09	-	54.49
Bull Run Creek	8.72	-	-	-	-	-	-	-	-	-	8.72
Cooper Creek	19.98	0.35	-	0.00	3.71	1.84	-	0.03	-	-	14.06
Cub Creek	7.44	-	-	-	-	-	-	-	-	-	7.44
Cumberland River	289.32	51.06	-	0.00	70.75	7.83	-	7.27	0.88	-	151.53
Davidson Branch	16.95	0.23	-	0.00	0.93	-	-	0.12	-	-	15.68
Dry Creek	27.78	0.60	-	-	4.02	-	-	0.52	0.19	-	22.46
Ewing Creek	58.97	1.72	-	0.00	10.81	-	-	4.24	0.19	-	42.01
Gibson Creek	30.97	0.27	-	0.00	4.02	0.92	-	0.20	0.19	-	25.38
Gizzard Branch	14.91	0.31	-	-	0.93	-	-	1.01	-	-	12.67
Harpeth River	74.16	2.13	-	0.00	20.08	-	-	1.82	-	-	50.12
Indian Creek	8.10	-	-	-	-	-	-	-	-	-	8.10
Island Creek	7.64	-	-	-	-	-	-	-	-	-	7.64
Little Harpeth River	17.58	0.21	-	0.00	1.24	-	-	0.75	-	-	15.38
Loves Branch	14.52	0.11	-	-	1.24	-	-	-	-	-	13.17
Mansker Creek	18.29	0.17	-	0.00	-	-	-	-	-	-	18.12
Marrowbone Creek	13.20	0.04	-	0.00	-	-	-	-	-	-	13.16
Mill Creek Lower	190.60	2.85	-	0.00	39.24	1.94	-	4.32	0.19	-	142.08
Mill Creek Upper	63.21	1.33	-	0.00	11.74	8.94	-	8.46	1.08	-	31.66
Overall Creek	18.32	0.19	-	0.00	0.62	-	-	0.97	-	-	16.55
Pages Branch	29.26	0.60	-	0.00	4.63	-	-	0.59	0.04	-	23.39
Percy Priest Lake, Lower	74.16	0.65	-	0.00	25.02	-	-	1.39	-	-	47.10
Percy Priest Lake, Upper	46.33	1.91	-	0.00	3.40	-	-	4.46	0.10	-	36.46
Pond Creek	7.68	-	-	-	-	-	-	-	-	-	7.68
Richland Creek	93.87	10.76	-	0.00	21.63	-	-	2.29	0.04	-	59.15
Sevenmile Creek	86.51	1.11	-	0.00	23.17	-	-	4.34	0.04	-	57.85
South Harpeth River, Lower	12.67	0.02	-	0.00	0.93	-	-	0.49	-	-	11.24
Stoner Creek	61.58	3.84	-	0.00	18.54	-	-	2.88	-	-	36.33
Stones River	67.48	1.07	-	0.00	12.05	-	-	4.04	-	-	50.32
Sugartree Creek	28.81	0.60	-	0.00	5.25	-	-	0.47	-	-	22.49
Sulphur Creek	9.92	0.06	-	-	-	-	-	-	-	-	9.86
Sycamore Creek	20.62	0.04	-	-	-	-	-	0.23	-	-	20.35
Whites Creek	72.19	5.00	-	0.00	11.12	7.06	-	9.79	0.38	-	38.84
Sandy Creek	11.86	0.05	-	0.00	1.24	-	-	-	-	-	10.57
All Watersheds	1,600.73	88.97	-	0.00	308.94	28.53	-	61.45	3.40	-	1,109.43

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: Ni								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (pounds)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	8.88	-	-	-	-	-	-	-	-	-	8.88
Browns Creek	87.72	2.03	-	0.00	8.09	-	-	7.02	-	-	70.58
Bull Run Creek	9.99	-	-	-	-	-	-	-	-	-	9.99
Cooper Creek	17.06	0.28	-	0.00	2.37	-	-	0.38	-	-	14.03
Cub Creek	9.01	-	-	-	-	-	-	-	-	-	9.01
Cumberland River	317.58	88.49	-	0.00	45.18	-	-	83.99	-	-	99.91
Davidson Branch	17.15	0.39	-	0.00	0.59	-	-	1.53	-	-	14.63
Dry Creek	31.78	1.08	-	-	2.57	-	-	8.94	-	-	19.20
Ewing Creek	58.80	2.35	-	0.00	6.91	-	-	67.96	-	-	-
Gibson Creek	28.38	0.54	-	0.00	2.57	-	-	1.52	-	-	23.75
Gizzard Branch	17.26	0.56	-	-	0.59	-	-	7.70	-	-	8.41
Harpeth River	56.83	2.56	-	0.00	12.83	-	-	43.76	-	-	-
Indian Creek	9.76	-	-	-	-	-	-	-	-	-	9.76
Island Creek	9.15	-	-	-	-	-	-	-	-	-	9.15
