



Stormwater Management Plan

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CHAPTER 1 — INTRODUCTION

1.1 Background

1.1.1 Water Resource Characteristics

The City of Kingsport (City) is rich in water resources. Local watersheds drain to streams that ultimately discharge to the Holston River and the Fort Patrick Henry Reservoir. Watershed conditions vary across the City and include broad floodplains, rolling terrain, and steeper hillside areas. Stream characteristics also vary, ranging from larger, slower-moving waterways in floodplain areas to smaller streams that respond rapidly to rainfall events. These watersheds and streams provide important environmental, recreational, and drainage functions for the community.

As land is developed, natural landscapes are replaced with buildings, roads, parking areas, and other impervious surfaces that limit the infiltration of rainfall into the ground. As a result, a greater volume of stormwater runoff is generated and conveyed more quickly to local streams. These changes can increase the potential for flooding, streambank erosion, and degradation of aquatic habitat.

Stormwater runoff can also affect water quality. As runoff flows across developed areas, it may carry pollutants such as sediment, nutrients, metals, trash, and other contaminants into nearby waterways. Unlike the sanitary sewer system, stormwater runoff is generally not treated before it enters streams and other surface waters. For this reason, effective stormwater management focuses on preventing pollution at its source and reducing the impacts of stormwater runoff on local water resources.

The protection of water quality, management of stormwater runoff, and reduction of flood-related impacts are important objectives of the Stormwater Management Program (Program). Through planning, regulation, maintenance, public education, and other Program activities described in this Stormwater Management Plan (SWMP), the City works to protect and enhance its water resources while supporting continued growth and development.

1.1.2 Public Stormwater Conveyance System

The City owns and maintains a public stormwater conveyance system that collects and transports stormwater runoff throughout the community. The system consists of streets, gutters, inlets, catch basins, pipes, channels, culverts, ditches, and other infrastructure that convey stormwater runoff to streams, rivers, and other receiving waters. The public stormwater conveyance system constitutes the City's Municipal Separate Storm Sewer System (MS4).

Unlike sanitary sewer systems, the public stormwater conveyance system is designed to convey stormwater runoff and does not typically provide treatment before discharging into surface waters. As a result, pollutants that enter the stormwater conveyance system may be transported directly to local waterways. Protecting water quality therefore depends on preventing pollutants from entering the system and implementing practices that reduce the impacts of stormwater runoff.

In addition to the public stormwater conveyance system, privately owned stormwater infrastructure exists throughout the City. Property owners are responsible for the operation and maintenance of stormwater facilities located on private property unless otherwise specified by the City. Through its Program, the City

maintains the public stormwater conveyance system, implements regulatory requirements, and works with property owners, businesses, developers, and the public to protect local water resources.

1.1.3 Evolution of the Stormwater Management Program

Historically, the City's stormwater management efforts focused primarily on drainage infrastructure such as ditches, culverts, pipes, and other facilities designed to safely convey stormwater runoff away from developed areas. As scientific understanding of stormwater impacts evolved and regulatory requirements expanded, stormwater management programs across the United States began placing greater emphasis on water quality protection, watershed stewardship, and flood management.

The City Program evolved in response to these changing priorities and the implementation of the *National Pollutant Discharge Elimination System (NPDES) Small Municipal Separate Storm Sewer System (MS4)* Program. In 2003, Kingsport obtained coverage under Tennessee's Small MS4 General Permit. For purposes of this SWMP, the permit will hereafter be referred to as the Small MS4 permit. Since obtaining permit coverage, the City has continued to develop and refine its Program to meet permit requirements and protect local water resources.

Today, the Program includes a broad range of activities intended to reduce pollutant discharges from the City's MS4, protect water quality, and support compliance with applicable regulatory requirements. Program elements include public education and outreach, public involvement and participation, illicit discharge detection and elimination, construction and post-construction stormwater management, pollution prevention and good housekeeping practices for municipal operations, stormwater monitoring, and Program evaluation. These activities are described throughout this SWMP.

1.2 Purpose and Scope

This SWMP documents the activities, procedures, and Program elements that comprise the City of Kingsport's Program. The SWMP has been developed to satisfy the requirements of the Small MS4 permit and serves as the primary document describing how the City implements, administers, and maintains its stormwater management Program.

This SWMP describes the City's approach for implementing permit-required Program elements and associated supporting activities. These Program elements include public education and outreach, public involvement and participation, illicit discharge detection and elimination, construction site stormwater runoff control, post-construction stormwater management, pollution prevention and good housekeeping for municipal operations, stormwater monitoring, enforcement, Program evaluation, annual reporting, and Program modifications. The organization of the SWMP is described in Section 1.5.

The SWMP summarizes the goals, policies, and implementation measures used by the City to protect water quality, manage stormwater runoff, and meet applicable regulatory requirements. The SWMP also provides a framework for documenting Program implementation, measuring progress, evaluating Program effectiveness, and reporting compliance with the Small MS4 permit.

1.3 Regulatory Drivers

The City's Program is implemented in accordance with applicable federal, state, and local laws, regulations, permits, and ordinances. These requirements establish the framework for protecting water

quality, managing stormwater runoff, regulating development activities, and reducing pollutant discharges from the City's MS4.

At the federal and state level, the primary regulatory driver of the City's Program is the Small MS4 permit administered by the Tennessee Department of Environment and Conservation (TDEC). At the local level, the City implements its Program through the *Stormwater Management Ordinance* and other regulatory mechanisms, policies, plans, and procedures. Together, these requirements provide the legal authority and administrative framework necessary to implement the Program elements described in this SWMP.

Table 1-1 identifies the primary regulatory drivers that establish requirements for and provide legal authority to implement the City's Program.

Table 1-1 Primary Regulatory Drivers for the Stormwater Management Program

Regulatory Driver	Description
Federal Water Pollution Control Act	Establishes the national framework for protecting water quality and regulating discharges of pollutants to waters of the United States. The Act authorizes the NPDES permitting program.
Tennessee Water Quality Control Act	Establishes the State's authority to protect and maintain water quality and authorizes TDEC to administer the NPDES program in Tennessee. This Act provides the state regulatory framework supporting implementation and enforcement of the City's Program.
General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (NPDES Permit No. TNS000000)	Establishes the requirements applicable to regulated small MS4s in Tennessee, including the six minimum control measures, qualifying local program requirements, enforcement, stormwater monitoring, program evaluation, annual reporting, and program modifications. The City's stormwater management program is designed to meet the requirements of this permit.
City of Kingsport <i>Stormwater Management Ordinance</i> (Chapter 38, Article III)	Provides the local legal authority necessary to implement and enforce the City's Program, including regulation of stormwater discharges, development and redevelopment activities, stormwater management facilities, inspections, and enforcement actions.

