



**STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
401 CHURCH STREET
L & C ANNEX 6TH FLOOR
NASHVILLE TN 37243**

December 10, 2010

Dr. Mounir Minkara, PhD, P.E.
Manager, City of Chattanooga MS4
1250 Market St., Ste. 2100
Development Resource Center
Chattanooga, TN 37402

**Subject: Minor Modification of NPDES Permit No. TNS068063
City of Chattanooga MS4
Chattanooga, Hamilton County, Tennessee**

Dear Dr. Minkara:

In accordance with the provisions of "The Tennessee Water Quality Control Act" (Tennessee Code Annotated, Sections 69-3-101 through 69-3-120) your NPDES Permit is hereby modified by the Division of Water Pollution Control. The continuance and/or reissuance of this NPDES Permit is contingent upon your meeting the conditions and requirements as stated therein. This minor modification revises items as described below.

A sentence was missing in the section 3.2.5.2.1 [Runoff Reduction (infiltration or green infrastructure)] of the final permit. This sentence was provided as a part of Mayor Littlefield's comments on the draft permit regarding implementation of Green Infrastructures demonstration projects and it reads:

"The permittee may identify one or more sub-basins within its corporate boundary as a designated green infrastructure solution zone to demonstrate a wide variety of green infrastructure solutions. The projects would show the feasibility of green infrastructure within a geographically and geologically diverse region."

The above sentence was added as a last paragraph in the section 3.2.5.2.1 [Runoff Reduction (infiltration or green infrastructure)].

Section 3.3.6. [Field Sampling and Screening] contains a table, describing Land Use Categories, System and Monitoring Frequency requirements for field sampling and screening. The final permit requires "0.25-mile grid" system for the land use category defined as "All Other Land Uses." The more typical grid system for this category, as agreed during permit negotiations, is a 0.5 mile grid. Consequently, the table in section 3.3.6 was modified as following:

Land Use Categories	System	Frequency
Industrial	0.25-mile grid	Twice per Permit Term
Heavy Commercial	0.25-mile grid	Twice per Permit Term
All Other Land Uses	0.5-mile grid	Twice per Permit Term

A clarification was requested for the following sentence in Section 3.3.4 [Biological Monitoring]:

“Macroinvertebrate sampling will occur during the second (January 1 thru March 31) and fourth (July 1 thru September 30) quarter of each permit year”.

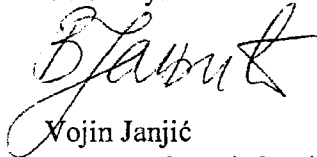
The 2nd and 4th quarters of the new permit year (city’s fiscal year) does not correspond with Jan-Mar and Jul-Sep, respectively. Considering that biological monitoring is planned according to city’s new permit and the fiscal year, this sentence will be modified to read as following:

“Macroinvertebrate sampling will occur during the first (July 1 thru September 30) quarter and third (January 1 thru March 31) quarter of each permit year”.

Please be advised that a petition for permit appeal may be filed, pursuant to T.C.A. Section 69-3-105, subsection (i), by the permit applicant or by any aggrieved person who participated in the public comment period or gave testimony at a formal public hearing whose appeal is based upon any of the issues that were provided to the commissioner in writing during the public comment period or in testimony at a formal public hearing on the permit application. Additionally, for those permits for which the department gives public notice of a draft permit, any permit applicant or aggrieved person may base a permit appeal on any material change to conditions in the final permit from those in the draft, unless the material change has been subject to additional opportunity for public comment. Any petition for permit appeal under this subsection (i) shall be filed with the board within thirty (30) days after public notice of the commissioner’s decision to issue or deny the permit.

If you have questions, please contact the division at the Chattanooga Environmental Field Office at 1-888-891-TDEC; or, at this office, please contact Mr. Vojin Janjic at (615) 532-0670 or by E-mail at Vojin.Janjic@tn.gov.

Sincerely:



Vojin Janjic
Manager, Permit Section

CC: DWPC, Permit Section & Chattanooga Environmental Field Office
Honorable Ron Littlefield Mayor, 1001 Lindsay St., Chattanooga, TN 37402
Ms. Alanna Conley, US EPA Region 4 (Conley.Alanna@epamail.epa.gov)
Mr. Bill Payne, P.E., City Engineer (payne_bill@mail.chattanooga.gov)
Ms. Dana L. Wright, Tennessee Clean Water Network (dana@tcwn.org)
Mr. Jonathan Hagan, Water Quality Manager, City of Chattanooga (hagen_j@mail.chattanooga.gov)
Ms. Stephanie Matheny, Tennessee Clean Water Network (stephanie@tcwn.org)

STATE OF TENNESSEE



NPDES PERMIT

No. TNS068063
(Modified)

Authorization to discharge under the
National Pollutant Discharge Elimination System (NPDES)

Issued By

Tennessee Department of Environment and Conservation
Division of Water Pollution Control
401 Church Street
6th Floor, L & C Annex
Nashville, Tennessee 37243-1534

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.)

Discharger: The City of Chattanooga, Hamilton County, Tennessee

is authorized to discharge stormwater runoff, in accordance with the following stormwater quality management program(s), effluent limitations, monitoring requirements and other provisions as set forth in Parts I through IX herein, from all portions of the MS4, owned or operated by any permittee listed above, to Waters of the State of Tennessee.

This permit shall become effective on: January 1, 2011

This permit shall expire on: November 30, 2015

Issuance date: December 10, 2010


FOR

Paul E. Davis, Director
Division of Water Pollution Control

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NPDES PERMIT FOR DISCHARGES FROM
CITY OF CHATTANOOGA MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)

TABLE OF CONTENTS

1.	Coverage Under this Permit	1
1.1.	Permit Area.....	1
1.2.	Authorization to discharge.....	1
1.3.	Permittee.....	1
1.4.	Responsibilities of Permittee.....	1
1.5.	Types of authorized discharges	2
1.6.	Limitations on Coverage	2
2.	Special Conditions	3
2.1.	Discharges to Water Quality Impaired Waters.....	3
2.2.	Discharges into Waterbodies with EPA-Approved or Established TMDLs.....	4
2.3.	Discharges to Impaired Waterbodies without EPA-Approved TMDLs.....	4
2.4.	Protection of State or Federally Listed Species.....	4
2.5.	Co-permittees and Coordinated Programs.....	5
3.	Stormwater Management Program	6
3.1.	Program Requirements	6
3.2.	Program Elements	7
3.3.	Stormwater Monitoring Program.....	24
3.4.	Qualifying Tribe, State or Local Program (QLP).....	28
3.5.	Reviewing and Updating Stormwater Management Programs.....	28
3.6.	Enforcement Response Plan	30
4.	Monitoring, Recordkeeping, Assessment and Reporting.....	32
4.1.	Analytical monitoring.....	32
4.2.	Non-analytical monitoring.....	33
4.3.	Recordkeeping.....	33
4.4.	Annual Effectiveness Assessment	34
4.5.	Reporting	34
5.	Standard Permit Conditions.....	34
5.1.	Duty to Comply	34
5.2.	Duty to Reapply.....	35
5.3.	Need to Halt or Reduce Activity Not a Defense.....	35
5.4.	Duty to Mitigate	36
5.5.	Duty to Provide Information.....	36
5.6.	Other Information.....	36
5.7.	Signatory Requirements	36
5.8.	Property Rights	37
5.9.	Proper Operation and Maintenance.....	37
5.10.	Inspection and Entry	38
5.11.	Permit Actions.....	38
5.12.	Permit Transfers	38
5.13.	Anticipated Noncompliance	38

5.14.	State Environmental Laws.....	38
5.15.	Severability.....	39
5.16.	Procedures for Modification or Revocation	39
5.17.	Planned Changes	39
6.	Definitions.....	39
7.	APPENDIX A – MS4 Annual Report	1

1. COVERAGE UNDER THIS PERMIT

1.1. Permit Area

This permit covers all areas located within the corporate boundary of The City of Chattanooga, located in Hamilton County, Tennessee.

1.2. Authorization to discharge

Except for discharges prohibited under subpart 1.6 below, this permit authorizes existing or new stormwater point source discharges to waters of the State of Tennessee from those portions of the Municipal Separate Storm Sewer System (MS4) owned or operated by The City of Chattanooga.

1.3. Permittee

The following party is the permittee subject to the limits and conditions of this permit:

The City of Chattanooga, Hamilton County, Tennessee

1.4. Responsibilities of Permittee

The permittee is responsible for the following:

- a. compliance with permit conditions relating to discharges from portions of the MS4 where they are the operator;
- b. implementing the Stormwater Management Program (SWMP) through development of a Stormwater Management Plan (Plan) on portions of the MS4 where they are the owner or operator;
- c. where permit conditions are established for specific portions of the MS4, the permittee need only comply with the permit conditions relating to those portions of the MS4 for which they are the operator;
- d. a plan of action to assume responsibility for implementation of stormwater management and monitoring programs on their portions of the MS4 should inter-jurisdictional agreements allocating responsibility between permittees be dissolved or in default.
- e. submission of annual reporting requirements as specified in part 4;
- f. collection of monitoring data as required by subpart 3.3 below, and according to such agreements as may be established between the permittees; and,
- g. insuring implementation of system-wide management program elements, including any system-wide public education efforts.

Specific permittees are jointly responsible for compliance with the permit on portions of the MS4 where operational authority or authority to implement SWMPs over portions of the MS4 have been transferred from one permittee to another in accordance with legally binding interagency or inter-

jurisdictional agreements. Both the owner and operator are jointly responsible for permit compliance on those portions of the MS4 referenced in such agreements unless specific responsibility provisions have been otherwise outlined in the agreements.

1.5. Types of authorized discharges

1.5.1. Stormwater discharges

This permit authorizes the Chattanooga MS4 to discharge stormwater to waters of the state from the city of Chattanooga MS4, except as excluded in subpart 1.6.

1.5.2. Non-stormwater discharges

The permittee is authorized to discharge the following non-stormwater sources provided that the division has not determined these sources to be substantial contributors of pollutants to the MS4¹:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration (infiltration is defined as water other than wastewater that enters a sewer system, including sewer service connections and foundation drains, from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.)
- Uncontaminated pumped ground water
- Discharges from potable water sources
- Air conditioning condensate
- Irrigation water
- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool discharges
- Street wash water
- Discharges or flows from fire fighting activities

1.6. Limitations on Coverage

This permit does not authorize:

- a. Discharges that are mixed with sources of non-stormwater unless such non-stormwater discharges are:
 - In compliance with an NPDES permit; and
 - Determined not to be a substantial contributor of pollutants to waters of the state.

¹ see 40 C.F.R. § 122.25(d)(2)(iv)(B)(1)

The City of Chattanooga MS4 - Permit Number TNS068063

- b. Stormwater discharges associated with industrial activity, excluding construction activities, as defined in 40 CFR §122.26(b)(14)
- c. Stormwater discharges currently covered under another permit.
- d. Discharge or conduct discharge-related activities that are likely to jeopardize the continued existence of any state or federally listed species or result in the adverse modification or destruction of habitat that is designated as critical under the Endangered Species Act (ESA) or other applicable state law or rule. See sub-part 2.4 for instructions related to evaluating and certifying your status with respect to state or federally listed species.
- e. Discharge or conduct discharge related activities that will cause a prohibited take of federally listed species (as defined under Section 3 of the ESA and 50 CFR §17.3), unless such take is authorized under Sections 7 or 10 of the ESA.
- f. Discharge or conduct discharge-related activities that will cause a prohibited take of state listed species (as defined in the Tennessee Wildlife Resources Commission Proclamation, Endangered or Threatened Species, and in the Tennessee Wildlife Resources Commission Proclamation, Wildlife in Need of Management), unless such take is authorized under the provisions of Tennessee Code Annotated §70-8-106(e)
- g. Discharges that would cause or contribute to an in-stream exceedance of water quality standards. The stormwater management plan must include a description of the best management practices (BMPs) that MS4 will be using to ensure that this will not occur. The division may require a corrective action plan if discharges from the MS4 are determined to cause or contribute to an in-stream exceedance of water quality standards.
- h. Discharges of any pollutant into any water for which a Total Maximum Daily Load (TMDL) has been approved by EPA, where the TMDL establishes a specific wasteload allocation and recommends it be incorporated into an individual NPDES permit.
- i. Discharges of materials resulting from a spill, except emergency discharges required to prevent imminent threat to human health or to prevent severe property damage, provided reasonable and prudent measures have been taken to minimize the impact of the discharges.
- j. Discharges that do not comply with the division's anti-degradation policy for water quality standards, pursuant to the Rules of the Tennessee Department of Environment and Conservation (TDEC), Chapter 1200-4-3-.06, titled "Tennessee Antidegradation Statement."