Little Harpeth River	21.73	0.42	-	0.00	0.79	-	-	7.09	-	-	13.43
Loves Branch	15.76	0.14	-	-	0.79	-	-	-	-	-	14.83
Mansker Creek	21.36	0.31	-	0.00	-	-	-	-	-	-	21.04
Marrowbone Creek	16.20	0.08	-	0.00	-	-	-	-	-	-	16.11
Mill Creek Lower	222.27	4.31	-	0.00	25.06	-	-	163.18	-	-	29.72
Mill Creek Upper	54.68	2.17	-	0.00	7.50	-	-	150.64	-	-	-
Overall Creek	19.27	0.32	-	0.00	0.39	-	-	11.20	-	-	7.36
Pages Branch	31.58	0.75	-	0.00	2.96	-	-	6.76	-	-	21.12
Percy Priest Lake, Lower	74.57	1.56	-	0.00	15.98	-	-	16.27	-	-	40.76
Percy Priest Lake, Upper	67.57	2.65	-	0.00	2.17	-	-	83.26	-	-	-
Pond Creek	9.17	-	-	-	-	-	-	-	-	-	9.17
Richland Creek	91.46	24.35	-	0.00	13.81	-	-	26.40	-	-	26.90
Sevenmile Creek	72.23	2.50	-	0.00	14.80	-	-	34.40	-	-	20.53
South Harpeth River, Lower	15.01	0.03	-	0.00	0.59	-	-	6.35	-	-	8.03
Stoner Creek	48.41	10.61	-	0.00	11.84	-	-	21.48	-	-	4.48
Stones River	74.21	1.47	-	0.00	7.70	-	-	38.58	-	-	26.47
Sugartree Creek	26.13	1.23	-	0.00	3.35	-	-	3.94	-	-	17.61
Sulphur Creek	11.62	0.09	-	-	-	-	-	-	-	-	11.53
Sycamore Creek	21.74	0.09	-	-	-	-	-	1.75	-	-	19.90
Whites Creek	70.80	11.21	-	0.00	7.10	-	-	121.75	-	-	-
Sandy Creek	12.37	0.08	-	0.00	0.79	-	-	-	-	-	11.50
All Watersheds	1,677.50	162.66	-	0.00	197.31	-	-	915.87	-	-	617.78

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: Zn								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (pounds)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	253.10	-	-	-	-	-	-	-	-	-	253.10
Browns Creek	1,469.51	55.41	-	0.00	34.82	82.26	-	-	0.53	-	1,296.49
Bull Run Creek	277.54	-	-	-	-	-	-	-	-	-	277.54
Cooper Creek	475.07	10.53	-	0.00	10.19	120.07	-	-	-	-	334.28
Cub Creek	255.18	-	-	-	-	-	-	-	-	-	255.18
Cumberland River	6,229.69	1,178.31	-	0.00	194.47	601.75	-	-	5.25	-	4,249.91
Davidson Branch	477.90	5.70	-	0.00	2.55	-	-	-	-	-	469.65
Dry Creek	676.52	16.84	-	-	11.04	14.02	-	-	1.13	-	633.49
Ewing Creek	1,312.93	56.48	-	0.00	29.72	72.37	-	-	1.13	-	1,153.23
Gibson Creek	842.59	6.73	-	0.00	11.04	151.22	-	-	1.13	-	672.46
Gizzard Branch	469.64	7.28	-	-	2.55	-	-	-	-	-	459.81
Harpeth River	1,523.77	60.25	-	0.00	55.20	35.91	-	-	-	-	1,372.42
Indian Creek	270.33	-	-	-	-	-	-	-	-	-	270.33
Island Creek	254.84	-	-	-	-	-	-	-	-	-	254.84
Little Harpeth River	490.66	4.90	-	0.00	3.40	-	-	-	-	-	482.37
Loves Branch	365.41	2.88	-	-	3.40	5.82	-	-	-	-	353.31
Mansker Creek	462.90	5.43	-	0.00	-	-	-	-	-	-	457.47
Marrowbone Creek	347.79	0.97	-	0.00	-	-	-	-	-	-	346.82
Mill Creek Lower	4,247.16	89.05	-	0.00	107.85	374.38	-	-	1.11	-	3,674.76
Mill Creek Upper	1,483.33	38.35	-	0.00	32.27	570.50	-	-	6.49	-	835.72
Overall Creek	536.64	4.33	-	0.00	1.70	5.85	-	-	-	-	524.76
Pages Branch	761.17	20.70	-	0.00	12.74	15.82	-	-	0.26	-	711.65
Percy Priest Lake, Lower	1,261.97	12.63	-	0.00	68.78	5.88	-	-	-	-	1,174.68