1.4 Supporting Plans and Documents

The City's Program is supported by a variety of plans, procedures, manuals, and other documents that provide additional details regarding Program implementation. These documents supplement the information contained in this SWMP and establish specific procedures, standards, and requirements used to implement individual Program elements.

The supporting plans and documents identified in **Table 1-2** provide guidance for the implementation, administration, inspection, maintenance, and enforcement activities associated with the City's Program. These documents are maintained by the City and may be updated periodically to reflect changes in

regulatory requirements, Program implementation, or local priorities. References to these documents are provided throughout this SWMP, as applicable.

Table 1-2 identifies the supporting plans and documents used to implement the City's Program and provides information regarding where each document may be obtained.

Table 1-2 Supporting Plans and Documents

Supporting Document and Related SWMP Section(s)	Purpose	Availability
Exceptional Tennessee Waters (SWMP Section 3.1)	Identifies waters designated by the Tennessee Water Quality Control Board as Exceptional Tennessee Waters based on criteria established in Tennessee water quality regulations.	Found on TDEC's website under <i>Water Quality Rules, Reports and Publications</i> page
EPA ¹ Approved Lists of Impaired and Threatened Waters (SWMP Section 3.1)	As required by Section 303(d) of the Clean Water Act, this is a compilation of the lakes, rivers, and streams in Tennessee that fail to meet one or more water quality standards, including pollutant information and TMDL prioritization	Found on TDEC's website under <i>Water Quality Rules, Reports and Publications</i> page
<i>Tennessee Total Maximum Daily Load (TMDL) Program</i> Publication (SWMP Section 3.1)	Provides information regarding EPA-approved and established TMDLs, including pollutants of concern, watershed-specific pollutant reduction goals, and other information used to evaluate applicability of TMDL requirements to receiving waters affected by discharges from the City's MS4.	Found on TDEC's website under the <i>Tennessee Total Maximum Daily Load (TMDL) Program</i> page.
<i>Public Information and Education (PIE) Plan</i> (SWMP Section 3.2.1)	Documents the City's activities, target audiences, measurable goals, and implementation measures used to satisfy the Public Education and Outreach requirements of the Small MS4 permit	Appendix A.
<i>Public Involvement and Participation Plan</i> (SWMP Section 3.2.2)	Documents the City's activities, measurable goals, and implementation measures used to satisfy the Public Involvement and Participation requirements of the Small MS4 permit.	Appendix B.
Illicit Discharge Detection and Elimination (IDDE) SOPs (SWMP Section 3.2.3)	Establishes procedures for detecting, investigating, tracking, and eliminating illicit discharges and other prohibited non-stormwater discharges in accordance with the requirements of the Small MS4 permit.	City's <i>Stormwater Management Ordinance</i> and SOPs available at City's website; SOPs also in Appendix C.

¹ EPA is the acronym for the United States Environmental Protection Agency.

Supporting Document and Related SWMP Section(s)	Purpose	Availability
Storm Sewer System Map (SWMP Section 3.2.3)	Provides a geospatial inventory of the City's MS4, including stormwater conveyance system components, outfalls, receiving waters, and other infrastructure required by the Small MS4 permit.	Available through the City's GIS mapping system.
<i>Northeast Tennessee Water Quality Stormwater Control Measure (SCM) Manual</i> (SWMP Section 3.2.4 and 3.2.5)	Establishes stormwater management standards, design criteria, and performance requirements for development and redevelopment activities to support compliance with City regulations and the Small MS4 permit.	Available on the City's website.
<i>Tennessee NPDES Permit for Discharges of Stormwater Associated with Construction Activities</i> (AKA TN Construction General Permit) (SWMP Section 3.2.4)	Establishes statewide requirements for stormwater discharges associated with construction activities, including permit coverage, erosion prevention and sediment control, pollution prevention, inspection, and stabilization requirements	Found on TDEC's website under <i>NPDES Stormwater Permitting Program</i> page.
<i>Tennessee Erosion Prevention and Sediment Control Handbook</i> (SWMP Section 3.2.4)	Provides design criteria, best management practices, and technical guidance for erosion prevention and sediment control measures used during construction activities. The City has adopted the handbook as its erosion and sediment control design standard.	Found on TDEC's website under <i>NPDES Stormwater Permitting Program</i> page.
Kingsport, TN NOI and SWPPP Checklist	Provides review criteria used by City staff to evaluate NOI and SWPPP submittals for compliance with applicable construction stormwater requirements and issuance of permit coverage under the City's QLP.	Available on the City's website.
<i>Northeast Tennessee SCM Inspection & Maintenance Manual</i> (SWMP Section 3.2.5)	Provides inspection, operation, maintenance, and repair guidance for permanent stormwater control measures. The manual includes operation and maintenance standards, SCM-specific inspection and maintenance guidance, and standardized inspection checklists used to support compliance with City regulations and the Small MS4 permit.	Available on the City's website.

Supporting Document and Related SWMP Section(s)	Purpose	Availability
Municipal Facility Plans and Standard Operating Procedures (SWMP Section 3.2.6)	Establish procedures for implementing Pollution Prevention and Good Housekeeping activities at municipal facilities and during municipal operations to satisfy the requirements of the Small MS4 permit.	SOPs are available on the City's website and included in Appendix C. Facility plans are housed on the City's server.
<i>Quality System Standard Operating Procedure for Macroinvertebrate Stream Surveys</i> Publication (SWMP Section 3.3) • <i>Field Stream Survey and Habitat Sheets</i> • <i>Macroinvertebrate Taxa Reports</i>	Describes TDEC-approved procedures for conducting Semi-Quantitative Single Habitat (SQSH) biological stream surveys and habitat assessments used to evaluate the biological integrity of streams. TDEC reporting workbooks used to document habitat assessments, field survey information, chemical and physical measurements, and macroinvertebrate taxa data collected during biological monitoring activities. These workbooks must be submitted to TDEC in accordance with applicable Small MS4 permit requirements.	Found on TDEC's website under <i>Water Quality Rules, Reports and Publications</i> page
<i>Quality Systems Standard Operating Procedure (QSSOP) for Chemical and Bacteriological Sampling of Surface Water</i> Publication (SWMP Section 3.3)	Describes TDEC-approved procedures for collecting chemical and bacteriological samples from surface waters, including chain-of-custody requirements, quality assurance and quality control procedures, and the use of water quality monitoring equipment.	Found on TDEC's website under <i>Water Quality Rules, Reports and Publications</i> page
<i>Enforcement Response Plan</i> (SWMP Section 3.4)	Establishes procedures for responding to violations and implementing enforcement actions associated with the City's Program. The ERP supports implementation of the enforcement requirements of the Small MS4 permit.	Found in the City's <i>Stormwater Management Ordinance</i> available on the City's website and in Appendix D.