2. SPECIAL CONDITIONS

2.1. Discharges to Water Quality Impaired Waters

Using the most current EPA-approved 303(d) list published on the division's web site along with the division's GIS mapping tool available on the division's web site (<http://inmap.tn.gov/vpc/>), the permittee must determine whether stormwater discharges from any part of the MS4 contribute pollutants of concern to an impaired waterbody. For those impaired waters, the permittee must determine whether or not a TMDL has been established or approved by EPA. A list of EPA-

Approved TMDLs can be found on the division's web site (<http://www.tn.gov/environment/wpc/tmdl/approved.shtm1>).

Alternatively, the permittee may obtain an electronic copy of the division's GIS files covering the permittee's corporate boundaries for use with the permittee's GIS mapping software to make the required determination.

2.2. Discharges into Waterbodies with EPA-Approved or Established TMDLs

The permittee must implement stormwater pollutant reductions consistent with the assumptions and requirements of any applicable wasteload allocation(s) in TMDLs established or approved by EPA. If an MS4 discharges into a water body with an approved or established TMDL, then the Stormwater Management Program must include BMPs specifically targeted to achieve the wasteload allocations (WLAs) prescribed by the TMDL. The plan must include a schedule for installation of such BMPs. A monitoring component to assess the effectiveness of the BMPs in achieving the wasteload allocations must also be included in the plan. Monitoring can entail a number of activities including but not limited to: outfall monitoring, in-stream monitoring or modeling. Monitoring requirements are further described in part 4 of this permit.

Not later than 6 months following TMDL adoption, the SWMP shall be revised to include BMPs that target pollutants with WLAs as specified in the TMDL. If the source of the impairment has been determined, management measures specific for reducing pollutant of concern from that specified source shall be included.

2.3. Discharges to Impaired Waterbodies without EPA-Approved TMDLs

For discharges containing pollutants of concern into a receiving water which has been listed on the current EPA-approved Section 303(d) list of impaired waters, the permittee must document in the plan how the BMPs will address the discharge of the pollutants of concern, and must demonstrate (through outfall monitoring, in-stream monitoring and/or modeling) that the discharge will not further the impairment. A monitoring component to assess the effectiveness of the BMPs in controlling the discharge of pollutants of concern must also be included in the plan. Monitoring can entail a number of activities including but not limited to: outfall monitoring, in-stream monitoring or modeling. Monitoring requirements are further described in part 4 of this permit.

2.4. Protection of State or Federally Listed Species

The permittee must evaluate annually whether or not stormwater discharges, allowable non-stormwater discharges and discharge-related activities are likely to jeopardize the continued existence of any state or federally listed species or result in the adverse modification or destruction of habitat that is designated as critical under the ESA (critical habitat). To obtain lists by county and watershed for state and federally listed species reference the Department of Environment and Conservation, Resource Management Division (RMD) website at <http://state.tn.us/environment/na/data.shtm1>. Also reference the Fish and Wildlife Service lists. The permittee shall keep documentation of the evaluations and decisions reached through the evaluation. The permittee must include this determination in an annual report.

2.4.1. Evaluation Procedure

The permittee must use the most recent Rare Species County and Watershed Lists (hyperlink to <http://state.tn.us/environment/na/data.shtml>) available from TDEC's Resource Management Division and then follow the process described below to determine whether or not your discharges and/or discharge-related activities are likely to jeopardize the continued existence of any state or federally listed species or result in the adverse modification or destruction of habitat that is designated as critical under the ESA. The permittee must meet one or more of the criteria A through C listed below for the entire term of coverage under the permit.

Criterion A: No state or federally listed species or critical habitat are in proximity to your MS4 or the point where authorized discharges reach the receiving water; or

Criterion B: The permittee have evaluated the effects of your stormwater discharges, allowable non-stormwater discharges and discharge-related activities on state and federally listed species and critical habitat and do not have reason to believe the discharge and/or discharge-related activities will jeopardize the continued existence of any state or federally listed species or result in the adverse modification or destruction of critical habitat.

Such evaluation of the effects of your stormwater discharges on federally listed species may include authorizations and determinations made through consultation with US Fish and Wildlife Service under Sections 7 and 10 of the ESA; however, the permittee must still evaluate effects as well.

Criterion C: Stormwater discharges, allowable non-stormwater discharges and/or discharge-related activities from the MS4 were already addressed in another operator's certification of eligibility include with the MS4's activities. By certifying eligibility, the permittee agrees to comply with any measures or controls upon which the operator's certification was based.

The division may require any permittee or applicant to provide documentation of the their determination of eligibility for this permit where TDEC, Tennessee Wildlife Resources Agency, US Environmental Protection Agency or the US Fish and Wildlife Service, or other regulatory agency otherwise determines that there is a potential impact on a state or federally listed species or a critical habitat.

2.5. Co-permittees and Coordinated Programs

2.5.1. Co-permittees

The permittee may be covered under this Permit No. TNS068063 as a co-permittee with one or more other, neighboring MS4s which are located in the State of Tennessee. Co-permittees may submit a permit application at anytime during the term of this permit.

In order to be permitted as co-permittees, the city of Chattanooga and the other applicants must submit a permit application with a set of BMPs for all co-permittees. Responsible officials of each participating MS4 must sign the application. If measurable goals and implementation milestones vary, each co-permittee must submit its own appendix to the application. "BMP Measurable Goals and Implementation Milestones." The individual stormwater management plans must clearly describe which permittees are responsible for implementing each of the control measures.

Each co-permittee is individually liable for:

The City of Chattanooga MS4 - Permit Number TNS068063

- Permit compliance for discharges within its legal jurisdiction.
- Ensuring that the control measures are implemented for portions of the MS4 where it is the operator and in areas within its legal jurisdiction.
- If any permit conditions are established for specific portions of the MS4, co-permittees need only comply with the permit conditions relating to those portions of the MS4 for which they are the operator.
- Each co-permittee is jointly liable for compliance with annual reporting requirements in part 4, except that a co-permittee is individually liable for any parts of the annual report that relate exclusively to portions of the MS4 where it is the operator.

Specific co-permittees are jointly liable for permit compliance on portions of the MS4 as follows:

- Where operational or SWMP implementation authority over portions of the MS4 has been transferred from one co-permittee to another in accordance with legally binding interagency agreements, both the owner and operator may be jointly liable for permit compliance on those portions of the MS4; and
- Where one or more co-permittees jointly own or operate a portion of the MS4, each owner/operator is jointly liable for compliance with permit conditions on the shared portion of the MS4.

2.5.2. Coordinated Programs

Implementation of one or more of the SWMP elements in subpart 3.2 below may be shared with another entity, or the entity may fully take over the measure. The permittee may rely on another entity only if:

- The particular control measure, or component of that measure, is at least as stringent as the corresponding permit requirement.
- The other entity agrees to implement the SWMP element on the permittee's behalf. Written acceptance of this obligation is expected. This obligation must be included in the plan. If the other entity agrees to report on the control element, the permittee must supply the other entity with the reporting requirements contained in part 4 of this permit. If the other entity fails to implement the control element, then the permittee remains liable for any permit violations related to that failure to implement.

3. STORMWATER MANAGEMENT PROGRAM

3.1. Program Requirements

The permittee must develop, implement, and enforce a SWMP² which is designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP) to protect water quality, and to satisfy the appropriate water quality requirements of the CWA. The SWMP shall

² See 40 C.F.R. § 123.26(d)(2)(iv)

include management practices, control techniques, system design and engineering methods appropriate for the control of pollutants of concern. The permittee must also document all the elements of the SWMP in a stormwater management plan. The plan must include the following information for each of the control measures described in subpart 3.2 below of this permit:

- BMPs and/or processes that the permittee or another entity will implement for each of the SWMP elements;
- The measurable goals for each of the BMPs including, as appropriate, the months and years in which the permittee will undertake required actions, including interim milestones and the frequency of the action; and
- The person or persons responsible for implementing or coordinating the SWMP elements in the plan.

3.1.1. Requirement to Ensure Adequate Resources to Comply with MS4 Permit

3.1.1.1 Secure Resources

The permittee must secure the resources necessary to meet all requirements of this permit.

3.1.1.2 Annual Fiscal Analysis

The permittee shall conduct an annual fiscal analysis of the necessary capital and operation and maintenance expenditures necessary to accomplish the program tasks in part 3 that coincides with permittee's fiscal year (i.e. July 1 – June 30)³. Such analysis shall include a description of the source of funds that are proposed to meet the necessary expenditures, including legal restrictions on the use of such funds. A summary of the fiscal analysis will be included in the next annual report following the end of the permittee's fiscal cycle (e.g., If the annual report is due in March 2012, the fiscal analysis will cover FY 2011 ending on June 30, 2011).

3.2. Program Elements

The permittee shall implement the control measures contained in this subpart.

3.2.1. Public Education and Outreach

The permittee shall continue to implement its public education and outreach program. The focus of the program shall continue to be on impacts of stormwater discharges to water bodies and the steps that the public can take to reduce pollutants in stormwater runoff. The program must target specific pollutants and sources that may cause or contribute to impairment. For example, in certain areas known as hot areas, the permittee must focus education and outreach on those particular pollutants of concern. Some educational programs can lend themselves to water quality improvements. Permittee is encouraged to pursue those programs and document related or expected water quality improvements. The plan must outline how the permittee will target illicit discharges; pesticides, herbicides, and

³ See 40 C.F.R. § 122.26(d)(2)(vi)

fertilizer applicators; and construction site operators (e.g., brochures, signage, and community events, etc.).⁴

The permittee shall track and maintain records of public education and outreach activities. A summary of this information shall be included in the annual report.

3.2.2. Public Involvement/Participation

The permittee shall continue to implement its public participation program of its SWMP and shall detail the elements of its program in the plan (e.g., stream clean-up events, storm drain stenciling, etc.). The plan shall facilitate opportunities and include for public notice of program participation opportunities, participation in local stormwater management workgroups, recruiting education volunteers, riparian plantings or stream clean-up events, and in programs such as illicit discharge identification and elimination (e.g. storm drain marking program). The plan should provide for the public notice requirements for each type of public participation activity, which may vary under the specific circumstances (e.g. publication in a newspaper, web site notification, etc.).⁵

The permittee may develop a website that includes information that will inform stakeholders of actions that will result in behavior changes that will improve water quality, provide a press release or advertisement of activities to local cable networks, radio stations and/or newspapers, or other alternate method that provides an effective equivalent.

The permittee shall track and maintain records of public involvement and participation activities. A summary of this information shall be included in the annual report.

3.2.3. Illicit Discharge Detection and Elimination

The permittee shall develop, implement and enforce an illicit discharge detection and elimination program. The permittee shall continue to implement the existing illicit discharge detection and elimination program.

The permittee shall effectively prohibit, through ordinance, or other regulatory mechanism, non-stormwater discharges into the storm sewer system and implement an appropriate Enforcement Response Plan (ERP). The ERP must be developed within 18 months of coverage under this permit.

Develop and implement a plan to detect and eliminate non-stormwater discharges, including illegal disposal, to your system:

Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste; and

Address the following categories of non-stormwater discharges or flows as illicit discharges only if the permittee identifies them as significant contributors of pollutants to your MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats

⁴ See 40 C.F.R. § 122.26(d)(2)(iv)(A)(6), 40 C.F.R. § 122.26(d)(2)(iv)(B)(5, 6), and 40 C.F.R. § 122.26(d)(2)(iv)(D)(4)

⁵ See 40 C.F.R. § 122.26(d)(2)(iv)

The City of Chattanooga MS4 - Permit Number TNS068063

and wetlands, dechlorinated swimming pool discharges, and street wash water (discharges or flows from fire fighting activities are excluded from the effective prohibition against non-stormwater and need only be addressed where they are identified as significant sources of pollutants to waters of the state).

The permittee must be able, by ordinance or other regulatory mechanism, to prohibit contamination of stormwater runoff from hot areas. The ordinance must allow for penalties as specified in TCA 68-221-1106.

The permittee shall develop a mechanism for the public to report (e.g., via hotline or website), suspected illicit discharges. The permittee shall specify within the ERP the timeframe for complaint investigation. Documented illicit discharges shall be eliminated as soon as possible, following the timeframes and procedures outlined in the plan.

The permittee shall investigate and analyze the types and causes of spills and develop spill prevention procedures/guidance responsive to the types and causes previously identified. The permittee shall require SPCC and/or SWPPP plans for industries previously identified as having spills or fugitive releases.