Percy Priest Lake, Upper	1,069.62	59.30	-	0.00	9.34	-	-	-	0.58	-	1,000.39
Pond Creek	260.69	-	-	-	-	-	-	-	-	-	260.69
Richland Creek	2,068.49	225.20	-	0.00	59.44	91.94	-	-	0.26	-	1,691.64
Sevenmile Creek	1,842.44	25.37	-	0.00	63.69	207.18	-	-	0.26	-	1,545.93
South Harpeth River, Lower	339.78	0.38	-	0.00	2.55	-	-	-	-	-	336.84
Stoner Creek	1,299.71	85.96	-	0.00	50.95	19.34	-	-	-	-	1,143.46
Stones River	1,654.96	32.86	-	0.00	33.12	3.87	-	-	-	-	1,585.12
Sugartree Creek	769.31	13.54	-	0.00	14.44	2.38	-	-	-	-	738.96
Sulphur Creek	304.76	1.93	-	-	-	-	-	-	-	-	302.83
Sycamore Creek	520.42	0.83	-	-	-	-	-	-	-	-	519.59
Whites Creek	1,581.32	105.08	-	0.00	30.57	781.56	-	-	2.25	-	661.86
Sandy Creek	344.99	1.84	-	0.00	3.40	-	-	-	-	-	339.76
All Watersheds	36,802.11	2,129.07	-	0.00	849.20	3,162.13	-	-	20.38	-	30,641.34

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: Cr								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (pounds)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	6.66	-	-	-	-	-	-	-	-	-	6.66
Browns Creek	68.24	1.33	-	0.00	9.00	-	-	7.52	-	-	50.38
Bull Run Creek	8.56	-	-	-	-	-	-	-	-	-	8.56
Cooper Creek	20.80	0.39	-	0.00	2.63	-	-	0.08	-	-	17.69
Cub Creek	6.73	-	-	-	-	-	-	-	-	-	6.73
Cumberland River	280.72	41.27	-	0.00	50.27	-	-	75.42	-	-	113.75
Davidson Branch	17.32	0.18	-	0.00	0.66	-	-	0.32	-	-	16.16
Dry Creek	27.69	0.35	-	-	2.85	-	-	6.50	-	-	17.99
Ewing Creek	61.39	1.14	-	0.00	7.68	-	-	47.98	-	-	4.59
Gibson Creek	31.32	0.15	-	0.00	2.85	-	-	2.07	-	-	26.24
Gizzard Branch	13.14	0.21	-	-	0.66	-	-	11.05	-	-	1.22
Harpeth River	80.21	2.08	-	0.00	14.27	-	-	10.95	-	-	52.91
Indian Creek	7.74	-	-	-	-	-	-	-	-	-	7.74
Island Creek	6.99	-	-	-	-	-	-	-	-	-	6.99
Little Harpeth River	18.43	0.12	-	0.00	0.88	-	-	6.07	-	-	11.35
Loves Branch	16.01	0.09	-	-	0.88	-	-	-	-	-	15.03
Mansker Creek	21.76	0.11	-	0.00	-	-	-	-	-	-	21.65
Marrowbone Creek	16.73	0.02	-	0.00	-	-	-	-	-	-	16.71
Mill Creek Lower	179.86	1.71	-	0.00	27.88	-	-	61.95	-	-	88.31
Mill Creek Upper	69.05	0.87	-	0.00	8.34	-	-	79.70	-	-	-
Overall Creek	19.09	0.15	-	0.00	0.44	-	-	4.83	-	-	13.67
Pages Branch	27.53	0.33	-	0.00	3.29	-	-	5.74	-	-	18.16
Percy Priest Lake, Lower	84.32	0.85	-	0.00	17.78	-	-	6.48	-	-	59.20
Percy Priest Lake, Upper	51.90	1.30	-	0.00	2.41	-	-	48.62	-	-	-
Pond Creek	7.12	-	-	-	-	-	-	-	-	-	7.12
Richland Creek	93.21	6.45	-	0.00	15.37	-	-	22.78	-	-	48.62
Sevenmile Creek	89.72	0.92	-	0.00	16.47	-	-	42.89	-	-	29.44
South Harpeth River, Lower	13.84	0.01	-	0.00	0.66	-	-	1.34	-	-	11.82
Stoner Creek	61.93	2.30	-	0.00	13.17	-	-	30.27	-	-	16.18
Stones River	63.50	0.72	-	0.00	8.56	-	-	37.91	-	-	16.31
Sugartree Creek	27.63	0.40	-	0.00	3.73	-	-	4.65	-	-	18.84
Sulpher Creek	10.10	0.04	-	-	-	-	-	-	-	-	10.07
Sycamore Creek	26.89	0.03	-	-	-	-	-	2.51	-	-	24.35