1.5 Program Maintenance and Updates

The City evaluates its Program annually to assess compliance with the Small MS4 permit, the effectiveness of Program activities and controls, and progress toward achieving the permit's measurable requirements.

The evaluation identifies ineffective activities or Program components that should be modified or replaced and improvements needed to address Program deficiencies or weaknesses. The City documents completion and the results of the annual evaluation in the annual report submitted to TDEC.

The Program will be reviewed and updated as necessary based on the annual evaluation, changes in permit requirements, local regulations, implementation procedures, organizational responsibilities, supporting plans and documents, or other Program improvements. Modifications will be documented and implemented in accordance with applicable permit requirements and City procedures.

CHAPTER 2 — OVERVIEW OF THE STORMWATER MANAGEMENT PROGRAM

2.1 Program Administration

The City administers its Program to protect water quality, reduce pollutant discharges from the MS4, manage stormwater runoff, and satisfy the requirements of the Small MS4 permit. Program implementation includes public education and participation, development and redevelopment plan review, inspection and enforcement activities, stormwater monitoring, municipal operations and maintenance activities, and other measures designed to protect local water resources.

Administration of the Program is coordinated among multiple City departments and divisions. Responsibilities for implementing individual Program elements are assigned based on the functions and expertise of participating departments and personnel. Program responsibilities are summarized in **Table 2-1**.

2.1.1 Program Goals

The primary goals of the City's Program are to:

- Protect citizens and property from the negative impacts of stormwater runoff.
- Reduce the discharge of pollutants from the MS4 by implementing a comprehensive Program.
- Maintain compliance with the Small MS4 permit and other applicable state and federal requirements.
- Engage citizens, businesses, and industries in understanding the need to protect water quality and the functionality of the public stormwater conveyance system.
- Provide regulatory certainty and consistency in plan review, guidance, and enforcement for the development community.

2.1.2 Primary Stormwater Management Program Responsibilities

The Stormwater Services Division within the Utilities Department is responsible for administration and day-to-day implementation of the City's Program. Primary responsibilities include permit compliance, Program planning, public education and participation, stormwater monitoring, inspection and enforcement activities, development and redevelopment plan review, annual reporting, Program evaluation, and coordination of Program activities required by the Small MS4 permit.

2.1.3 Supporting Department Roles and Responsibilities

Successful implementation of the City's Program requires coordination among multiple City departments and divisions that support stormwater-related activities through their routine operations, technical expertise, regulatory responsibilities, maintenance activities, and public services.

Supporting departments and divisions contribute to implementation of the Program by assisting with development review, operation and maintenance of public infrastructure and utilities, management of parks and recreational facilities, transportation services, fleet operations, municipal facility management, and other activities that may affect stormwater quality or the operation of the public stormwater conveyance system. Supporting department responsibilities are summarized in **Table 2-1**.

Table 2-1 Supporting Stormwater Program Responsibilities

Department/Division	Primary Responsibilities
Water Plant (Division under Utilities Department)	Implementation of pollution prevention and good housekeeping practices associated with facility operations and maintenance.
Wastewater Treatment (Division under Utilities Department)	Operates under a separate TMSP and implements pollution prevention and good housekeeping practices associated with facility operations and maintenance.
Utilities Maintenance (Division under Utilities Department)	Implementation of pollution prevention and good housekeeping practices associated with utility operation, maintenance, and utility construction activities
Streets & Sanitation (Division under Public Works Department)	Implementation of pollution prevention and good housekeeping practices associated with roadway, roadside, and sanitation-related operations and maintenance activities.
Traffic (Division under Public Works Department)	Implementation of pollution prevention and good housekeeping practices associated with traffic operations, maintenance, and transportation-related services.
Landscaping (Division under Public Works Department)	Implementation of pollution prevention and good housekeeping practices associated with City landscaping and grounds maintenance activities.
Fleet Services (Division under Public Works Department)	Operates under a separate TMSP and implements pollution prevention and good housekeeping practices associated with vehicle and equipment maintenance activities.
City Landfill (Division under Public Works Department)	Implementation of pollution prevention and good housekeeping practices associated with landfill operations and maintenance activities.

Department/Division	Primary Responsibilities
Leisure Services	Implementation of pollution prevention and good housekeeping practices associated with parks, greenways, recreational facilities, and other public properties; support for illicit discharge detection and elimination activities, as needed.
Building Department	Secondary oversight of stormwater-related construction activities at the lot development level and support for enforcement of applicable City codes and regulations.

2.1.4 Partner Organizations Roles

The City often partners with local governmental agencies, educational institutions, non-profit organizations, watershed groups, businesses, and other stakeholders to support implementation of the City's Program. These partnerships may provide technical assistance, public education and outreach support, volunteer participation, monitoring assistance, watershed stewardship activities, or other resources that enhance Program effectiveness. Partner organizations supplement, but do not replace, the City's responsibilities under the Small MS4 permit.

Although implementation of specific activities may involve external partners, the City remains responsible for administration of the City's Program and for ensuring compliance with the requirements of the Small MS4 permit.

2.2 Qualifying Local Program (QLP)

The City participates in Tennessee's Qualifying Local Program (QLP) and was the first to be certified by TDEC in 2016. The QLP designation allows TDEC to formally recognize a local MS4 construction stormwater management program that meets or exceeds the requirements of the State's Construction General Permit. Under this program, qualifying local governments administer construction stormwater requirements through local regulatory and administrative procedures rather than through separate and potentially duplicative state and local processes.

Participation in the QLP provides a more streamlined and efficient approach to implementing construction stormwater requirements by coordinating local development review and stormwater management activities. The QLP is administered by the Utilities Department and is implemented through the City's established review, inspection, and enforcement procedures. This approach allows stormwater management requirements to be addressed through the City's established review, inspection, and enforcement procedures while maintaining consistency with applicable state requirements. The QLP also provides a single, coordinated process for developers and property owners working within the City's jurisdiction.

CHAPTER 3 — CITY OF KINGSFORT STORMWATER MANAGEMENT PROGRAM ELEMENTS

This chapter describes the Program elements implemented by the City to satisfy the requirements of the Small MS4 permit. These Program elements include activities associated with special permit conditions, the six minimum control measures (MCMs), stormwater monitoring, enforcement, Program evaluation, annual reporting, and Program modifications. Together, these elements comprise the City's Program and support the City's efforts to reduce pollutant discharges from the MS4, protect water quality, and maintain compliance with applicable permit requirements.