The permittee shall identify in the plan opportunities for interagency coordination of hazardous waste or material spills response and cleanup. The permittee must coordinate with the TEMA (Tennessee Emergency Management Agency), local county emergency management agency, local fire departments and other agencies that respond to accidents and spill incidents with potential stream impacts. The permittee shall coordinate with these agencies to develop a program that minimizes the potential for their response to spills of chemicals or hazardous materials to cause pollutants to enter waters of the state. The permittee shall provide stormwater system and receiving water mapping to Emergency Preparedness officials for the identification of downstream risk areas. The permittee must identify industries with stores of hazardous chemicals, explosives, and water priority chemicals.

3.2.3.1 MS4 Mapping

The permittee must maintain an up-to-date and accurate storm sewer system map that shows the location of all known outfalls where the municipal storm sewer system discharges into waters of the state. The system map shall also identify known conveyances crossing the permittee's corporate boundary. The storm sewer system map must be available onsite for review by the permitting authority. The storm sewer system map must show the following, at a minimum:

- The location of all known MS4 outfalls and drainage areas contributing to those outfalls that are operated by the permittee, and that discharge within the permittee's jurisdiction to a receiving water;
- The location (and name, where known to the permittee) of all waters receiving discharges from those major outfall pipes. Each mapped outfall must be given an individual alphanumeric identifier, which must be noted on the map. When possible, the outfalls must be located using a geographic position system (GPS) and photographs should be taken to provide baseline information and track operation & maintenance needs over time.
- Inputs into the storm sewer system, such as the inlets, catch basins, drop structures or other defined contributing points to the storm sewer system serving that outfall.
- The location and condition of major structural controls (retention basins, detention basins, major infiltration devices, etc.)

- General direction of stormwater flow.
- Hot areas identified under section 3.2.3 above;
- Monitoring locations identified under subparts 4.1 below and 4.2 below.

3.2.3.2 Illicit Discharge Education & Training

The permittee must continue to implement a training and education program for all municipal field staff that, as part of their normal job responsibilities, administer the illicit discharge and illicit connection detection program, and shall also detail the components of its program in the plan. Contact information, including the procedure for reporting an illicit discharge, must be included in the permittee's fleet vehicles that are used by field staff. Training program documents must be available for review by the permitting authority.

By no later than 6 months following the effective date of this permit, the permittee must train all staff identified in paragraph above on the identification of an illicit discharge or connection, and on the proper procedures for reporting and responding to the illicit discharge or connection. Follow-up training must be provided as needed to address changes in procedures, techniques, or staffing. The permittee must document and maintain records of the training provided and the staff trained.

3.2.3.3 Field screening program

The permittee shall continue to implement and make necessary improvements to its ongoing program to determine whether non-stormwater entries are present in the storm drainage system, and to identify locations and sources of non-stormwater. Specifically, the permittee shall:

- Update map for current industrial and high-density commercial land use based on current zonings
- Prioritize areas for inspection and monitoring based on previous field screening results, spills, complaints, etc.
- Update illicit discharge identification procedures
- Identify potential discharges to MS4 or "Waters of the State"

3.2.3.4 Limitation of Sanitary Sewer Seepage

The permittee shall continue to develop and implement a program to reduce and eliminate the inflow, infiltration and discharge of sanitary sewage into the stormwater system and community waters. Corrective actions must follow an order of priority, as described in the plan. Field screening procedures, as described in 3.2.3.3, shall include tests to indicate the presence of any sanitary wastes. The locations of known sanitary sewer leaks to storm sewer shall be included in the Annual Report.

3.2.4. Construction Site Stormwater Runoff Control

The permittee shall continue to implement and enforce its existing construction site stormwater runoff control program, including detailing the following elements in the plan⁶: 1) A description of requirements for structural and non-structural BMPs, 2) procedures for identifying priorities for inspecting construction sites and enforcing control measures which consider, for example, the nature of construction activity and the characteristics of soils and receiving water quality; and 3) educational and training measures for construction site operators. The permittee must have any updates to the program completed within 24 months of the effective date of the current Construction Site Stormwater Runoff Control

⁶ See 40 C.F.R. § 122.26(d)(2)(iv)(D)

The City of Chattanooga MS4 - Permit Number TNS068063

General Permit. The program must address pollutants in stormwater runoff from construction activities that result in a land disturbance of or equal to or greater than one acre. Reduction of pollutants discharged from construction activity disturbing less than one acre must be included if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. The city must include the development and implementation of, at a minimum:

An ordinance or other regulatory mechanism to require erosion prevention and sediment controls, as well as sanctions to ensure compliance: The ordinance must allow for penalties as specified in TCA 68-221-1106. Modifications to ordinances or other regulatory mechanisms for the construction site runoff control program are to be consistent with requirements of the current NPDES general permit for construction stormwater runoff and must be implemented within 24 months of the effective date of the current effective Tennessee Construction General Permit.

Requirements for construction site operators to implement appropriate erosion prevention and sediment control best management practices: The MS4's EPSC requirements shall be consistent with those described in the TDEC EPSC Handbook.

The MS4's requirements for design storm and special conditions for impaired waters or exceptional Tennessee waters must be consistent with those of the current effective Tennessee Construction General Permit (TNR100000).

The permittee must maintain an inventory of all active public and private construction sites that result in a total land disturbance as defined in this section. The inventory must contain relevant contact information for each project (e.g., tracking number, name, address, phone, etc.), the size of the project and area of disturbance, whether the project has submitted for permit coverage under the Tennessee Construction General Permit (TNR100000) and the date the permittee approved the site plan. The permittee must make this inventory available to TDEC upon request.

Requirements for construction site operators to control waste materials: The permittee must require that operators control wastes such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site to avoid adverse impacts to water quality.

Specific procedures for site plan (including erosion prevention and sediment controls) review and approval: The permittee procedures must include an evaluation of plan completeness and overall BMP effectiveness.

Procedures for managing public input on projects: The permittee must have mechanisms for public access to information on projects and receiving and considering comments from the public on those projects. It is recommended that the permittee uses the world wide web for facilitating public involvement.

Procedures for site inspection and enforcement: The permittee must have procedures in place for its inspectors to evaluate construction site compliance. The ERP must include specific enforcement steps to ensure construction sites are in compliance with the MS4's program.

MS4 staff training: Inspectors must maintain certification under the Tennessee Fundamentals of Erosion Prevention and Sediment Control. Level 1. Site plan reviewers must receive a certificate of completion from the Tennessee Erosion Prevention and Sediment Control Design Course. Level 2. It is recommended that MS4 staff receive training under both courses.

The MS4 program must provide for the following:

- Identification of Priority construction activity ;
- Pre-construction meetings with construction-site operators for Priority construction activity ; and
- Inspections by the permittee of priority construction sites at least once per month.
- Inspections of non-priority construction sites on a quarterly basis

3.2.4.1 Construction Site Operator Education & Public Involvement

The permittee must develop and distribute educational materials to construction site operators by considering the following:

- a. Each year of the permit, the permittee must either provide information on existing training opportunities or co-sponsor with other agencies training for construction operators on control measure selection, installation, implementation, and maintenance as well as overall program compliance.
- b. The permittee must develop or utilize existing outreach tools (i.e. brochures, posters, website, plan notes, manuals etc.) aimed at educating construction operators on appropriate selection, installation, implementation, and maintenance of stormwater controls, as well as overall program compliance.
- c. The permittee must make available appropriate outreach materials to construction operators who will be disturbing land within the MS4 boundary. The permittees' contact information and website must be included in these materials.
- d. The permittee must include information on appropriate selection, installation, implementation, and maintenance of controls, as well as overall program compliance, on the permittee's existing website.

The permittee must adopt and implement procedures for receipt and consideration of information submitted by the public regarding construction projects. This includes, but is not limited to, the public reporting mechanisms described in 3.2.2 above. The permittee must provide public notice for all public projects (owned by the permittee) that have planned disturbance greater than or equal to an acre. It is recommended that the permittee hold public meetings for all public projects (owned by the permittee) that have generated significant public interest.

3.2.5. Permanent Stormwater Management in New Development and Redevelopment

3.2.5.1 Permit requirements

The permittee shall include in the plan a description of planning procedures including a comprehensive master program to develop, implement, and enforce controls to reduce the discharge of pollutants from the MS4 which receive discharges from areas of new development and significant redevelopment⁷. The program shall address permanent (post-construction) stormwater runoff management from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development

⁷ See 40 C.F.R. § 122.26(d)(2)(iv)(A)(2)

The City of Chattanooga MS4 - Permit Number TNS068063

or sale, that discharge into the MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts.

Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for your community.

Develop and implement a set of requirements to establish, protect and maintain water quality buffer along all streams at new development and redevelopment projects.

Use an ordinance or other regulatory mechanism to address permanent runoff from new development and redevelopment projects. The city's ordinance must allow for penalties as specified in TCA 68-221-1106. Revisions to ordinances or other regulatory mechanisms to accommodate permanent stormwater management must be implemented within 48 months of the effective date of this permit.

Develop a strategy to ensure adequate long-term operation and maintenance of permanent BMPs.

3.2.5.2 Performance Standards

The permittee must implement and enforce permanent stormwater controls that are comprised of runoff reduction and pollutant removal. Runoff reduction is the preferred control practice as it can achieve both volume control and pollutant removal. If runoff reduction and/or pollutant removal cannot be fully accomplished on-site per 3.2.5.2.1 and 3.2.5.2.2, then the permittee may propose off-site mitigation and/or payment into a fund for public stormwater projects.

The permittee must develop and apply criteria for determining the circumstances under which these alternatives will be available. A determination that standards cannot be met on site may not be based solely on the difficulty or cost of implementing measures, but must include multiple criteria that would rule out an adequate combination of infiltration, evapotranspiration and reuse such as: lack of available area to create the necessary infiltrative capacity; a site use that is inconsistent with capture and reuse of stormwater; physical conditions that preclude use of these practices.

3.2.5.2.1 *Runoff Reduction (infiltration or green infrastructure)*

Within 24 months of the effective date of the permit, the permittee shall develop site design standards for all new development and redevelopment. These standards shall require, in combination or alone, management measures that are designed, built and maintained to infiltrate, evapotranspire, harvest and/or use, at a minimum, the first inch of every rainfall event preceded by 72 hours of no measurable precipitation. This first inch of rainfall must be 100% managed with no discharge to surface waters. For all new and redevelopment on private property, the permittee may opt to have controls installed on that private property, in the public right-of-way, or a combination of both. While developing the site design standards, the permittee may identify one or more sub-basins within its corporate boundary as a designated green infrastructure area to demonstrate a wide variety of green infrastructure solutions. The projects would show the feasibility of green infrastructure within a geographically and geologically diverse region.

Additionally, no later than two years following permit issuance, the permittee shall develop and include in the plan an incentive program to increase the use of green infrastructure while allowing flexibility for developers and designers to meet development standards. The Incentive Program could use methods such as a scoring system, credit system or other similar methods to encourage green technology practices such as bioretention areas, permeable paving, green roofs, vegetated walls, preservation of existing trees, and covering paved surfaces with vegetation.

Limitations to the application of runoff reduction requirements include, but are not limited to:

- Where a potential for introducing pollutants into the groundwater exists, unless pretreatment is provided;
- Where pre-existing soil contamination is present in areas subject to contact with infiltrated runoff;
- Presence of sinkholes or other karst features.
- Pre-development infiltrative capacity of soils at the site must be taken into account in selection of runoff reduction management measures.

The permittee may develop a program to allow for incentive standards for redeveloped sites. The permittee may provide a 10% reduction in the volume of rainfall to be managed for any of the following types of development. Such credits are additive such that a maximum reduction of 50% of the standard in the paragraph above is possible for a project that meets all 5 criteria:

- Redevelopment;
- Brownfield redevelopment;
- High density (>7 units per acre);
- Vertical Density, (Floor to Area Ratio (FAR) of 2 or >18 units per acre); and
- Mixed use and Transit Oriented Development (within ½ mile of transit).

The permittee may identify one or more sub-basins within its corporate boundary as a designated green infrastructure solution zone to demonstrate a wide variety of green infrastructure solutions. The projects would show the feasibility of green infrastructure within a geographically and geologically diverse region.

3.2.5.2.2 Pollutant Removal

For projects that cannot meet 100% of the runoff reduction requirement unless subject to the incentive standards, the remainder of the stipulated amount of rainfall must be treated prior to discharge with a technology documented to remove 80% total suspended solids (TSS). The treatment technology must be designed, installed and maintained to continue to meet this performance standard.