Whites Creek	82.14	2.95	-	0.00	7.90	-	-	55.15	-	-	16.13
Sandy Creek	11.31	0.04	-	0.00	0.88	-	-	-	-	-	10.40
All Watersheds	1,629.55	66.52	-	0.00	219.54	-	-	572.82	-	-	790.98

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: Cu								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (pounds)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	28.40	-	-	-	-	-	-	-	-	-	28.40
Browns Creek	211.95	5.57	-	0.00	9.32	1.67	-	6.77	0.09	-	188.52
Bull Run Creek	33.23	-	-	-	-	-	-	-	-	-	33.23
Cooper Creek	67.27	1.12	-	0.00	2.73	12.77	-	-	-	-	50.65
Cub Creek	28.66	-	-	-	-	-	-	-	-	-	28.66
Cumberland River	886.15	116.68	-	0.00	52.08	56.14	-	61.88	0.88	-	598.49
Davidson Branch	64.08	0.60	-	0.00	0.68	-	-	-	-	-	62.80
Dry Creek	91.42	1.43	-	-	2.96	0.29	-	4.34	0.19	-	82.21
Ewing Creek	191.89	6.16	-	0.00	7.96	1.46	-	32.12	0.19	-	144.00
Gibson Creek	114.75	0.48	-	0.00	2.96	8.23	-	1.99	0.19	-	100.90
Gizzard Branch	59.50	0.69	-	-	0.68	-	-	10.60	-	-	47.53
Harpeth River	229.24	5.67	-	0.00	14.78	0.73	-	4.06	-	-	204.00
Indian Creek	31.06	-	-	-	-	-	-	-	-	-	31.06
Island Creek	29.28	-	-	-	-	-	-	-	-	-	29.28
Little Harpeth River	64.88	0.36	-	0.00	0.91	-	-	5.15	-	-	58.46
Loves Branch	52.18	0.36	-	-	0.91	0.12	-	-	-	-	50.79
Mansker Creek	67.04	0.51	-	0.00	-	-	-	-	-	-	66.53
Marrowbone Creek	49.00	0.07	-	0.00	-	-	-	-	-	-	48.93
Mill Creek Lower	578.59	8.22	-	0.00	28.88	18.37	-	37.75	0.19	-	485.19
Mill Creek Upper	212.56	3.08	-	0.00	8.64	61.70	-	58.47	1.08	-	79.58
Overall Creek	69.18	0.44	-	0.00	0.45	0.12	-	2.76	-	-	65.41
Pages Branch	99.29	1.79	-	0.00	3.41	0.32	-	4.58	0.04	-	89.14
Percy Priest Lake, Lower	202.23	1.67	-	0.00	18.42	0.10	-	3.46	-	-	178.58
Percy Priest Lake, Upper	147.89	6.13	-	0.00	2.50	-	-	27.17	0.10	-	112.00
Pond Creek	29.50	-	-	-	-	-	-	-	-	-	29.50
Richland Creek	299.41	17.13	-	0.00	15.92	1.85	-	20.05	0.04	-	244.42
Sevenmile Creek	269.38	2.26	-	0.00	17.06	4.26	-	40.58	0.04	-	205.18
South Harpeth River, Lower	44.37	0.03	-	0.00	0.68	-	-	-	-	-	43.66
Stoner Creek	188.28	6.26	-	0.00	13.64	0.40	-	29.32	-	-	138.65
Stones River	230.69	3.51	-	0.00	8.87	0.08	-	33.06	-	-	185.18
Sugartree Creek	102.59	1.10	-	0.00	3.87	0.05	-	4.29	-	-	93.29
Sulphur Creek	37.61	0.20	-	-	-	-	-	-	-	-	37.41
Sycamore Creek	77.56	0.06	-	-	-	-	-	2.41	-	-	75.09
Whites Creek	241.63	7.97	-	0.00	8.19	55.41	-	31.10	0.38	-	138.59
Sandy Creek	42.04	0.18	-	0.00	0.91	-	-	-	-	-	40.94
All Watersheds	5,172.76	199.73	-	0.00	227.41	224.06	-	421.91	3.40	-	4,096.25

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: O&G								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (pounds)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	504.49	-	-	-	-	-	-	-	-	-	504.49
Browns Creek	56,932.79	1,024.62	-	0.13	206.33	-	-	9.17	4.31	4.54	55,683.70
Bull Run Creek	2,151.74	-	-	-	-	-	-	-	-	-	2,151.74