The City implements these Program elements through a combination of ordinances, procedures, inspections, monitoring activities, public education efforts, maintenance programs, and other administrative measures. Detailed implementation procedures, standards, and requirements are provided in the supporting plans and documents identified in **Table 1-2**. Where applicable, this chapter references those documents rather than duplicating information contained within them.

Table 3-1 summarizes the permit requirements addressed by the City's Program and identifies the supporting plans and documents used to implement each Program element. Subsequent sections describe how the City satisfies these requirements and maintains compliance with the Small MS4 permit.

Table 3-1 Summary of Permit Requirements

Program Element	Small MS4 Permit Reference	Supporting Plan(s) or Document(s)
Special Conditions	Part 3.1	Exceptional Tennessee Waters; EPA Approved Lists of Impaired and Threatened Waters; Tennessee Total Maximum Daily Load (TMDL) Program; monitoring records and procedures maintained by the City; this SWMP.
Public Education and Outreach (MCM 1)	Part 4.2.1	<i>Public Information and Education (PIE) Plan</i> (Appendix A)
Public Involvement and Participation (MCM 2)	Part 4.2.2	<i>Public Involvement and Participation Plan</i> (Appendix B)
Illicit Discharge Detection and Elimination (MCM 3)	Part 4.2.3	City's Stormwater Management Ordinance; IDDE Standard Operating Procedures (Appendix C); Storm Sewer System Map
Construction Site Stormwater Runoff Control (MCM 4)	Part 4.2.4	City's Stormwater Management Ordinance; <i>Northeast Tennessee Water Quality SCM Manual</i>

Program Element	Small MS4 Permit Reference	Supporting Plan(s) or Document(s)
Post-Construction Stormwater Management (MCM 5)	Part 4.2.5	<i>City's Stormwater Management Ordinance; Northeast Tennessee Water Quality SCM Manual; Northeast Tennessee SCM Inspection & Maintenance Manual</i>
Pollution Prevention and Good Housekeeping for Municipal Operations (MCM 6)	Part 4.2.6	Municipal Facility Plans and Standard Operating Procedures (Appendix C)
Stormwater Monitoring	Part 4.6.1	Storm Sewer System Map; <i>Quality System Standard Operating Procedure for Macroinvertebrate Stream Surveys; Field Stream Survey and Habitat Sheets; Macroinvertebrate Taxa Reports; Quality Systems Standard Operating Procedure (QSSOP) for Chemical and Bacteriological Sampling of Surface Water</i> ; monitoring records and procedures maintained by the City
Stormwater Program Enforcement Response	Part 4.5	<i>Enforcement Response Plan</i> (Appendix D)
Program Evaluation	Part 4.6.2	City's annual report
Annual Reporting	Part 5	City's annual report
Program Modifications	Part 4.4	SWMP

3.1 Special Conditions

Part 3 of the Small MS4 permit establishes additional requirements for discharges to waters with unavailable parameters, exceptional Tennessee waters, and waters subject to EPA-approved or established total maximum daily loads (TMDLs). These requirements are intended to ensure that permittees identify receiving waters subject to special regulatory considerations and implement best management practices (BMPs) designed to reduce pollutant discharges to the maximum extent practicable (MEP). The permit also requires the City to evaluate the effectiveness of BMPs through monitoring and other Program evaluation activities, as applicable.

The City utilizes the TDEC publications identified in **Table 1-2** to determine whether waters receiving discharges from the MS4 are subject to these requirements. When TDEC publishes updated water quality assessment information, the City evaluates the information to determine whether modifications to BMP implementation, monitoring activities, or other Program elements are warranted.

The City addresses these requirements through implementation of the minimum control measures (MCMs) described in Section 3.2 and the stormwater monitoring program described in Section 3.3. Applicable activities may include public education and outreach, public involvement and participation, illicit discharge detection and elimination, construction site stormwater runoff control, post-construction stormwater management, pollution prevention and good housekeeping practices, enforcement, and stormwater monitoring. Monitoring activities described in Section 3.3 are used, as appropriate, to evaluate BMP effectiveness, assess compliance with applicable permit requirements, and support the City's annual Program evaluation process.

3.1.1 Waters with Unavailable Parameters and Exceptional Tennessee Waters

The Small MS4 permit includes additional requirements for discharges to receiving waters identified by the TDEC as having unavailable parameters and discharges to applicable exceptional Tennessee waters. These requirements are intended to ensure that stormwater management activities address pollutants of concern and support protection of water quality.

The City utilizes the TDEC publications identified in **Table 1-2** to determine whether waters receiving discharges from the MS4 are subject to additional permit requirements.

Waters with Unavailable Parameters

Waters with unavailable parameters are waterbodies that do not meet one or more applicable water quality standards and are identified by TDEC in the *EPA Approved Lists of Impaired and Threatened Waters*.

The publication provides information used by the City to:

- Identify receiving waterbodies affected by discharges from the MS4 that have unavailable parameters.
- Identify pollutants or parameters of concern associated with affected waterbodies.
- Determine whether additional stormwater management activities, BMPs, monitoring activities, or Program modifications are warranted.
- Evaluate changes to receiving water conditions when TDEC publishes updated assessment information.

Exceptional Tennessee Waters

Exceptional Tennessee waters (ETW) are waterbodies designated by the Tennessee Water Quality Control Board as having outstanding resource value or other special characteristics identified in Tennessee water quality regulations.

The City utilizes TDEC's *Exceptional Tennessee Waters* publication to:

- Identify receiving waterbodies within the City's jurisdiction that have been designated as an ETW.
- Determine whether stormwater management activities, BMPs, monitoring activities, or Program modifications are warranted to protect the ETW.
- Support protection of waterbodies with special environmental, recreational, ecological, or water supply value.

3.1.2 EPA-Approved or Established TMDLs

A TMDL is a regulatory document developed by TDEC that identifies pollutant reduction goals needed to restore an impaired waterbody. EPA-approved or established TMDLs may establish requirements applicable to discharges from MS4s within the affected watershed and require implementation of BMPs designed to address identified pollutants of concern.

The City utilizes the TDEC publications identified in **Table 1-2** to determine whether waters receiving discharges from the MS4 are subject to EPA-approved or established TMDLs.