3.2.5.2.3 Off-site mitigation

The permittee may allow runoff reduction measures to be implemented at another location within the same USGS 12-digit hydrologic unit code (HUC) as the original project, pursuant to the requirements found in this section. Off-site mitigation must be for 1.5 times the amount of water not managed on site. The off-site mitigation location (or alternative location outside the 12-digit HUC) and runoff reduction measures must be approved by the MS4. The permittee shall identify priority areas within the watershed in which mitigation projects can be completed. The permittee must create an inventory of appropriate mitigation projects, and develop appropriate institutional standards and management systems to value, evaluate and track transactions. Mitigation can be used for retrofit or redevelopment projects, but should be avoided in areas of new development.

3.2.5.2.4 Payment into Public Stormwater Project Fund

For projects that cannot meet 100% of the runoff reduction and pollutant removal standards, and cannot provide for off-site mitigation, the permittee may allow the owner to make payment in a public

stormwater project fund established by the MS4. Payment into a public stormwater fund must be at a minimum 1.5 times the estimated cost of on-site runoff reduction controls.

3.2.5.3 Codes and Ordinances Review and Update

Within two years of the permit effective date, the permittee shall review local codes and ordinances using the EPA Water Quality Scorecard (the scorecard). A completed copy of the scorecard shall be submitted with the subsequent annual report.

The permittee shall update codes and ordinances, if necessary, within 4 years of permit effective date. The permittee shall continue to implement existing permanent Stormwater Management Program until the codes and ordinances review and update is completed.

The permittee should consider making revisions to policies, codes and ordinances that will achieve "the greatest improved protection of receiving waters." The permittee shall review and change, where necessary, building codes or other local regulations, such as covenants, codes, ordinances, and restrictions. For example, green roofs; infiltration approaches such as rain gardens, curb extensions, planter gardens, permeable and porous pavements; water harvesting devices such as rain barrels and cisterns; and downspout disconnection, are critical infiltration, evapotranspiration and capture and use measures. The permittee shall ensure that a reasonable suite of these types of practices is implemented, and encourage use of new options. If the permittee decides to significantly limit the number of options, they must justify this limitation by demonstrating that the performance standard can be met with the limited set of management measures allowed.

3.2.5.4 Plan Review, Approval and Enforcement

The permittee shall develop project review, approval and enforcement procedures. The review, approval and enforcement procedures shall apply at a minimum to all projects requiring a construction general permit and be detailed in the Enforcement Response Plan (see subpart 3.6) developed by the permittee, and shall include:

- procedures for site plan review and approval that include inter-departmental consultations, and a re-submittal process when an owner requests changes to an approved stormwater management plan,
- the site plan review must specifically address how the project applicant meets the performance standards in paragraph 3.2.5.2 and how the project will ensure long-term maintenance as required in paragraph 3.2.5.5,
- a verification process to ensure that permanent stormwater BMPs have been installed per design specifications. that includes enforceable procedures for bringing noncompliant projects into compliance.

3.2.5.5 Maintenance Agreements

All stormwater BMPs, including BMPs used at mitigation projects, installed and implemented to meet the performance standards of sub-section 3.2.5.2 must be maintained in perpetuity. The permittee must ensure the long-term maintenance of these stormwater BMPs through a local ordinance or other enforceable policy.

The permittee must require the owner or operator of any site subject to the performance standards in paragraph 3.2.5.2 to develop and implement a maintenance agreement (or an equivalent document ensuring compliance with this sub-section) addressing maintenance requirements for any BMPs, including off-site mitigation. The agreement must allow the permittee, or its designee, to conduct inspections of the stormwater BMPs and also account for transfer of responsibility in leases and/or deeds. When inadequacies are discovered, the permittee shall promptly notify the BMP owner or operator of any deficiencies. The BMP owner must initiate corrective action within 30 days of the notice.

The agreement must also allow the permittee, or its designee, to perform necessary maintenance or corrective actions neglected by the property owner/operator, and bill or recoup costs from the property owner/operator when the owner/operator has not performed the necessary maintenance within 30 days of notification by the permittee or its designee. The permittee must conduct subsequent inspection (or obtain sufficient written and photographic evidence) to ensure completion of all required repairs.

Where practices are on public property or within public rights-of way the MS4 must document, e.g., with photos, maintenance logs, contractor invoices, and in the tracking system, that appropriate maintenance and/or repairs have been completed.

Nothing in this section shall be construed to preclude a property owner or operator from relocating or modifying an installed BMP. The modified or relocated BMPs must be maintained pursuant to the requirements of this section.

3.2.5.5.1 Verification of maintenance responsibilities

The permittee must require that property owners or operators of any sites subject to the performance standards in sub-section 3.2.5.2 provide verification of maintenance for the approved stormwater BMPs used to comply with the performance standards. Verification must include one or more of the following as applicable:

- The owner/operator's signed statement accepting responsibility for maintenance with a provision for transferring maintenance responsibility if the property is legally transferred to another party; and/or
- Written conditions in the sales or lease agreement that require the recipient to assume responsibility for maintenance; and/or
- Written project conditions, covenants and restrictions for residential properties assigning maintenance responsibilities to a home owner's association, or other appropriate group, for maintenance of runoff reduction and pollutant reduction stormwater BMPs; and/or
- Any other legally enforceable agreement that assigns permanent responsibility for maintenance of runoff reduction and pollutant reduction stormwater BMPs, including, but not limited to a BMP permit tracking system developed by the permittee.

3.2.5.6 Inventory and Tracking of Management Practices

The permittee shall develop a system, or modify an existing system as necessary, within 180 days of the effective date of this permit, designed to track BMPs deployed at new development and

redevelopment projects. Tracking of BMPs shall begin during the plan review and approval process with an electronic database or geographic information system (GIS). The database or tracking system shall include information on both public and private projects that are within the jurisdiction of the MS4. In addition to the standard information collected for all projects (such as project name, owner, location, start/end date, etc.), the tracking system shall also include:

- Short description of each stormwater BMPs (type, number, design or performance specifications);
- Latitude and longitude coordinates of controls;
- Maintenance requirements (frequency of required maintenance and inspections) and
- Inspection information (date, findings, follow up activities, prioritization of follow-up activities, compliance status).

3.2.5.7 Owner/Operator Inspections

In order to ensure that all stormwater BMPs are operating correctly and are properly maintained, the permittee shall, at a minimum, require the following:

The owner/operator shall perform routine inspections to ensure that the BMPs are properly functioning. These inspections shall be conducted on an annual basis, at a minimum, and shall entail visual observations of the BMP performance. These inspections shall be conducted by a person familiar with control measures implemented at a site. Owners or operators shall maintain documentation of these inspections. The permittee may require submittal of this documentation.

The owner/operator shall have comprehensive inspections conducted of all stormwater management facilities and practices. These inspections shall be conducted once every five years, at a minimum. Such inspections must be conducted by either a professional engineer or landscape architect. Complete inspection reports for these five year inspections shall include:

- Facility type,
- Inspection date,
- Latitude and longitude and nearest street address,
- BMP owner information (e.g., name, address, phone number, fax, and email),
- A description of BMP condition including: vegetation and soils; inlet and outlet channels and structures; embankments, slopes, and safety benches; spillways, weirs, and other control structures; and any sediment and debris accumulation,
- Photographic documentation of BMPs, and
- Specific maintenance items or violations that need to be corrected by the BMP owner along with deadlines and reinspection dates.

Owners or operators shall maintain documentation of these inspections. The permittee may require submittal of this documentation.

3.2.5.8 BMP Maintenance

Through a local ordinance or other enforceable policy the permittee shall outline in the plan a program for enforcing proper BMP operation and maintenance. The plan shall require, at a minimum,

BMP owners to maintain, and promptly repair as necessary, all structural BMPs. Where practices are on public property or within public rights-of way the permittee must document, e.g., with photos, maintenance logs, contractor invoices, and in the tracking system, that appropriate maintenance and/or repairs have been completed.

3.2.5.9 Watershed Protection

When the permittee revises any of its urban development or community plan(s), effective water quality and watershed protection elements that require implementation of consistent water quality protection measures for new development and redeveloped sites must be considered and included. Examples of water quality and watershed protection elements to be considered include the following:

- Minimize the amount of impervious surfaces (roads, parking lots, roofs, etc.) within each watershed, by minimizing the creation, extension and widening of parking lots, roads and associated development.
- Preserve, protect, create and restore ecologically sensitive areas that provide water quality benefits and serve critical watershed functions. These areas may include, but are not limited to; riparian corridors, headwaters, floodplains and wetlands.
- Implement management practices that prevent or reduce thermal impacts to streams, including requiring vegetated buffers along waterways, and disconnecting discharges to surface waters from impervious surfaces such as parking lots.
- Prevent disturbances of natural waterbodies and natural drainage systems caused by development, including roads, highways, and bridges.
- Avoid development in areas that are particularly susceptible to erosion and sediment loss.
- Implement standards to protect trees, and other vegetation with important evapotranspirative qualities.
- Implement policies to protect native soils, prevent topsoil stripping, and prevent compaction of soils.
- Implement water conservation policies that will reduce both stormwater and non-stormwater discharges via storm sewer systems.
- Implement policies that encourage stormwater practices close to the source of the runoff rather than downstream and lower in the watershed.

3.2.6. Pollution Prevention/Good Housekeeping for Municipal Operations

The permittee must develop and implement an operation and maintenance program that has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

The program must include employee training to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance.

The permittee must consider the following in developing the program: maintenance activities, maintenance schedules, and long-term inspection procedures for structural and non-structural stormwater controls to reduce floatable and other pollutants discharged from the MS4's separate storm sewers; controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations and snow disposal areas operated by the MS4, landfills and solid waste facilities and waste transfer stations; procedures for properly disposing of

waste removed from the separate storm sewers and areas listed above (such as dredge spoil, accumulated sediments, floatable, and other debris); and ways to ensure that new flood management projects assess the impacts on water quality and examine existing projects for incorporating additional water quality protection devices or practices. Operation and maintenance must be an integral component of all Stormwater Management Programs.

3.2.6.1 Separate Storm Sewer System Maintenance Activities

3.2.6.1.1 *MS4 drainage structure maintenance*

Assessment/prioritization of drainage structures⁸ – The permittee must assign a priority to each municipally owned drainage structure within its jurisdiction as follow:

- Priority A – Drainage structures that are designated as consistently generating the highest volumes of trash and/or debris
- Priority B – Drainage structures that are designated as consistently generating moderate volumes of trash and/or debris
- Priority C – Drainage structures that are designated as generating low volumes of trash and/or debris

The plan must provide for utilizing information compiled from citizen complaints/reports to help in the determination of the appropriate priority level. The prioritization shall be included in the plan and will consider criteria such as the amount of trash/debris, type of trash/debris, frequency of backups, and potential danger to public health and safety. Inspection and maintenance frequency for drainage structures shall be included in the Stormwater Management Plan. The frequency of inspections and maintenance shall be adjusted as necessary. Documentation of such adjustments and accompanying rationale shall be maintained in the Stormwater Management Plan.

3.2.6.1.2 *Drainage structure inspection and cleaning*

Based on the priorities assigned in paragraph 3.2.6.1.1 above, the permittee must inspect and clean drainage structures. The permittee must document the prescribed cleaning frequency in the plan. The permittee must document that it has performed all required drainage structure cleanings in a log that is to be made available for review by the division upon request.

3.2.6.1.3 *Catch basin labeling*

The permittee must develop a plan to ensure that each catch basin includes a legible stormwater awareness message (e.g., a label, stencil, marker, or pre-cast message such as “drains to the creek” or “only rain in the drain”). The permittee must include timeframes in the plan for marking new structures, existing structures with no labels and re-labeling structures where the message has become illegible or is missing.

⁸ Such as, but not limited to: catch basins, open channels, and other structures serving the purpose of collecting and conveying stormwater runoff.

3.2.6.1.4 Disposal of waste materials

The permittee must develop a procedure to dewater and dispose of materials extracted from catch basins. This procedure must ensure that water removed during the catch basin cleaning process and waste material will not reenter the MS4.

3.2.6.1.5 Proper management and disposal of oil and toxic materials

The permittees shall effectively prohibit the discharge or disposal of used motor vehicle fluids and household hazardous wastes and other toxic materials into the MS4. To satisfy the requirements of this item, the permittees shall educate the public on the correct disposal of these wastes.