Cooper Creek	12,197.49	192.65	-	0.00	60.39	-	-	0.22	-	-	11,944.23
Cub Creek	580.38	-	-	-	-	-	-	-	-	-	580.38
Cumberland River	213,615.95	37,520.63	-	2.71	1,152.44	-	-	93.64	42.90	2.12	174,801.51
Davidson Branch	9,595.88	172.87	-	0.00	15.10	-	-	0.87	-	-	9,407.04
Dry Creek	19,523.38	357.67	-	-	65.42	-	-	7.96	9.19	-	19,083.13
Ewing Creek	44,847.58	1,204.90	-	0.02	176.14	-	-	60.52	9.19	-	43,396.80
Gibson Creek	21,093.90	144.67	-	1.50	65.42	-	-	2.40	9.19	1.37	20,869.35
Gizzard Branch	9,251.02	211.48	-	-	15.10	-	-	12.65	-	0.92	9,010.87
Harpeth River	46,827.18	1,142.64	-	0.01	327.11	-	-	22.11	-	-	45,335.31
Indian Creek	1,359.31	-	-	-	-	-	-	-	-	-	1,359.31
Island Creek	942.39	-	-	-	-	-	-	-	-	-	942.39
Little Harpeth River	11,125.55	123.50	-	0.36	20.13	-	-	8.05	-	-	10,973.51
Loves Branch	10,866.81	92.14	-	-	20.13	-	-	-	-	-	10,754.54
Mansker Creek	16,329.30	120.44	-	0.81	-	-	-	-	-	-	16,208.06
Marrowbone Creek	11,297.05	18.67	-	0.00	-	-	-	-	-	-	11,278.38
Mill Creek Lower	138,959.64	1,712.09	-	3.67	639.12	-	-	92.23	9.07	8.87	136,494.58
Mill Creek Upper	45,347.93	736.58	-	0.06	191.23	-	-	113.83	52.96	0.48	44,252.79
Overall Creek	10,358.06	130.99	-	0.00	10.06	-	-	8.53	-	-	10,208.47
Pages Branch	16,578.60	297.10	-	0.01	75.49	-	-	7.25	2.15	-	16,196.60
Percy Priest Lake, Lower	54,378.76	896.41	-	0.04	407.63	-	-	11.93	-	-	53,062.75
Percy Priest Lake, Upper	43,293.29	1,253.21	-	0.12	55.36	-	-	64.55	4.77	-	41,915.29
Pond Creek	812.39	-	-	-	-	-	-	-	-	-	812.39
Richland Creek	65,336.35	7,383.67	-	0.06	352.27	-	-	28.76	2.15	-	57,569.44
Sevenmile Creek	56,777.47	985.00	-	0.20	377.44	-	-	50.82	2.15	1.38	55,360.48
South Harpeth River, Lower	6,312.05	11.09	-	0.00	15.10	-	-	3.62	-	-	6,282.24
Stoner Creek	36,279.24	3,073.16	-	0.05	301.95	-	-	34.79	-	-	32,869.28
Stones River	50,795.78	716.30	-	0.04	196.27	-	-	47.03	-	0.86	49,835.28
Sugartree Creek	15,279.25	405.88	-	0.07	85.55	-	-	5.60	-	-	14,782.15
Sulphur Creek	3,623.86	38.89	-	-	-	-	-	-	-	-	3,584.97
Sycamore Creek	19,245.69	30.90	-	-	-	-	-	2.87	-	-	19,211.92
Whites Creek	61,494.34	3,389.52	-	0.04	181.17	-	-	92.30	18.39	-	57,812.92
Sandy Creek	3,481.38	36.84	-	0.04	20.13	-	-	-	-	-	3,424.37
All Watersheds	1,117,396.26	63,424.50	-	9.97	5,032.47	-	-	781.70	166.43	20.54	1,047,960.66

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: TSS								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (pounds)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	6,681.45	-	2,231.77	-	-	-	-	-	-	-	4,449.68
Browns Creek	664,163.80	17,910.29	326,251.67	0.35	52,506.88	-	-	73.68	537.77	566.53	266,316.62
Bull Run Creek	26,413.42	-	2,219.58	-	-	-	-	-	-	-	24,193.84
Cooper Creek	176,639.10	3,907.22	76,521.20	0.01	15,367.87	5.76	-	0.88	-	-	80,836.16
Cub Creek	7,409.73	-	-	-	-	-	-	-	-	-	7,409.73