Tennessee Total Maximum Daily Load (TMDL) Program

The *Tennessee Total Maximum Daily Load (TMDL) Program* publication provides information used by the City to:

- Identify waters receiving discharges from the MS4 that are subject to EPA-approved or established TMDLs.
- Identify pollutants of concern addressed by applicable TMDLs.
- Determine whether pollutant reduction goals, waste load allocations, or other TMDL requirements apply to discharges from the City's MS4.
- Evaluate whether modifications to BMP implementation, monitoring activities, or other Program elements are warranted to address applicable TMDL requirements.

3.2 Minimum Control Measures (MCMs)

The Small MS4 permit requires the City to implement six MCMs designed to reduce pollutant discharges from the MS4, protect water quality, and satisfy applicable permit requirements. The activities and procedures implemented under the MCMs form the foundation of the City's Program and serve as the primary means by which the City addresses pollutants of concern associated with the special conditions detailed in Section 3.1.

The six Minimum Control Measures implemented by the City and the primary goal of each Program element are summarized below:

- **Public Education and Outreach (MCM 1)** – Increase public awareness of stormwater impacts and promote behaviors that reduce pollutant discharges to the MS4.
- **Public Involvement and Participation (MCM 2)** – Encourage public participation in activities that support protection of water quality and implementation of the Program.
- **Illicit Discharge Detection and Elimination (MCM 3)** – Reduce pollutant discharges to the MS4 by preventing, identifying, and eliminating illicit discharges and other prohibited non-stormwater discharges.
- **Construction Site Stormwater Runoff Control (MCM 4)** – Minimize pollutant discharges from construction activities through implementation of erosion prevention and sediment control measures.
- **Post-Construction Stormwater Management (MCM 5)** – Minimize long-term stormwater runoff impacts from development and redevelopment through the use of permanent stormwater management practices.

- **Pollution Prevention and Good Housekeeping for Municipal Operations (MCM 6)** – Reduce pollutant discharges associated with municipal facilities, operations, and maintenance activities through implementation of pollution prevention and good housekeeping practices.

The following sections describe the activities, procedures, and supporting documents used by the City to implement each MCM and achieve the goals identified above.

3.2.1 Public Education and Outreach (MCM 1)

The goal of the City's public education and outreach MCM is to increase public awareness of stormwater impacts and promote behaviors that reduce pollutant discharges to the MS4 through targeted education and outreach activities directed toward the public, the engineering and development community, and City employees.

The remainder of Section 3.2.1 describes the activities, procedures, measurable goals, compliance tracking mechanisms, and supporting documents used by the City to implement the public education and outreach program and satisfy the requirements of Part 4.2.1 of the Small MS4 permit.

1) PROGRAM ELEMENT: PUBLIC INFORMATION AND EDUCATION (PIE) PLAN

a) **Regulatory Reference:** Part 4, Section 4.2.1

The permit requires the City's public education and outreach program to reach three major audiences: (1) the public; (2) the engineering and development community; and (3) City employees. Parts 4.2.1.1 through 4.2.1.3 of the permit establish the management measures that must be addressed for each audience, as well as the measurable goals and annual report requirements for activities performed by the City. In addition, the program must be documented in a written *Public Information and Education (PIE) Plan*, to include:

- Specific public information/education activities that are designed to meet the management measure;
- Identification of job categories and applicable management measures for employee education;
- A schedule/calendar of events for each year; and,
- Methodology to evaluate components to assess overall effectiveness and the need for improvement

b) **Responsible Party/Department**

Stormwater Services

c) **Activity Description**

The City's *Public Information and Education (PIE) Plan* documents the activities, procedures, schedules, and implementation measures used to satisfy the public education and outreach requirements of the Small MS4 permit. The plan is designed to reach the three major audiences identified in the permit: (1) the public, (2) the engineering and development community, and (3) City employees. The plan identifies the activities the City will implement to address the applicable management measures and measurable goals established for each audience and describes how the City will provide stormwater education and outreach on topics related to stormwater impacts, pollution prevention, and protection of water quality. The plan also identifies implementation schedules, documentation requirements, and program evaluation procedures used to assess program effectiveness and support annual reporting requirements.

d) **Measurable Goals and Implementation Schedule**

Measurable goals, implementation schedules, annual activity commitments, and tracking metrics are documented in the PIE Plan.

e) Compliance Tracking and Documentation

Participation records, educational material distribution records, website updates, event records, and other documentation required by the PIE Plan are maintained in an electronic database for annual reporting purposes.

f) Supporting Documents

The City's *Public Information and Education Plan* (Appendix A)

3.2.2 Public Involvement and Participation (MCM 2)

The goal of the public involvement and participation MCM is to encourage public participation in activities that support protection of water quality and implementation of the Program by providing opportunities for involvement, feedback, and citizen reporting of stormwater-related concerns.

The remainder of Section 3.2.2 describes the activities, procedures, measurable goals, compliance tracking mechanisms, and supporting documents used by the City to implement the public involvement and participation program and satisfy the requirements of Part 4.2.2 of the Small MS4 permit.

1) PROGRAM ELEMENT: PUBLIC INVOLVEMENT AND PARTICIPATION PLAN

a) Regulatory Reference: Part 4, Section 4.2.2

The Small MS4 permit requires the City to provide opportunities for public involvement and participation in the development, implementation, and improvement of the Program. Parts 4.2.2.1 and 4.2.2.2 of the permit establish the management measures, measurable goals, and annual reporting requirements for public involvement and participation activities targeting the two major audiences identified in the permit: (1) the general public and (2) the commercial and development community. In addition, the program must be documented in a written *Public Involvement and Participation Plan*.

b) Responsible Party/Department

Stormwater Services

c) Activity Description:

The City's *Public Involvement and Participation Plan* documents the activities, procedures, schedules, and implementation measures used to satisfy the Public Involvement and Participation requirements of the Small MS4 permit. The plan is designed to reach the two major audiences identified in the permit: (1) the general public and (2) the commercial and industrial community. The plan identifies the activities the City will implement to address applicable management measures and measurable goals for each audience, including opportunities for public participation in stormwater management activities, mechanisms for citizen reporting of illicit discharges and illegal dumping, public access to information regarding development and redevelopment projects, and opportunities for public involvement in the development, implementation, and update of the Program. The plan also identifies implementation schedules, documentation requirements, and program evaluation procedures used to assess program effectiveness and support annual reporting requirements.

d) Measurable Goals and Implementation Schedule

Measurable goals, implementation schedules, and annual activity commitments are documented in the *Public Involvement and Participation Plan*.

e) Compliance Tracking and Documentation

Public notices, public comments, citizen reports, participation records, event records, and other documentation required by the *Public Involvement and Participation Plan* are maintained in an electronic database for annual reporting purposes.

f) Supporting Documents

The City's *Public Involvement and Participation Plan* (Appendix B)

3.2.3 Illicit Discharge Detection and Elimination (MCM 3)

The goal of the illicit discharge detection and elimination (IDDE) MCM is to reduce pollutant discharges to the MS4 by preventing, identifying, investigating, and eliminating illicit discharges and other prohibited non-stormwater discharges. The City complies with MCM requirements through a combination of legal authority, storm sewer system mapping, public reporting mechanisms, field investigations, enforcement activities, and employee training.