3.2.6.2 Municipal activities and operations

3.2.6.2.1 Assessment of municipal activities and operations

The permittee must outline in the plan a comprehensive O&M activity assessment that will be conducted by end of year 2. After completion of the comprehensive O&M assessment, the permittee shall review annually O&M activities. The following municipal O&M activities must be evaluated and may be included as applicable in this assessment for their potential to discharge pollutants in stormwater:

- Road and parking lot maintenance, including pothole repair, pavement marking, sealing, and re-paving;
- Bridge maintenance, including re-chipping, grinding, and saw cutting;
- Cold weather operations, including plowing, sanding, and application of deicing compounds and maintenance of snow disposal areas;
- Right-of-way maintenance, including mowing, herbicide and pesticide application, and planting vegetation;
- Municipally-sponsored events such as large outdoor festivals, parades, or street fairs.

The permittee must identify all probable materials that could be discharged from each of the applicable O&M activities. Typical pollutants associated with these activities include metals, chlorides, hydrocarbons (e.g., benzene, toluene, ethylbenzene, xylene), sediment, and trash.

The permittee must detail in the plan a set of pollution prevention measures that, when applied during municipal O&M activities, are designed to reduce the discharge of pollutants in stormwater. These pollution prevention measures must include, at a minimum:

- Replacing materials/chemicals with more environmentally benign materials or methods (e.g., use mechanical methods vs. herbicides, or use water-based paints or thermoplastics rather than solvent-based paints for stripping)
- Changing operations to minimize the exposure or mobilization of pollutants (e.g., mulch, compost or landfill grass clippings) to prevent them from entering surface waters
- Placing barriers around or conducting runoff away from deicing chemical storage areas to prevent discharge into surface waters), consistent with provisions in sub-section 3.2.6.2 above.

The permittee must detail in the plan a schedule for instituting the pollution prevention measures. At a minimum, with respect to all roads, highways, and parking lots with more than 5,000 square feet of

The City of Chattanooga MS4 - Permit Number TNS068063

pollutant-generating impervious surface area that are owned, operated, or maintained, the permittee must implement all pollution prevention measures by year 2 following the effective date of this permit.

The results of the assessments and pollution prevention measures, including schedules for implementation, must be documented and submitted with the subsequent annual report.

3.2.6.2 *Inspection of pollution prevention measures*

All pollution prevention measures implemented at municipal facilities (landfills, hazardous waste disposal facilities, salt storage facilities, solid waste handling and transfer facilities) must be visually inspected quarterly to ensure they are working properly; a log of inspections must be maintained and made available for review by the permitting authority upon request.

3.2.6.3 Street Sweeping and Cleaning

The permittee must include in the plan a method to evaluate and rate all municipally owned and operated streets, roads, and public parking lots within their jurisdiction. Based on that evaluation, the permittee shall outline in the plan the sweeping frequency, timing, and efficiency, which shall consider land use type, amount and type of trash, and stormwater pollutant levels generated:

- High priority – Municipally owned and operated streets, road segments, and public parking lots in high priority areas include, but are not limited to: high traffic zones; commercial and industrial districts; shopping malls; high-density residential dwellings; and sport and event venues. This designation must include municipally owned and operated streets, road segments, and public parking lots that consistently accumulate high volumes of trash, debris, and other stormwater pollutants.
- Medium priority – Municipally owned and operated streets, road segments and public parking lots in medium priority areas include, but are not limited to: medium traffic zones; warehouse districts; and light, small-scale commercial and industrial areas.
- Low priority – Municipally owned and operated streets and road segments in low priority areas include, but are not limited to, light traffic zones and residential zones.

3.2.6.3.1 *Maintenance of municipally-owned and/or maintained structural stormwater controls*

The permittee must inspect at least yearly, and maintain if necessary, all municipally-owned or maintained structural stormwater controls. The permittee must also maintain all municipally-owned or maintained permanent stormwater management practices through regularly scheduled maintenance activities.

3.2.6.4 Flood Management

Within two years of the permit effective date, the permittee will develop a process and schedule to assess the water quality impacts in the design of the permittee's new flood management projects that discharge to the MS4 and include such process and schedule in the plan. This process must include consideration of controls that can be used to minimize the impacts to site water quality and hydrology while still meeting the project objectives.

Starting in permit year three, the permittee must assess at least two-existing flood management projects per year to determine whether changes or additions should be made to improve water quality.

No projects will be evaluated more than one time per permit cycle. The permittee is responsible for maintaining a list of flood control projects subject to this subpart.

3.2.6.5 Pesticide, Herbicide, and Fertilizer Application and Management

The permittee must develop a program in the plan to evaluate the materials used and activities performed on municipally owned public spaces such as parks, golf courses, easements, public rights of way, and other open spaces for pollution prevention opportunities. The plan shall describe maintenance activities for the turf landscaped areas, which could include, as applicable: mowing, fertilization, pesticide application, and irrigation. Typical pollutants include sediment, nutrients, hydrocarbons, pesticides, herbicides and organic debris.

The permittee must include in the plan the following appropriate practices to minimize landscaping-related pollutant generation:

1. Educational activities, permits, certifications, and other measures for municipal applicators.
2. Integrated pest management measures that rely on non-chemical solutions, including:
 - Use of native plants
 - Keeping clippings and leaves away from waterways and out of the street using mulching, composting
 - Limiting application of pesticides and fertilizers if precipitation is forecasted within 24 hours or as specified in label instructions
 - Limiting or replacing pesticide use (e.g., manual weed and insect removal)
 - Limiting or eliminating the use of fertilizers, or, if necessary, prohibiting application within 5 feet of pavement, 25 feet of a storm drain inlet, or 50 feet of a waterbody
 - Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing motorist safety
3. Schedules for chemical application that minimize the discharge of such constituents due to irrigation and expected precipitation.
4. The collection and proper disposal of unused pesticides, herbicides, and fertilizers.

3.2.6.6 Contractor Requirements and Oversight

Requirements for Contractors:

The permittee will outline in the plan requirements for the oversight of contractors hired to perform municipal maintenance activities on all new procurements, which shall be implemented starting one year after the effective date of the permit. The plan must include requirements for compliance with all of the stormwater control measures, good housekeeping practices, and facility-specific stormwater management standard operating procedures.

3.2.6.7 Monitor and Control Industrial, Commercial and High Risk Runoff

Chattanooga shall develop and implement a program to monitor and control, to the MEP, pollutants in runoff from the following industrial, commercial and high risk runoff facilities and activities:

The City of Chattanooga MS4 - Permit Number TNS068063

- 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 municipal permit applicant determines are contributing a substantial loading of pollutants to the municipal separate storm sewer system.

The permittees shall maintain a database of industrial and commercial facilities in the City, which shall include the following types of industries:

- those listed above;
- facilities covered by individual NPDES permits;
- facilities covered under the TMSP;
- facilities regulated by the pretreatment program; and
- facilities defined as industries by the EPA stormwater application rule of November 16, 1990.

This database must include, for example, NPDES permit numbers, if applicable, compliance information, property information, and water quality information.

The permittee shall update this database at least yearly and provide a listing in each Annual Report of any additionally identified industrial facilities which discharge stormwater into the MS4.

Inspections

The permittee shall inspect all industrial, commercial and high risk runoff facilities at least once every three years. The permittee shall establish and follow procedures for these routine inspections.

In addition to the routine inspections, the MS4s shall establish and follow procedures for inspections in response to illicit discharges, improper disposal, water quality monitoring or complaints. These procedures shall also include timely re-inspection for those facilities to verify that corrective actions have been taken.

The procedures for both routine and non-routine inspections must include a manual and checklist for inspectors. The inspection procedures must recognize and coordinate with existing programs, namely SARA Title III inspections performed by the Chattanooga Fire Department, pretreatment inspections performed by the Chattanooga Waste Resource Division, and NPDES inspections performed by Tennessee Department of Environment and Conservation. These procedures must include a manual and checklist for inspectors. The permittee must conduct and document inspector training annually.

Industrial Runoff Control

The permittee shall work with its industries to prevent contamination of stormwater runoff. The permittee must accomplish this by providing guidance materials, conducting workshops, reviewing stormwater pollution prevention plans and providing technical assistance. The permittee must retain records that document its work with these industries.

In cases where contaminated industrial stormwater discharges are eliminated or contamination is significantly reduced, the permittee shall document, if possible, the beneficial effect on receiving streams.

3.3. Stormwater Monitoring Program

3.3.1. Wet Weather Monitoring

The permittee shall perform wet weather monitoring to evaluate program compliance, the effectiveness of BMPs, and improvements to impaired waters.

The following five sites shall be used for wet weather monitoring:

Type	Location	Coordinates	Waterbody	Frequency
Low Density Residential	On the wooded lot adjacent to 1418 Stratman Circle	35.0103° -85.1603°	Mackey Branch	3 storm events occurring at different seasons during each permit year
High Density Residential	East Lake Apartments	35.1576° -85.2802°	Dobbs Branch	3 storm events occurring at different seasons during each permit year
Concentrated Commercial	Gunbarrel Road at Landress Drive	35.0357° -85.1533°	Friar Branch	3 storm events occurring at different seasons during each permit year
Light Industrial	Latta Street	35.0687° -85.3259°	Citico Creek	3 storm events occurring at different seasons during each permit year
Heavy Industrial	At the culvert at Hamm Road approximately 1500 ft from the intersection of Hamm Road and Manufacturers Road	35.0554° -85.3259°	Tennessee River	3 storm events occurring at different seasons during each permit year

A narrative description shall be provided of the date and duration of the storm event(s) sampled, rainfall estimates of the storm event which generated the sampled discharge and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event. Any adjustments of wet weather monitoring locations shall be described and justified in the plan.

3.3.2. Monitoring parameters

At a minimum the wet weather monitoring shall include the following parameters:

TABLE 1 PARAMETERS FOR WET WEATHER MONITORING	
pH	biochemical oxygen demand (BOD ₅)
total suspended solids (TSS)	chemical oxygen demand (COD)
total dissolved solids (TDS)	dissolved phosphorus
total ammonia nitrogen (as N)	total phosphorus
total ammonia plus organic nitrogen	total Kjeldahl nitrogen
nitrate plus nitrite nitrogen (as N)	trichloroethylene
total nitrogen	bis (2 ethly-hexyl) phthalate
oil and grease	total recoverable chromium
methylene chloride	total recoverable beryllium
vinyl chloride	total recoverable lead
fluoranthene	total recoverable zinc
Cyanide, Total	
Phenols, Total	
total recoverable copper	
total recoverable nickel	
total recoverable arsenic	
total recoverable cadmium	
SPECIAL ANALYSES	
<i>E. Coli</i> (1 storm/year)	

The permittee should provide the seasonal pollutant load (SPL) and the event mean concentration (EMC) for all parameter listed in Table 1, except pH, for each grid system within the MS4. The permittee should document the method used to calculatc SPL and EMC. The SPL and EMC should be included in the Annual Report for the fifth year of the permit.

3.3.3. In-Stream Ambient Monitoring

3.3.3.1 Development of Ambient Monitoring Program

The permittee shall maintain the following ambient monitoring program (according to the plan). Any proposed revisions to the program must be submitted to the division for review and approval.

3.3.3.2 Monitoring locations and frequencies:

Waterbody	Location (lat/long)	Frequency
Friar Branch	35° 2' 48.948"N 85° 11' 36.740"W	annually
Citico Creek	35° 3' 10.667"N 85° 16' 59.948"W	annually
Dobbs Branch	35° 1' 9.426"N 85° 17' 15.583"W	annually
Black Creek	35° 0' 18.648"N 85° 22' 41.44" W	annually

The City of Chattanooga MS4 - Permit Number TNS068063

Poe Branch	35° 3' 47.740"N 85° 9' 30.863"W	annually
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Locations may change during subsequent years based on the water quality data collected at these locations. Modifications in the monitoring locations will be identified in the plan.

3.3.3.3 Monitoring Parameters

Parameters are the same as the parameters for wet weather monitoring.

3.3.4. Biological Monitoring

The city of Chattanooga shall continue a program of biological assessments of at least two urban streams. The city shall obtain approval from the division of the streams selected.

Macroinvertebrate sampling will occur during the first (July 1 thru September 30) quarter and third (January 1 thru March 31) quarter of each permit year. The protocol for sampling shall be that found in TDEC's Division of Water Pollution Control's Quality System Standard Operation Procedure for Macroinvertebrate Stream Surveys. The level of protocol for each sampling must be approved by the Environmental Field Office Manager of the division. Results of biological monitoring shall be submitted with each Annual Report.

3.3.5. Watershed Characterization

The city will conduct watershed characterization for Friar Branch no later than two years following the effective date of the permit. Sampling for *E.coli* and total suspended solids will be conducted twice each year to determine both pollutant loading and source identification. Results of watershed characterization shall be submitted with each Annual Report.

3.3.6. Field Sampling and Screening

The city must inspect all cells identified in the grid system that contain a segment of the storm sewer system during the life of the permit. Any illicit discharges observed during inspection must be sampled for the purpose of source tracking. The frequency of the field screening of land use categories will be as follows.