Cumberland River	2,789,334.49	434,543.44	2,890,096.29	5,199.19	293,270.13	24.47	-	692.67	5,357.53	265.00	-
Davidson Branch	122,174.94	1,993.70	88,079.46	0.01	3,841.97	-	-	3.54	-	-	28,256.26
Dry Creek	248,188.10	4,334.42	129,671.67	741.67	16,648.52	-	-	47.87	1,148.33	-	95,595.62
Ewing Creek	590,172.33	15,597.08	601,369.83	0.06	44,822.95	-	-	368.23	1,148.33	-	-
Gibson Creek	296,686.88	1,876.48	231,507.47	4.15	16,648.52	2.87	-	20.73	1,148.33	171.64	45,306.69
Gizzard Branch	114,814.98	2,548.98	46,323.74	-	3,841.97	-	-	110.01	-	114.83	61,875.45
Harpeth River	715,612.41	20,491.95	392,227.19	1,483.35	83,242.61	-	-	96.27	-	-	218,071.03
Indian Creek	17,298.48	-	3,048.87	-	-	-	-	-	-	-	14,249.60
Island Creek	10,636.02	-	-	-	-	-	-	-	-	-	10,636.02
Little Harpeth River	130,672.52	1,636.75	134,431.36	1.01	5,122.62	-	-	61.16	-	-	-
Loves Branch	133,349.59	1,088.52	43,949.59	-	5,122.62	-	-	-	-	-	83,188.86
Mansker Creek	192,290.67	1,443.57	15,463.88	2.23	-	-	-	-	-	-	175,380.99
Marrowbone Creek	135,315.30	222.77	20,033.81	741.68	-	-	-	-	-	-	114,317.04
Mill Creek Lower	1,776,989.14	25,335.60	943,449.17	10.18	162,643.26	6.06	-	481.19	1,133.06	1,108.03	642,822.58
Mill Creek Upper	657,295.00	11,542.71	1,910,558.07	741.83	48,664.91	27.94	-	728.98	6,614.82	59.53	-
Overall Creek	137,335.28	1,573.64	405,577.58	0.01	2,561.31	-	-	49.89	-	-	-
Pages Branch	221,510.47	6,256.03	176,537.87	5,191.69	19,209.83	-	-	52.00	268.90	-	13,994.15
Percy Priest Lake, Lower	751,490.18	8,653.19	899,370.37	2,225.10	103,733.10	-	-	67.47	-	-	-
Percy Priest Lake, Upper	487,638.94	16,770.27	472,517.73	742.00	14,087.21	-	-	340.02	595.28	-	-
Pond Creek	11,046.59	-	-	-	-	-	-	-	-	-	11,046.59
Richland Creek	882,887.69	59,466.12	608,168.20	741.83	89,645.89	-	-	222.66	268.90	-	124,374.08
Sevenmile Creek	847,330.47	10,088.16	187,268.60	0.57	96,049.17	-	-	430.09	268.89	172.83	553,052.15
South Harpeth River, Lower	76,315.31	108.46	3,329.37	0.01	3,841.97	-	-	14.66	-	-	69,020.85
Stoner Creek	569,460.94	21,221.36	88,596.12	0.15	76,839.34	-	-	302.93	-	-	382,501.04
Stones River	642,267.85	10,334.46	235,375.63	2,225.11	49,945.57	-	-	366.00	-	107.55	343,913.53
Sugartree Creek	225,009.56	4,391.96	205,108.41	0.20	21,771.15	-	-	46.46	-	-	-
Sulpher Creek	42,711.40	490.24	37,063.01	741.67	-	-	-	-	-	-	4,416.47
Sycamore Creek	240,529.44	302.45	854,940.13	-	-	-	-	25.00	-	-	-
Whites Creek	799,058.99	26,609.52	1,365,088.52	8,158.45	46,103.60	22.07	-	526.27	2,296.65	-	-
Sandy Creek	52,022.08	516.16	60,162.56	0.11	5,122.62	-	-	-	-	-	-
All Watersheds	14,798,753.52	711,255.51	13,456,538.74	28,952.63	1,280,655.60	89.16	-	5,128.64	20,786.78	2,565.95	3,375,225.05

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: TDS								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (pounds)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	29,440.47	-	-	-	-	-	-	-	-	-	29,440.47