The City's IDDE program consists of the following Program elements:

- Storm sewer system mapping
- Ordinance for prohibiting non-stormwater discharges
- Illicit discharge detection, investigation, and elimination
- Significant non-stormwater discharge identification and evaluation
- Employee education and awareness
- Public reporting of potential illicit discharges

The remainder of Section 3.2.3 describes the activities, procedures, measurable goals, compliance tracking mechanisms, and supporting documents used by the City to implement each Program element and satisfy the requirements of Part 4.2.3 of the Small MS4 permit.

1) PROGRAM ELEMENT: STORM SEWER SYSTEM MAPPING

a) Regulatory Reference: Part 4, Section 4.2.3.1

The permit requires the City to develop and maintain a storm sewer system map that identifies the components of the MS4 and supports implementation of the IDDE program. The storm sewer system map must be maintained and updated as necessary to reflect changes to the MS4 and to support identification, investigation, and elimination of illicit discharges.

b) Responsible Party/Department

Stormwater Services with support from City's GIS staff, as applicable.

c) Activity Description

The City maintains a GIS-based storm sewer system map that serves as a primary tool for implementation of the IDDE program. The map is used to identify stormwater infrastructure, receiving waters, and outfall locations; support outfall inspections and illicit discharge investigations; assist in tracing potential sources of illicit discharges; and document updates to the MS4 as new infrastructure is constructed or existing infrastructure is modified. The storm sewer system map is available through the City's GIS mapping system and is maintained as part of the City's Program.

d) Measurable Goals and Implementation Schedule

- Maintain a storm sewer system map that meets the requirements of Part 4.2.3.1 of the Small MS4 permit.
- Update the map as new stormwater infrastructure is constructed, or existing infrastructure is modified.

- Utilize the map to support outfall inspections, illicit discharge investigations, and other IDDE activities.
- **Implementation Schedule:** Ongoing. The storm sewer system map is maintained throughout the permit term and updated as necessary to reflect changes to the MS4.
- e) **Compliance Tracking and Documentation**
The City maintains the storm sewer system map within its GIS mapping system and provides the map URL in its annual report in accordance with permit requirements.
- f) **Supporting Documents**
Storm sewer system map found on the City's website

2) PROGRAM ELEMENT: ORDINANCE FOR PROHIBITING NON-STORMWATER DISCHARGES

- a) **Regulatory Reference:** Part 4, Section 4.2.3(b)
The permit requires the City to maintain legal authority to prohibit illicit discharges and other prohibited non-stormwater discharges to the MS4. The regulatory mechanism must provide the authority necessary to inspect potential sources of illicit discharges, require corrective actions, and implement enforcement measures when violations occur.
- b) **Responsible Party/Department**
Stormwater Services with support from the City Attorney's Office and Board of Mayor and Aldermen, as applicable.
- c) **Activity Description**
The City maintains a regulatory mechanism through its *Stormwater Management Ordinance* to prohibit illicit discharges, illegal dumping, and other prohibited non-stormwater discharges to the MS4. The ordinance establishes the legal authority necessary to administer the IDDE program, including the authority to inspect potential sources of illicit discharges, require corrective actions, and implement enforcement measures when violations occur. The ordinance is supported by the City's *Enforcement Response Plan* and Illicit discharge standard operating procedures, which establish procedures for implementing and enforcing ordinance requirements.
- d) **Measurable Goals and Implementation Schedule**
 - Enforce the *Stormwater Management Ordinance*
 - Review and revise the *Stormwater Management Ordinance*, as necessary, to maintain consistency with applicable permit requirements, state regulations, and local Program needs.
 - **Implementation Schedule:** Ongoing. The *Stormwater Management Ordinance* is implemented and enforced throughout the year and reviewed periodically to determine whether updates are warranted.
- e) **Compliance Tracking and Documentation**
Annual report documentation includes confirmation that the City maintains and enforces a regulatory mechanism prohibiting illicit discharges and other unauthorized non-stormwater discharges to the MS4.
- f) **Supporting Documents**
City's Stormwater Management Ordinance

3) PROGRAM ELEMENT: ILLICIT DISCHARGE DETECTION, INVESTIGATION, AND ELIMINATION PROGRAM

- a) **Regulatory Reference:** Part 4, Section 4.2.3(c)

The permit requires the City to implement procedures for detecting, investigating, tracing, and eliminating illicit discharges and other prohibited non-stormwater discharges to the MS4. The program must include procedures for responding to suspected illicit discharges, identifying the source of the discharge, eliminating confirmed illicit discharges, documenting investigation activities, and implementing enforcement actions when necessary.

b) Responsible Party/Department

Stormwater Services

c) Activity Description

The City implements an illicit discharge detection, investigation, and elimination program to identify, investigate, trace, and eliminate illicit discharges and other prohibited non-stormwater discharges to the MS4. The City's *Stormwater Management Ordinance* establishes requirements related to illicit discharges and provides the authority necessary to investigate suspected violations, require corrective actions, and implement enforcement measures. The program is further implemented through procedures established in the *Stormwater Standard Operating Procedures and Enforcement Response Plan*.

Potential illicit discharges may be identified through citizen complaints, observations by City personnel, dry-weather screening activities, routine field activities, and other investigations. Reported incidents are documented and investigated in accordance with established procedures. When evidence of a potential illicit discharge is observed, City staff conduct field investigations and utilize available information, including the storm sewer system map, to identify and trace the source of the discharge.