Land Use Categories	System	Frequency
Industrial	0.25-mile grid	Twice per Permit Term
Heavy Commercial	0.25-mile grid	Twice per Permit Term
All Other Land Uses	0.5-mile grid	Twice per Permit Term

The list of sampling parameters used to identify sanitary, commercial and industrial sources during the field sampling and screening should be included in the Plan. Corresponding benchmark concentrations developed during the screening process should be included in the Plan as well. List of parameters, results of sampling and benchmark concentrations used shall be summarized in an Annual Report corresponding to the monitoring period.

3.3.7. Industrial Monitoring Program

The permittee shall sample once per permit year, at least, four industrial dischargers who have individual NPDES permits. The visual assessment of the industrial stormwater discharge will include: color, odor, clarity, oil/grease sheen and foam. The analysis of the stormwater discharge will include the following constituents:

Parameter	Sample Type
any pollutants limited in an existing NPDES permit for an identified facility;	As indicated by permit
any pollutants limited in applicable <u>effluent limitations guidelines</u> (40 CFR Parts 400-471);	As indicated by applicable <u>effluent limitations guidelines</u>
oil and grease;	grab
chemical oxygen demand (COD);	composite
pH;	grab
biochemical oxygen demand, five-day (BOD5);	composite
total suspended solids (TSS);	composite
total phosphorous;	composite
total Kjeldahl nitrogen (TKN);	composite
nitrate plus nitrite nitrogen; and	composite
Total Organic Carbon	composite
Ammonia (as N)	grab
Temperature	grab

In addition, the permittee shall collect and analyze stormwater samples from municipal waste management facilities including City Wide Services, Summit landfill, Moccasin Bend landfill and 36th Street landfill once per year. The results for the following parameters for municipal waste management facilities will be reported in the MS4 annual report.

Parameter	Sample Type
Metals - Total recoverable Chromium Copper Lead Nickel Zinc Arsenic Beryllium Cadmium	Composite
Total Suspended Solids and Total Dissolved Solids	Composite
Oxygen demands BOD5 COD	Composite
Nutrients Total Phosphorous Dissolved Phosphorous NO2 plus NO3 TKN Ammonia (total)	Composite

General Cyanide Oil/Grease E Coli	Grab
Table II of Appendix D of 40 CFR 122	Grab
Field Measurements pH Temperature DO Conductivity	Grab

3.3.8. Pesticide, Herbicide and Fertilizer Program

The permittee shall collect a minimum of two grab samples between April and September once during the life of the permit from an area, such as a golf course or residential community that is likely to use pesticides. A list of pesticides to be analyzed is included in the plan.

3.3.9. Monitoring MS4 Activities

The city will conduct monitoring to evaluate the effectiveness of its MS4 Inspection and Maintenance Program in areas that established maintenance procedures have not been implemented. Monitoring will consist of identification of a sub-basin and collection of stormwater samples pre-and post maintenance. Analysis will consist of items listed in Table 1 in section 3.3.2 above. The city will continue monitoring at least one sub-basin at a minimum in areas that established maintenance procedures have not been implemented.

3.4. Qualifying Tribe, State or Local Program (QLP)

A *qualifying local program (qlp)* is an MS4 Stormwater Management Program that has been formally approved by the division as having met QLP minimum program requirements related to stormwater discharges associated with construction activity. If a construction activity is within the jurisdiction of and has obtained a notice of coverage from a QLP, the operator of the construction activity is authorized to discharge stormwater associated with construction activity under General NPDES Permit for Discharges of Stormwater Associated with Construction Activities Permit without submittal of an NOI to the division. Additional information, including QLP minimum requirements and application procedures, can be obtained from the local Tennessee Department of Environment and Conservation Environmental Field Office or the division [stormwater program website](#).

3.5. Reviewing and Updating Stormwater Management Programs

3.5.1. Stormwater Management Program Review

The permittee must perform a review of the Stormwater Management Program in preparation of the annual report required under subpart 4.5.

3.5.2. Stormwater Management Program Update

The permittee may change the Stormwater Management Program during the life of the permit in accordance with the following procedures:

Changes adding (but not subtracting or replacing) components, controls, or requirements to the Stormwater Management Program may be made at any time. Reporting of such changes must be made in accordance with subpart 5.17.

Changes replacing an ineffective or unfeasible BMP specifically identified in the Stormwater Management Program with an alternate BMP may be adopted at any time, provided the permittee can justify the change by:

- Analyzing why the BMP is ineffective or infeasible (including cost prohibitive),
- Analyzing why the replacement BMP is expected to achieve the goals of the BMP to be replaced, or has achieved those goals.

Modifications to adjust the schedule for maintenance activities or the frequency of inspections or monitoring identified in the Stormwater Management Program may be made by the permittee on an annual basis. The permittee must include in the subsequent annual report a description of the adjustment to schedule along with the following information:

- An analysis of why the former schedule was ineffective or infeasible;
- Expectations on the effectiveness of the replacement schedule; and
- An analysis, if applicable, of why the replacement schedule will ensure the optimization of equipment use.

Modifications to Stormwater Management Program components, controls, or requirements may not be made by the permittee unless the permittee can document in the plan that the change will not cause or contribute to violations of State water quality standards in the receiving stream. In the case where this type of modification is appropriate, the permittee may make the required modification and shall include in the subsequent annual report a description of the component which has been eliminated along with the following information:

- An analysis of why the component was ineffective or infeasible; and
- A detailed explanation of why, with the elimination of this component, the plan will continue to achieve a reduction in pollutants to the MEP and shall not cause or contribute to violations of State water quality standards in the receiving stream.

Modifications included in the annual report shall be signed in accordance with subpart 5.7.

3.5.3. Stormwater Management Program Updates Required by the Division

The division may require changes to the Stormwater Management Program as needed to:

- Address impacts on receiving water quality caused, or contributed to, by discharges from the MS4;

- Include more stringent requirements necessary to comply with new federal statutory or regulatory requirements; or
- Include such other conditions deemed necessary by the division to comply with the goals and requirements of the Clean Water Act.

Changes requested by the division must be made in writing to the MS4, set forth the time schedule for the permittee to develop the changes, and offer the opportunity to propose alternative program changes to meet the objective of the requested modification. All changes required by the division will be made in accordance with 40 CFR §124.5, 40 CFR §122.62, or as appropriate 40 CFR §122.63.

3.5.4. Transfer of Ownership, Operational Authority, or Responsibility

The permittee must implement the Stormwater Management Program in all new areas added to the MS4 as expeditiously as practicable, but not later than one year from addition of the new areas. Implementation may be accomplished in a phased manner to allow additional time for controls that cannot be implemented immediately.

Within 90 days of a transfer of ownership, operational authority, or responsibility for Stormwater Management Program implementation, the permittee must have a plan for implementing the Stormwater Management Program in all newly added areas. The plan may include schedules for implementation. Information on all new annexed areas and any resulting updates required to the Stormwater Management Program must be included in the annual report.

3.6. Enforcement Response Plan

3.6.1. Development of Enforcement Response Plan

Within 18 months of permit effective date, the permittee must develop and implement an enforcement response plan (ERP). The plan must set out the MS4's potential responses to violations and address repeat violations through progressive enforcement as needed to achieve compliance. The permittee must have the legal ability to employ any combination of the enforcement actions below (or their functional equivalent), and to escalate enforcement responses where necessary to address persistent non-compliance, repeat or escalating violations, or incidents of major environmental harm. The ERP must describe how the permittee will use each of the following types of enforcement responses:

Verbal Warnings – At a minimum, verbal warnings must specify the nature of the violation and required corrective action.

Written Notices – Written notices must stipulate the nature of the violation and the required corrective action, with deadlines for taking such action.

Citations with Fines – The ERP must indicate when the permittee will assess monetary fines, which may include civil and administrative penalties.

Stop Work Orders – The permittee must have the authority to issue stop work orders that require construction activities to be halted, except for those activities directed at cleaning up, abating discharge, and installing appropriate control measures.

Withholding of Plan Approvals or Other Authorizations – Where a facility is in non-compliance, the ERP must address how the MS4’s own approval process affecting the facility’s ability to discharge to the MS4 can be used to abate the violation.

Additional Measures – The permittee may also use other escalated measures provided under local legal authorities. The permittee may perform work necessary to improve erosion control measures and collect the funds from the responsible party in an appropriate manner, such as collecting against the project’s bond or directly billing the responsible party to pay for work and materials.

3.6.2. NPDES Permit Referrals

For those construction projects or industrial facilities subject to the TNR100000 (the NPDES general permit for stormwater discharges from construction activity) or TNR050000 (the NPDES general permit for stormwater discharges from industrial activity), the permittee must:

Refer facilities that cannot demonstrate that they obtained NPDES permit coverage to the division within 30 days of making that determination. In making such referrals, the permittee must include, at a minimum, the following documentation:

- Construction project or industrial facility location,
- Name of owner or operator.
- Estimated construction project size or type of industrial activity (including SIC code if known),
- Records of communication with the owner or operator regarding filing requirements.

Refer violations to the division provided that the permittee has documented progressive enforcement to achieve compliance with its own ordinances. At a minimum, the MS4’s progressive enforcement must include two follow-up inspections and two warning letters or notices of violation. In making such referrals, the permittee must provide, at a minimum, the following:

- Construction project or industrial facility location
- Name of owner or operator
- Estimated construction project size or type of industrial activity (including SIC code if known)
- Records of communication with the owner or operator regarding the violation, including at least two follow-up inspections, two warning letters or notices of violation, and any response from the owner or operator.

3.6.3. Enforcement Tracking

The permittee must track instances of non-compliance either in paper files or electronically. The enforcement case documentation must include, at a minimum, the following:

- Name of owner/operator
- Location of construction project or industrial facility
- Description of violation
- Required schedule for returning to compliance
- Description of enforcement response used, including escalated responses if repeat violations occur or violations are not resolved in a timely manner

- Accompanying documentation of enforcement response (e.g., notices of noncompliance, notices of violations, etc.)
- Any referrals to different departments or agencies
- Date violation was resolved.

3.6.4. Recidivism Reduction

The permittee must identify chronic violators of any SWMP component and reduce the rate of noncompliance recidivism. The permittee must track the violations, apply incentives and/or disincentives, and increase the inspection frequency at the operator's sites. If corrective actions are not taken, the permittee shall pursue progressive enforcement and, if need be, perform the necessary work and assess against the owner the costs incurred for repairs. Where BMPs are on public property or within public rights-of way the permittee must document, e.g., with photos, maintenance logs, contractor invoices, and in the tracking system, that appropriate maintenance and/or repairs have been completed.

4. MONITORING, RECORDKEEPING, ASSESSMENT AND REPORTING

4.1. Analytical monitoring

In addition to the monitoring as a part of its Stormwater Management Program as described in subpart 3.3, the permittee shall perform monitoring in streams with EPA-approved or established TMDLs and impaired streams as described below:

For stream segments identified as being impaired for siltation and/or habitat alteration, biological stream sampling must be performed utilizing the Semi-Quantitative Single Habitat (SQSH) Method as identified in the division's Quality System Standard Operating Procedure for Macroinvertebrate Stream Survey, revised October 2006. At least one sample per stream segment must be collected, with all segments in the MS4 jurisdiction sampled in a five-year period.

For stream segments identified as being impaired for pathogens, bacteriological stream sampling must be performed utilizing methods identified in the division's Quality System Standard Operating Procedure for Chemical and Bacteriological Sampling of Surface Water, revised December 2009. Sampling shall include the collection of five samples and corresponding flow measurements, within a thirty-day period (to establish a geometric mean), and be performed during summer (June through September). Bacteriological sampling must be performed such that all pathogen-impaired segments in the MS4 jurisdiction are sampled within a five-year period.

For stream segments subject to TMDLs for parameters other than siltation, habitat alteration or pathogens, the permittee shall perform analytical monitoring as prescribed in the TMDL.

When the permittee conducts monitoring of stormwater discharges, or of receiving waters, the permittee must comply with the following:

Representative monitoring. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

Test Procedures. Monitoring results must be conducted according to test procedures approved under 40 CFR 133.11.

Records of monitoring information shall include:

- The date, exact place indicated by latitude and longitude, and time of sampling or measurements;
- The names(s) of the individual(s) who performed the sampling or measurements;
- The date(s) analyses were performed;
- The names of the individuals who performed the analyses;
- The analytical techniques or methods used; and
- The results of such analyses.