Browns Creek	2,578,467.94	53,155.75	-	-	-	-	-	531.53	-	-	2,524,780.66
Bull Run Creek	108,798.52	-	-	-	-	-	-	-	-	-	108,798.52
Cooper Creek	645,916.26	19,586.75	-	-	-	-	-	7.10	-	-	626,322.41
Cub Creek	33,567.88	-	-	-	-	-	-	-	-	-	33,567.88
Cumberland River	10,657,265.93	1,594,768.55	-	-	-	-	-	5,962.64	-	-	9,056,534.74
Davidson Branch	437,537.22	7,001.09	-	-	-	-	-	28.59	-	-	430,507.54
Dry Creek	1,016,606.46	10,477.63	-	-	-	-	-	678.94	-	-	1,005,449.90
Ewing Creek	2,259,557.06	33,143.45	-	-	-	-	-	4,827.37	-	-	2,221,586.23
Gibson Creek	1,122,809.29	7,117.71	-	-	-	-	-	137.51	-	-	1,115,554.07
Gizzard Branch	398,930.16	8,429.69	-	-	-	-	-	731.29	-	-	389,769.18
Harpeth River	2,679,382.56	99,638.14	-	-	-	-	-	1,267.88	-	-	2,578,476.54
Indian Creek	87,863.24	-	-	-	-	-	-	-	-	-	87,863.24
Island Creek	36,963.23	-	-	-	-	-	-	-	-	-	36,963.23
Little Harpeth River	568,626.54	6,117.00	-	-	-	-	-	417.43	-	-	562,092.11
Loves Branch	542,511.47	2,347.65	-	-	-	-	-	-	-	-	540,163.83
Mansker Creek	870,717.19	4,690.35	-	-	-	-	-	-	-	-	866,026.84
Marrowbone Creek	698,636.77	646.81	-	-	-	-	-	-	-	-	697,989.96
Mill Creek Lower	7,026,841.09	56,573.01	-	-	-	-	-	7,140.16	-	-	6,963,127.92
Mill Creek Upper	2,687,782.27	34,158.07	-	-	-	-	-	7,090.75	-	-	2,646,533.46
Overall Creek	582,610.81	4,757.67	-	-	-	-	-	362.23	-	-	577,490.90
Pages Branch	826,310.60	9,273.21	-	-	-	-	-	468.14	-	-	816,569.25
Percy Priest Lake, Lower	3,234,871.48	49,522.17	-	-	-	-	-	493.16	-	-	3,184,856.15
Percy Priest Lake, Upper	2,449,509.31	26,869.15	-	-	-	-	-	5,414.39	-	-	2,417,225.76
Pond Creek	54,598.14	-	-	-	-	-	-	-	-	-	54,598.14
Richland Creek	3,168,810.71	200,692.33	-	-	-	-	-	1,674.02	-	-	2,966,444.36
Sevenmile Creek	3,181,362.02	49,054.09	-	-	-	-	-	2,863.01	-	-	3,129,444.92
South Harpeth River, Lower	358,823.60	787.96	-	-	-	-	-	118.47	-	-	357,917.16
Stoner Creek	2,025,248.70	168,907.45	-	-	-	-	-	2,005.38	-	-	1,854,335.88
Stones River	2,287,846.19	22,859.32	-	-	-	-	-	2,769.16	-	-	2,262,217.71
Sugartree Creek	771,452.82	16,729.16	-	-	-	-	-	311.84	-	-	754,411.82
Sulpher Creek	185,090.23	920.59	-	-	-	-	-	-	-	-	184,169.64
Sycamore Creek	1,154,902.68	910.68	-	-	-	-	-	166.18	-	-	1,153,825.82
Whites Creek	3,268,401.35	77,457.66	-	-	-	-	-	4,637.99	-	-	3,186,305.70
Sandy Creek	197,201.33	1,422.39	-	-	-	-	-	-	-	-	195,778.95
All Watersheds	58,235,261.52	2,568,015.46	-	-	-	-	-	50,105.16	-	-	55,617,140.90

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year

Watershed	Baseline	SCM Load ¹	Pollutant: E. coli								Net Pollutant Load from Watershed (ac-ft)
			Removal by MWS Control Measure Implementation during FY24 (MPN e9)								
			Construction Inspection Load ²	Illicit Discharge Load ²	Street Sweeping Load ²	Home Buyout Load ¹	Tree Planting Load ¹	Stream Buffer Load ¹	Industrial Inspection Load ²	Field Screening Load ²	