When an illicit discharge is confirmed, the City works with the responsible party to eliminate the discharge and implement corrective actions. Enforcement actions are implemented in accordance with the *Enforcement Response Plan* when necessary. If an illicit discharge cannot be eliminated within the timeframe established by the permit, a corrective action plan may be required. If the source of a confirmed illicit discharge cannot be identified after a comprehensive investigation, the City refers the matter to TDEC in accordance with permit requirements.

d) Measurable Goals and Implementation Schedule

- Investigate reports of potential illicit discharges in accordance with established procedures and initiate investigations within seven calendar days of receiving a complaint.
- Implement initial enforcement actions within seven calendar days of completing an investigation when an illicit discharge is confirmed.
- Eliminate confirmed illicit discharges as soon as practicable.
- Require development of a corrective action plan when elimination of a confirmed illicit discharge is expected to exceed fourteen calendar days following notification of the responsible party.
- Refer confirmed illicit discharges to TDEC within fourteen calendar days of completing a comprehensive investigation when the responsible party or source cannot be identified.
- Conduct illicit discharge detection, investigation, tracing, elimination, and enforcement activities in accordance with the *Stormwater Standard Operating Procedures and Enforcement Response Plan*.

Implementation Schedule: Ongoing. Complaint response, investigations, source tracing, discharge elimination, and enforcement activities are conducted throughout the year as potential illicit discharges are identified.

e) Compliance Tracking and Documentation

Complaint records, inspection reports, investigation records, discharge tracing documentation, corrective action plans, enforcement records, referrals to TDEC, and discharge elimination documentation are maintained electronically and tracked through the City's IDDE program. Documentation is used to demonstrate compliance with investigation, enforcement, discharge elimination, and referral timeframes established in the Small MS4 permit and to support annual reporting requirements.

Annual report documentation includes:

- Number of illicit discharge complaints received.
- Number of investigations conducted.
- Number of confirmed illicit discharges identified.
- Number of illicit discharges eliminated.
- Number of enforcement actions issued.
- Number of referrals made to TDEC.

f) Supporting Documents

- City's *Stormwater Management Ordinance*
- Illicit Discharge SOPs (*Complaint Response and Tracking, Illicit Discharge Investigation, Outfall Inspections, Illicit Discharge Removal, Tracing Illicit Discharges*)
- *Enforcement Response Plan*
- Storm sewer system map

4) PROGRAM ELEMENT: SIGNIFICANT NON-STORMWATER DISCHARGE IDENTIFICATION AND EVALUATION

a) Regulatory Reference: Part 4, Section 4.2.3(d)

The permit requires the City to identify non-stormwater discharges that are not otherwise prohibited by the Small MS4 permit and evaluate whether the discharge is a significant contributor of pollutants to the MS4. If a discharge is determined to be a significant contributor of pollutants, the City must implement measures to address the discharge and document the evaluation process.

b) Responsible Party/Department

Stormwater Services

c) Activity Description

The City's *Stormwater Management Ordinance* recognizes certain allowable non-stormwater discharges that may enter the MS4. The City evaluates allowable non-stormwater discharges identified through inspections, investigations, public reports, or other Program activities to determine whether they are significant contributors of pollutants to the MS4.

d) Measurable Goals and Implementation Schedule

- Annually review allowable non-stormwater discharges identified through Program activities.
- Evaluate identified non-stormwater discharges to determine whether they are significant contributors of pollutants to the MS4.

- **Implementation Schedule:** Annually during preparation of the City's annual report and throughout the year as potential significant non-stormwater discharges are identified.
- e) **Compliance Tracking and Documentation**

Records of non-stormwater discharge evaluations, supporting observations, investigation documentation, and corrective actions are maintained electronically and tracked through the City's Program.

Annual report documentation includes:

 - Number of non-stormwater discharges investigated.
 - Number of non-stormwater discharges identified as significant contributors of pollutants.
 - Confirmation of whether identified non-stormwater discharges were determined to be significant contributors of pollutants to the MS4.
- f) **Supporting Documents**

City's Stormwater Management Ordinance

5) PROGRAM ELEMENT: ILLICIT DISCHARGE INFORMATION AND AWARENESS

- a) **Regulatory Reference:** Part 4, Section 4.2.3(e)

The Small MS4 permit requires the City to inform public employees, businesses, and the general public of the hazards associated with illicit discharges and improper waste disposal practices. The program must also provide education regarding identification and reporting of illicit discharges and ensure that employee training is documented.
- b) **Responsible Party/Department**

Stormwater Services
- c) **Activity Description**

The City addresses illicit discharge information and awareness requirements through implementation of the *Public Information and Education (PIE) Plan* described in Section 3.2.1. The PIE Plan includes education and outreach activities directed toward public employees, businesses, and the general public regarding the identification, prevention, and reporting of illicit discharges, illegal dumping, and improper waste disposal practices. The plan also identifies employee groups requiring stormwater-related training and establishes procedures for documenting completion of employee education activities.
- d) **Measurable Goals and Milestones**
 - Implement illicit discharge information and awareness activities identified in the PIE Plan.
 - Provide education and outreach to public employees, businesses, and the general public regarding illicit discharge prevention and reporting.
 - Provide employee training in accordance with the requirements of the PIE Plan and document training completion.
 - **Implementation Schedule:** Activities are implemented in accordance with the schedules established in the PIE Plan
- e) **Compliance Tracking and Documentation**

Documentation required by the *Public Information and Education (PIE) Plan* is maintained electronically and tracked through the City's annual reporting process. As identified in the PIE Plan, documentation may include training records, attendance records, educational materials, outreach activity records, website information, participation records, and other information necessary to demonstrate completion of measurable goals and satisfy annual reporting

requirements. The specific documentation maintained and reported for each activity is identified in the PIE Plan.

f) Supporting Documents

Public Information and Education (PIE) Plan

6) PROGRAM ELEMENT: PUBLIC REPORTING OF POTENTIAL ILLICIT DISCHARGES

a) Regulatory Reference: Part 4, Section 4.2.3(f)

The permit requires the City to provide a mechanism for the public to report suspected illicit discharges, illegal dumping, spills, and other stormwater related issues.

b) Responsible Party/Department

Stormwater Services

c) Activity Description

The City provides multiple mechanisms for the public to report suspected illicit discharges, illegal dumping, spills, clogged storm drains, drainage concerns, and other stormwater-related issues. Reports may be submitted through the City's stormwater webpage, the ConnectKingsport mobile application, or by contacting Stormwater Services using the contact information provided on the City's stormwater webpage.

d) Measurable Goals and Milestones

- Maintain mechanisms for public reporting of suspected illicit discharges and other stormwater-related concerns.
- **Implementation Schedule:** Ongoing. Public reporting mechanisms are available 365 days per year.

e) Compliance Tracking and Documentation

Records related to public reporting activities are maintained electronically and tracked through the City's Program. Annual report documentation includes the number of reports or complaints received from the public through the City's reporting system and the number of potential illicit discharges reported by the public.

f) Supporting Documents

City stormwater website

ConnectKingsport Mobile Application

3.2.4 Construction Site Stormwater Runoff Control (MCM 4)

The goal of the construction site stormwater runoff control MCM is to minimize pollutant discharges from construction activities by requiring erosion prevention and sediment control measures, construction site pollution prevention practices, and compliance with applicable local and state stormwater requirements. The City complies the requirements of the MCM through its Qualifying Local Program (QLP), which is administered in accordance with the City's *Stormwater Management Ordinance*, review and approval procedures, inspection program, enforcement procedures, and technical standards. Through participation in the QLP, the City administers construction stormwater requirements through a coordinated local program that satisfies applicable requirements of the Tennessee Construction General Permit and the Small MS4 permit. The City's QLP is described in Section 2.2.