4.2. Non-analytical monitoring

Visual Stream Surveys and Impairment Inventories must be performed on streams impaired for siltation, habitat alteration and pathogens in order to identify and prioritize MS4 stream impairment sources. It is strongly recommended that visual stream surveys be performed throughout the entire HUC-12 sub watershed of a stream segment identified as being impaired. At a minimum, a visual stream survey must be performed immediately upstream and downstream of each MS4 outfall that discharges into an impaired stream segment. The permittee shall refer to existing survey protocols such as the ones available through the Environmental Protection Agency, Natural Resources Conservation Service and the State of Maryland Department of Natural Resources or using the Stream Corridor Assessment Program (SCORE). The permittee have the flexibility to select or modify a protocol to complement the existing MS4 program. All impaired stream segments in the MS4 jurisdiction must be surveyed in a five-year period. The results of non-analytical monitoring will be reported in the annual report.

Records of non-analytical monitoring of stormwater discharges shall include:

- The date, exact place, and time of observation/monitoring;
- The names(s) of the individual(s) who performed the observation/monitoring;
- The date(s) of the observation/monitoring;
- The names of the individuals who performed the observation/monitoring;
- A description of the protocol employed;
- Documentation of findings, including a prioritized written description, photographs and corrective action plan and timeline.

4.3. Recordkeeping

The permittee must retain records of all monitoring information, including, all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, a copy of the NPDES permit, and records of all data used

to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application, or for the term of this permit, whichever is longer. The division may extend this period with good cause.

The permittee must submit records to the division only when specifically asked to do so or as required under subpart 4.5. The permittee must retain a copy of the stormwater management plan. A copy of the permit must be included as part of the plan. The plan shall be kept in a location accessible to the division. The permittee must make its records, including the application and the stormwater management plan, available to the public upon written request.

4.4. Annual Effectiveness Assessment

The annual effectiveness assessment must:

- a) Use the monitoring and assessment data described in subpart 3.3 above to specifically assess the effectiveness of each of the following:
 - Each significant activity/control measure or type of activity/control measure implemented;
 - Implementation of each major component of the SWMP
 - Implementation of the SWMP as a whole.
- b) Identify and use measurable goals, assessment indicators, and assessment methods for each of the items listed under paragraph a) (above).
- c) Document the permittee's compliance with permit conditions.

Based on the results of effectiveness assessment, the permittee must annually review its activities or control measures to identify modifications and improvements needed to maximize SWMP effectiveness as necessary to achieve compliance with this permit. The permittee must develop and implement a plan and schedule to address the identified modifications and improvements. Municipal activities/control measures that are ineffective or less effective than other comparable municipal activities/control measures must be replaced or improved upon by implementation of more effective activities/control measures.

As part of its annual reports, the permittee must report on its SWMP effectiveness assessment as implemented under this subpart of the permit.

4.5. Reporting

The permittee must submit an annual report to Tennessee Department of Environment and Conservation Chattanooga Environmental Field Office by 6 months following the city's fiscal year. The permittee may fulfill this requirement by submitting the report via e-mail. Prior to submitting the annual report to the division, the permittee must present the annual report at a public hearing for suggestions and comment. The annual report form is found in Appendix A.

5. STANDARD PERMIT CONDITIONS

5.1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and/or the Tennessee Water Quality Control Act

(TWQCA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

5.1.1. Penalties for Violations of Permit Conditions

Pursuant to T.C.A. § 69-3-115 of The Tennessee Water Quality Control Act of 1977, as amended:

Any person who violates an effluent standard or limitation or a water quality standard established under this part (T.C.A. § 69-3-101, et. seq.); violates the terms or conditions of this permit; fails to complete a filing requirement; fails to allow or perform an entry, inspection, monitoring or reporting requirement; violates a final determination or order of the board, panel or commissioner; or violates any other provision of this part or any rule or regulation promulgated by the board, is subject to a civil penalty of up to ten thousand dollars (\$10,000) per day for each day during which the act or omission continues or occurs;

Any person unlawfully polluting the waters of the state or violating or failing, neglecting, or refusing to comply with any of the provisions of this part (T.C.A. § 69-3-101, et. seq.) commits a Class C misdemeanor. Each day upon which such violation occurs constitutes a separate offense;

Any person who willfully and knowingly falsifies any records, information, plans, specifications, or other data required by the board or the commissioner, or who willfully and knowingly pollutes the waters of the state, or willfully fails, neglects or refuses to comply with any of the provisions of this part (T.C.A. § 69-3-101, et. seq.) commits a Class E felony and shall be punished by a fine of not more than twenty-five thousand dollars (\$25,000) or incarceration, or both.

Nothing in this permit shall be construed to relieve the discharger from civil or criminal penalties for noncompliance. Notwithstanding this permit, the discharger shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of treated wastewater to any surface or subsurface waters. Additionally, notwithstanding this permit, it shall be the responsibility of the discharger to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created. Furthermore, nothing in this permit shall be construed to preclude the State of Tennessee from any legal action or relieve the discharger from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or the Federal Water Pollution Control Act.

5.2. Duty to Reapply

Permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Director of Water Pollution Control (the "Director") no later than 180 days prior to the expiration date. Such applications must be properly signed and certified.

5.3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for you in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

5.4. Duty to Mitigate

You must take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

5.5. Duty to Provide Information

You must furnish to the division, within a time specified by the division, any information that the division may request to determine compliance with this permit, including any and all records required by the permit.

5.6. Other Information

If you become aware that you have failed to submit any relevant facts in your Notice of Intent or submitted incorrect information in the Notice of Intent or in any other report to the division, you must promptly submit such facts or information.

5.7. Signatory Requirements

The application, reports, certifications, or information submitted to the division, or that this permit requires be maintained by you shall be signed, dated and certified as follows:

For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

(1) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or

(2) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

NOTE: The division does not require specific assignments or delegations of authority to responsible corporate officers. The division will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals. For a partnership or sole proprietorship. By a general partner or the proprietor, respectively; or

For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

5.7.1. Reports and other information

All reports required by the permit and other information requested by the division or authorized representative of the division shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

5.7.1.1 Signed authorization

Person described in subpart 5.7 must submitted written authorization for a specific position or individual to the division.

5.7.1.2 Authorization with specified responsibility

The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility for environmental matter for the regulated entity.

5.7.1.3 Changes to authorization

If an authorization is no longer accurate because a different operator has the responsibility for the overall operation of the MS4, a new authorization satisfying the requirement of 5.7.1.2 must be submitted to the division prior to or together with any reports, information, or notices of intent to be signed by an authorized representative.

5.7.2. Certification

Any person signing documents under subpart 5.7 shall make the following certification:

"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."

5.8. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

5.9. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related equipment) that are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate

laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

5.10. Inspection and Entry

The permittee must allow the division or an authorized representative (including an authorized contractor acting as a representative of the division) upon the presentation of credentials and other documents as may be required by law, to do any of the following:

- Enter your premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
- Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
- Inspect at reasonable times any facilities or equipment (including monitoring and control equipment) practices, or operations regulated or required under this permit; and
- Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

5.11. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. Your filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

5.12. Permit Transfers

This permit is not transferable to any person except after notice to the division. The division may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.

5.13. Anticipated Noncompliance

The permittee must give advance notice to the division of any planned changes in the permitted small MS4 or activity, which may result in noncompliance with this permit.

5.14. State Environmental Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable Tennessee law or regulation under authority preserved by the Section 510 of the Clean Water Act. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

5.15. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

5.16. Procedures for Modification or Revocation

Permit modification or revocation will be conducted according to 40 CFR §122.62, §122.63, §122.64 and §124.5.

Only those portions of the Stormwater Management Program specifically required as permit conditions shall be subject to the modification requirements of 40 CFR §124.5. Addition of components, controls, or requirements by the permittee(s) and replacement of an ineffective or infeasible BMP implementing a required component of the Stormwater Management Program with an alternate BMP expected to achieve the goals of the original BMP shall be considered minor changes to the Stormwater Management Program and not modifications to the permit.

5.17. Planned Changes

The permittee shall give notice to the director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
- The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).

6. DEFINITIONS

All definitions contained in Section 502 of the Act and 40 CFR §122 shall apply to this permit and are incorporated herein by reference. For convenience, simplified explanations of some regulatory/statutory definitions have been provided, but in the event of a conflict, the definition found in the Statute or Regulation takes precedence.

Analytical monitoring refers to monitoring of water bodies (streams, ponds, lakes, etc.) or of stormwater, according to 40 CFR 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants," or to state- or federally established protocols for biomonitoring or stream bioassessments.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Brownfield means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

Co-permittees are operators who by mutual consent request joint and severed responsibility for coverage under this general permit.

Construction Site Operator for the purpose of this permit and in the context of stormwater associated with construction activity, means any person associated with a construction project that meets either of the following two criteria:

- a) This person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project, and is considered the primary permittee; or
- b) This person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee, and is considered a secondary permittee.

It is anticipated that at different phases of a construction project, different types of parties may satisfy the definition of the “construction site operator.”

Control Measure as used in this permit, refers to any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to waters of the state.

CWA or The Act means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub.L.92-500, as amended Pub.L.95-217, Pub.L.95-576, Pub.L.96-483 and Pub.L.97-117, 33 U.S.C.1251 et seq.

Director means the director of the Tennessee Division of Water Pollution Control, or an authorized representative.

Discharge, when used without a qualifier, refers to “discharge of a pollutant” as defined at 40 CFR §122.2.

Discharge-related activities include: activities which cause, contribute to, or result in stormwater point source pollutant discharges; and measures to control stormwater discharges, including the site, construction and operation of best management practices (BMPs) to control, reduce or prevent stormwater pollution.

Division means the Tennessee Department of Environment and Conservation, Division of Water Pollution Control.

Enforcement Response Plan (ERP) is a matrix of enforcement actions to be taken for noncompliance incidents. Permittees are required to include in their ordinance, or other regulatory mechanism, penalty provisions to ensure compliance with construction requirements, to require the removal of illicit discharges, and to address noncompliance with post-construction requirements. In complying with these requirements, EPA recommends the use of enforcement responses that vary with the type of permit violation, and escalate if violations are repeated or not corrected. The MS4 must develop and implement an enforcement response plan (ERP), which clearly describes the action to be taken for common violations associated with the construction program, or other Stormwater Management Program elements. A well-written ERP provides guidance to inspectors on the different enforcement

responses available, actions to address general permit non-filers, when and how to refer violators to the state, and how to track enforcement actions.

Exceptional Tennessee Waters are surface waters of the State of Tennessee that satisfy the characteristics as listed in Rule 1200-4-3-.06 of the official compilation - rules and regulations of the State of Tennessee. Characteristics include waters within state or national parks, wildlife refuges, wilderness or natural areas; State or Federal Scenic Rivers; Federally-designated critical habitat; waters within an areas designated as Lands Unsuitable for Mining; waters with naturally reproducing trout; waters with exceptional biological diversity or; other waters with outstanding ecological or recreational value as determined by the department.

Hot area means 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.

Illicit Connection means any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

Illicit Discharge is defined at 40 CFR §122.26(b)(2) and refers to any discharge to a municipal separate storm sewer that is not entirely composed of stormwater, except discharges authorized under an NPDES permit (other than the NPDES permit for discharges from the MS4) and discharges resulting from fire fighting activities.

Impaired Waters means any segment of surface waters that has been identified by the division as failing to support classified uses. The division periodically compiles a list of such waters known as the 303(d) List.

Load Allocation (LA): The portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background (40 CFR §130.2(g)).

Margin of Safety (MOS): The "MOS" accounts for uncertainty in the loading calculation. The MOS may not be the same for different water bodies due to differences in the availability and strength of data used in the calculations.

Maximum Extent Practicable (MEP) is the technology-based discharge standard for Municipal Separate Storm Sewer Systems to reduce pollutants in stormwater discharges that was established by CWA §402(p). MS4 operators shall develop and implement their Stormwater Management Programs to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of pollutants.

Monitoring refers to tracking or measuring activities, progress, results, etc.; and can refer to non-analytical monitoring for pollutants by means other than 40 CFR 136 (and other than state- or federally established protocols in the case of biological monitoring and assessments), such as visually or by qualitative tools that provide comparative values or rough estimates.

Municipal Separate Storm Sewer (MS4) is defined at 40 CFR §122.24(b)(1) and means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

The City of Chattanooga MS4 - Permit Number TNS068063

- Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the state;
- Designed or used for collecting or conveying stormwater;
- Which is not a combined sewer; and
- Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

NOI is an acronym for “Notice of Intent” to be covered by this permit and is the mechanism used to “register” for coverage under a general permit.

Nonpoint Source is essentially any source of pollutant(s) that is not a point source. Examples are sheet flow from pastures and runoff from paved areas.