Back Creek	6,484.66	-	-	-	-	-	-	-	-	-	6,484.66
Browns Creek	228,211.78	15,614.99	-	66.24	3,197.12	0.00	-	0.00	-	-	209,333.42
Bull Run Creek	17,104.88	-	-	-	-	-	-	-	-	-	17,104.88
Cooper Creek	139,009.40	8,960.12	-	1.89	935.74	0.00	-	-	-	-	129,111.65
Cub Creek	6,929.13	-	-	-	-	-	-	-	-	-	6,929.13
Cumberland River	1,656,012.08	210,922.31	-	1,410.07	17,857.09	0.00	-	0.00	-	-	1,425,822.61
Davidson Branch	62,491.38	1,373.74	-	1.89	233.94	-	-	-	-	-	60,881.81
Dry Creek	172,699.37	1,995.00	-	-	1,013.72	0.00	-	0.00	-	-	169,690.65
Ewing Creek	381,733.41	3,432.06	-	11.36	2,729.25	0.00	-	0.00	-	-	375,560.74
Gibson Creek	249,089.87	1,512.09	-	778.66	1,013.72	0.00	-	0.00	-	-	245,785.39
Gizzard Branch	51,956.91	613.32	-	-	233.94	-	-	0.00	-	-	51,109.65
Harpeth River	639,172.09	44,492.17	-	3.79	5,068.61	0.00	-	0.00	-	-	589,607.53
Indian Creek	20,068.40	-	-	-	-	-	-	-	-	-	20,068.40
Island Creek	1,283.05	-	-	-	-	-	-	-	-	-	1,283.05
Little Harpeth River	78,099.42	897.86	-	189.27	311.91	-	-	0.00	-	-	76,700.37
Loves Branch	79,782.99	318.21	-	-	311.91	0.00	-	-	-	-	79,152.87
Mansker Creek	140,672.42	323.04	-	418.67	-	-	-	-	-	-	139,930.72
Marrowbone Creek	139,981.31	56.61	-	1.89	-	-	-	-	-	-	139,922.81
Mill Creek Lower	1,115,709.67	7,211.06	-	1,908.60	9,903.28	0.00	-	0.00	-	-	1,096,686.72
Mill Creek Upper	654,485.83	11,700.35	-	30.28	2,963.19	0.00	-	0.00	-	-	639,792.02
Overall Creek	127,505.74	1,530.07	-	1.89	155.96	0.00	-	0.00	-	-	125,817.81
Pages Branch	143,792.97	781.07	-	3.79	1,169.68	0.00	-	0.00	-	-	141,838.43
Percy Priest Lake, Lower	636,331.64	7,817.46	-	18.93	6,316.26	0.00	-	0.00	-	-	622,178.99
Percy Priest Lake, Upper	383,624.39	8,138.18	-	62.46	857.76	-	-	0.00	-	-	374,565.99
Pond Creek	14,048.62	-	-	-	-	-	-	-	-	-	14,048.62
Richland Creek	511,393.33	26,686.45	-	30.28	5,458.50	0.00	-	0.00	-	-	479,218.09
Sevenmile Creek	731,729.33	6,544.53	-	105.99	5,848.39	0.00	-	0.00	-	-	719,230.42
South Harpeth River, Lower	59,253.15	189.96	-	1.89	233.94	-	-	-	-	-	58,827.37
Stoner Creek	490,782.13	8,339.11	-	28.39	4,678.71	0.00	-	0.00	-	-	477,735.92
Stones River	288,019.54	3,140.08	-	20.82	3,041.16	0.00	-	0.00	-	-	281,817.48
Sugartree Creek	165,244.51	2,894.71	-	37.85	1,325.64	0.00	-	0.00	-	-	160,986.32
Sulphur Creek	27,038.86	73.99	-	-	-	-	-	-	-	-	26,964.87
Sycamore Creek	240,938.05	260.93	-	-	-	-	-	0.00	-	-	240,677.13
Whites Creek	589,029.80	10,698.54	-	22.71	2,807.23	0.00	-	0.00	-	-	575,501.32
Sandy Creek	46,793.55	291.80	-	20.82	311.91	-	-	-	-	-	46,169.01
All Watersheds	10,296,503.67	386,809.80	-	5,178.44	77,978.58	0.00	-	0.00	-	-	9,826,536.85

Based on average annual rainfall conditions: (1) – Accounts for all control measures implemented in watershed thru end of FY (2) – Based on control measures implemented during the fiscal year