Owner or operator means the owner or operator of any “facility or activity” subject to regulation under the NPDES program.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

Priority construction activity shall be defined by the MS4, but shall include, at a minimum, those construction activities discharging directly into, or immediately upstream of, waters the state recognizes as impaired (for siltation or habitat alteration) or Exceptional Tennessee Waters.

Qualifying Local Program (QLP) is an MS4 Stormwater Management Program for discharges associated with construction activity that has been formally approved by the division as having met specific minimum program requirements, including those identified in 40 CFR 122.44(s). The intent of the QLP is to establish a streamlined and efficient process for managing discharges of stormwater associated with construction activities by eliminating duplication of the effort between the MS4 and the Division.

Redevelopment means the alteration of developed land that disturbs one acre or more, or less than an acre if part of a larger common plan of development, and increases the site or building impervious footprint, or offers a new opportunity for stormwater controls. The term is not intended to include such activities as exterior remodeling, which would not be expected to cause adverse stormwater quality impacts.

Significant Contributor is defined as a source of pollutants where the volume, concentration, or mass of a pollutant in a stormwater discharge can cause or threaten to cause pollution, contamination, or nuisance that adversely impact human health or the environment and cause or contribute to a violation of any applicable water quality standards for receiving water.

Stormwater is defined at 40 CFR §122.26(b)(13) and means stormwater runoff, snowmelt runoff, and surface runoff and drainage.

A **Stormwater Management Plan (Plan)** is a written compilation of the elements of the Stormwater Management Program. It is considered a single document, even though it actually consists of separate stand-alone components. There is no requirement for the Plan, or its portions, to be submitted to the division, unless requested by the division in writing.

Stormwater Management Program (SWMP) refers to a comprehensive program to manage the quality of stormwater discharged from the municipal separate storm sewer system.

A **Stormwater Pollution Prevention Plan (SWPPP)** is a written plan that includes site map(s), an identification of construction/contractor activities that could cause pollutants in the stormwater, and a description of measures or practices to control these pollutants. It must be prepared and approved before construction begins. In order to effectively reduce erosion and sedimentation impacts, Best Management Practices (BMPs) must be designed, installed, and maintained during land disturbing activities. The SWPPP shall be prepared in accordance with the Tennessee Erosion and Sediment Control Handbook or local BMP Manual, whichever is more stringent and protective of waters of the state. The handbook is designed to provide information to planners, developers, engineers, and contractors on the proper selection, installation, and maintenance of BMPs. The handbook is intended for use during the design and construction of projects that require erosion and sediment controls to protect waters of the state. It also aids in the development of SWPPPs and other reports, plans, or specifications required when participating in Tennessee's water quality regulations.

Stream means a surface water that is not a wet weather conveyance.

TMDL (Total Maximum Daily Load) in this permit generally refers to a study that quantifies the amount of a pollutant that can be assimilated in a water body, identifies the sources of the pollutant, and recommends regulatory or other actions to be taken to achieve compliance with applicable water quality standards based on the relationship between pollution sources and in-stream water quality conditions. A TMDL can be expressed as the sum of all point source loads (Waste Load Allocations), non-point source loads (Load Allocations), and an appropriate margin of safety (MOS), which takes into account any uncertainty concerning the relationship between effluent limitations and water quality:

$$\text{TMDL} = \Sigma \text{WLAs} + \Sigma \text{LAs} + \text{MOS}$$

The objective of a TMDL is to allocate loads among all of the known pollutant sources throughout a watershed so that appropriate control measures can be implemented and water quality standards achieved. 40 CFR §130.2 (i) states that TMDLs can be expressed in terms of mass per time, toxicity, or other appropriate measure.

Waste load Allocation (WLA): The portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute the type of water quality-based effluent limitation. (40 CFR §130.2(h)).

Water quality buffer means a setback from the top of water body's bank of undisturbed vegetation, including trees, shrubs and herbaceous vegetation; enhanced or restored vegetation; or the re-establishment of native vegetation bordering streams, ponds, wetlands, springs, reservoirs or lakes, which exists or is established to protect those water bodies. The goal of the water quality buffer is to preserve undisturbed vegetation that is native to the streamside habitat in the area of the project.

The City of Chattanooga MS4 - Permit Number TNS068063

Vegetated, preferably native, water quality buffers protect water bodies by providing structural integrity and canopy cover, as well as stormwater infiltration, filtration and evapotranspiration. Buffer width depends on the size of a drainage area. Streams or other waters with drainage areas less than 1 square mile will require buffer widths of 30 feet minimum. Streams or other waters with drainage areas greater than 1 square mile will require buffer widths of 60 feet minimum. The 60-foot criterion for the width of the buffer zone can be established on an average width basis at a project, as long as the minimum width of the buffer zone is more than 30 feet at any measured location. The MS4 must develop and apply criteria for determining the circumstances under which these averages will be available. A determination that standards cannot be met may not be based solely on the difficulty or cost associated with implementation.

Every attempt should be made for development and redevelopment activities not to take place within the buffer zone. If water quality buffer widths as defined above cannot be fully accomplished on-site, the MS4 must develop and apply criteria for determining the circumstances under which alternative buffer widths will be available. A determination that water quality buffer widths cannot be met on site may not be based solely on the difficulty or cost of implementing measures, but must include multiple criteria, such as: type of project, existing land use and physical conditions that preclude use of these practices.

Waters of the State or simply ***Waters*** is defined in the Tennessee Water Quality Control Act and means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through or border upon Tennessee or any portion thereof except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine to effect a junction with natural surface or underground waters.

Wet weather conveyance means, notwithstanding any other law or rule to the contrary, man-made or natural watercourses, including natural watercourses that have been modified by channelization:

- (A) That flow only in direct response to precipitation runoff in their immediate locality;
- (B) Whose channels are at all times above the groundwater table;
- (C) That are not suitable for drinking water supplies; and
- (D) In which hydrological and biological analyses indicate that, under normal weather conditions, due to naturally occurring ephemeral or low flow there is not sufficient water to support fish, or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two (2) months.

You and ***Your*** as used in this permit is intended to refer to the permittee, the operator, or the discharger as the context indicates and that party's responsibilities (e.g., the city, the county, the flood control district, the U.S. Air Force, etc.).

7. **APPENDIX A – MS4 ANNUAL REPORT**



*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*

Municipal Separate Storm Sewer System (MS4) Annual Report

1. MS4 Information

 Name of MS4

 Name of Contact Person

 Telephone (including area code)

 Mailing Address

 City State ZIP code

What is the current population of your MS4?

What is the reporting period for this annual report? From _____ to _____

2. Protection of State or Federally Listed Species

A. Do any of the MS4 discharges or discharge-related activities likely to jeopardize any state or federally listed species (subpart 2.4)? Yes No

B. Please attach the determination of the effect of the MS4 discharges on state or federally listed species per subpart 2.4.

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.

Impaired Water	Impairment	Approved TMDL		MS4 Assigned to WLA	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No

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

Appendix A - Annual Report Form

D. Do you have discharges to any Exceptional TN Waters (ETWs) or Outstanding National Resource Waters (ONRWS)? Yes No

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

4. Public Education and Public Participation

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

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

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

D. Do you have an advisory committee or other body comprised of the public and other stakeholders that provides regular input on your stormwater program? Yes No

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

5. Codes and Ordinances Review and Update

A. Is a completed copy of the EPA Water Quality Scorecard submitted with this report? Yes No

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

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

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

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

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

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

Appendix A - Annual Report Form

- E. Do you prioritize certain construction sites for more frequent inspections? Yes No
If Yes, based on what criteria? _____

7. Illicit Discharge Elimination

- A. Have you completed a map of all known outfalls and receiving waters of your storm sewer system? Yes No
- B. Have you completed a map of all known storm drain pipes of storm sewer system? Yes No
- C. How many outfalls have you identified in your system? _____
- D. How many of these outfalls have been screened for dry weather discharges? _____
- E. How many of these have been screened more than once? _____
- F. What is your frequency for screening outfalls for illicit discharges? _____
- 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)? _____
- I. Of those illicit discharges/illegal connections that have been discovered or reported, how many have been eliminated? _____
- J. Do you have the authority to recover cost for addressing illicit discharges? Yes No

8. Stormwater Management for Municipal Operations

- A. Have stormwater pollution prevention plans (or an equivalent plan) been developed for:
- All municipal parks, ball fields and other recreational facilities Yes No
 - All municipal turf grass/landscape management activities Yes No
 - All municipal vehicle fueling, operation and maintenance activities Yes No
 - All municipal maintenance yards Yes No
 - All municipal waste handling and disposal areas Yes No
- B. Are stormwater inspections conducted at these facilities? Yes No
If Yes, at what frequency are inspections conducted? _____
- C. Have standard operating procedures or BMPs been developed for all MS4 field activities? (e.g., road repairs, catch basin cleaning, landscape management, etc.) Yes No
- D. Do you have a prioritization system for storm sewer system and permanent BMP inspections? Yes No
- E. On average, how frequently are catch basins and other inline treatment systems inspected? _____
- F. On average, how frequently are catch basins and other inline treatment systems cleaned out/maintained? _____
- G. Have all applicable municipal employees received training, as identified in each of the following permit sections:
- 3.2.3 - Illicit discharge detection and elimination Yes No
If Yes, identify the number of municipal employees trained _____.
 - 3.2.4 - Construction site stormwater runoff control Yes No
If Yes, identify the number of municipal employees trained _____.
 - 3.2.5 - Permanent stormwater management in new development and redevelopment Yes No
If Yes, identify the number of municipal employees trained _____.

Appendix A - Annual Report Form

3.2.6 - Pollution prevention/good housekeeping for municipal operations Yes No

If Yes, identify the number of municipal employees trained _____

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

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

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 Performance Standards and require that pre-development hydrology be met for:

Flow volumes Yes No

Peak discharge rates Yes No

Discharge frequency Yes No

Flow duration Yes No

E. Please provide the URL/reference where all permanent stormwater management standards can be found.

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

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

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

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

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

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

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

M. Do all municipal departments and/or staff (as relevant) have access to this tracking system? Yes No

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

O. How many maintenance agreements has the MS4 approved during the reporting period?

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 Yes No

Appendix A - Annual Report Form

- Hazardous waste treatment, storage and disposal facilities Yes No
- Industries subject to reporting requirements pursuant to SARA Title III section 313 Yes No
- Industrial facilities that the MS4 determines are contributing a substantial loading of pollutants to the municipal separate storm sewer system 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:

- Those listed in 10 (A) above Yes No
- Facilities covered by individual NPDES permits Yes No
- Facilities covered under the TMSP Yes No
- Facilities regulated by the pretreatment program; and Yes No
- Facilities defined as industries by the EPA stormwater application rule of November 16, 1990

C. Has the MS4 updated the database of industrial and high risk facilities and activities at least yearly? 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

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? 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? Yes No

F. Provide a listing of inspections perform during this reporting year:

Facility/Activity

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:

Action	Construction	Permanent Stormwater Controls	Illicit Discharge	Authority?
Notice of violation	# _____	# _____	# _____	<input type="checkbox"/> Yes <input type="checkbox"/> No

Appendix A - Annual Report Form

Administrative fines	# _____	# _____	# _____	<input type="checkbox"/> Yes <input type="checkbox"/> No
Stop Work Orders	# _____	# _____	# _____	<input type="checkbox"/> Yes <input type="checkbox"/> No
Civil penalties	# _____	# _____	# _____	<input type="checkbox"/> Yes <input type="checkbox"/> No
Criminal actions	# _____	# _____	# _____	<input type="checkbox"/> Yes <input type="checkbox"/> No
Administrative orders	# _____	# _____	# _____	<input type="checkbox"/> Yes <input type="checkbox"/> No
Other	# _____	# _____	# _____	

B. Do you use an electronic tool (e.g., GIS, data base, spreadsheet) to track the locations, inspection results, and enforcement actions in your jurisdiction? Yes No

C. What are the 3 most common types of violations documented during this reporting period?

12. Program Resources

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

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

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: _____ Estimated Amount \$ _____

Source: _____ Estimated Amount \$ _____

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)? _____

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

Entity	Activity/Task/Responsibility	Your Oversight/Accountability Mechanism
--------	------------------------------	---

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?

Indicator	Began Tracking (year)	Frequency	Number of Locations
Example: E. coli	2003	Weekly April-September	20

Appendix A - Annual Report Form

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. _____

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.)

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. _____

Changes to replace an ineffective or unfeasible BMP. _____

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

Changes to the program as required by the division. _____

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.”

Printed Name and Title

Signature

Date