The City's construction site stormwater runoff control program consists of the following Program elements:

- The City's *Stormwater Management Ordinance*

- Erosion prevention, sediment control, and construction site pollution prevention requirements
- Construction site plan review, approval, and pre-construction coordination
- Active construction site inventory
- Public access and public comments on development and redevelopment projects
- Construction site inspection program
- Construction program staff qualifications
- Priority construction activity program

The remainder of Section 3.2.4 describes the activities, procedures, measurable goals, compliance tracking mechanisms, and supporting documents used by the City to implement each Program element and satisfy the requirements of Part 4.2.4 of the Small MS4 permit.

1) PROGRAM ELEMENT: STORMWATER MANAGEMENT ORDINANCE

a) **Regulatory Reference:** Part 4, Section 4.2.4(a)

The permit requires the City to maintain a regulatory mechanism to control stormwater runoff from construction activities that result in a land disturbance of one acre or greater, or activities that are part of a larger common plan of development or sale. The regulatory mechanism must provide the authority necessary to require erosion prevention and sediment control measures, conduct inspections, require corrective actions, and implement enforcement measures when violations occur.

b) **Responsible Party/Department**

Stormwater Services, with support from the City Attorney's Office and Board of Mayor and Aldermen, as applicable.

c) **Activity Description**

The City's *Stormwater Management Ordinance* establishes the legal authority necessary to implement the city's construction site stormwater runoff control program and establishes requirements for land-disturbing activities, stormwater pollution prevention plans (SWPPPs), construction site inspections, corrective actions, enforcement, and priority construction activities. The ordinance references and incorporates applicable requirements of the Tennessee Construction General Permit (TN CGP), including standards for erosion prevention and sediment control, inspection and maintenance activities, and protection of sensitive receiving waters. By referencing the current TN CGP, the City's construction stormwater program remains consistent with applicable state requirements and technical standards as permit requirements are updated. The ordinance supports the City's *Enforcement Response Plan*, *Northeast Tennessee Water Quality Stormwater Control Measure (SCM) Manual*, and other program implementation documents.

d) **Measurable Goals and Implementation Schedule**

- Enforce the *Stormwater Management Ordinance*.
- Maintain regulatory authority consistent with the requirements of Part 4.2.4 of the Small MS4 permit and Tennessee CGP.
- **Implementation Schedule:** Ongoing. The *Stormwater Management Ordinance* is implemented and enforced throughout the year and reviewed periodically to determine whether updates are warranted.

e) **Compliance Tracking and Documentation:** Annual report documentation includes confirmation that the City maintains legal authority to regulate construction site stormwater runoff in accordance with the Small MS4 permit requirements.

f) **Supporting Documents**

2) PROGRAM ELEMENT: EROSION PREVENTION, SEDIMENT CONTROL, AND CONSTRUCTION SITE POLLUTION PREVENTION REQUIREMENTS

a) **Regulatory Reference:** Part 4, Sections 4.2.4(b) and 4.2.4(e)

Part 4.2.4(b) requires the City to maintain requirements for erosion prevention and sediment control (EPSC) practices that minimize the discharge of pollutants from construction activities.

Part 4.2.4(e) requires construction site operators to control construction-related wastes and other potential pollutant sources, including discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste, to prevent adverse impacts to water quality.

b) **Responsible Party/Department**

Stormwater Services, with support from with support from the City Attorney's Office and Board of Mayor and Aldermen, as applicable.

c) **Activity Description**

The City's *Stormwater Management Ordinance* requires regulated construction activities to implement erosion prevention and sediment control (EPSC) practices and pollution prevention measures that minimize pollutant discharges to the MS4 and receiving waterbodies. The ordinance requires land-disturbing activities to obtain approval of a Stormwater Pollution Prevention Plan (SWPPP) and implement BMPs designed to prevent erosion, control sediment transport, and reduce construction-related pollutant discharges. The ordinance adopts the *Tennessee Erosion Prevention and Sediment Control Handbook* as the City's design standard for EPSC practices and requires SWPPPs to be prepared in accordance with the current Tennessee CGP.

The City's requirements address erosion prevention measures, sediment controls, stabilization practices, construction-related waste management, concrete washout controls, material storage, pollutant spill prevention, off-site sediment tracking, and other pollution prevention measures necessary to minimize the discharge of pollutants from construction activities. Construction site operators are responsible for implementing and maintaining required BMPs throughout the duration of land-disturbing activities.

d) **Measurable Goals and Implementation Schedule**

- Require regulated construction activities to implement erosion prevention and sediment control (EPSC) practices designed to minimize pollutant discharges from construction sites.
- Require construction site operators to implement pollution prevention measures that address construction-related wastes, concrete washout, material storage, sanitary waste, off-site sediment tracking, and other potential pollutant sources.
- Require SWPPPs to be prepared and implemented in accordance with applicable City requirements, the current *Tennessee Erosion Prevention and Sediment Control Handbook*, and the current TN CGP
- **Implementation Schedule:** Ongoing. Requirements apply to regulated construction activities throughout the duration of land-disturbing activities.

e) **Compliance Tracking and Documentation**

Compliance is tracked through approved SWPPPs, construction plans, inspection records, corrective action documentation, and other records maintained as part of the City's construction stormwater program. Documentation is maintained in accordance with City procedures and applicable permit requirements.

Annual report documentation includes:

- Confirmation that the City maintains requirements for erosion prevention and sediment control practices at regulated construction sites.
- Confirmation that the City maintains requirements for controlling construction-related wastes and other pollutant sources at regulated construction sites.

f) Supporting Documents

City's Stormwater Management Ordinance

Tennessee Construction General Permit

Tennessee Erosion Prevention and Sediment Control Handbook

3) PROGRAM ELEMENT: CONSTRUCTION SITE PLAN REVIEW, APPROVAL, AND PRE-CONSTRUCTION COORDINATION

a) Regulatory Reference: Part 4, Section 4.2.4(c) and Part 4.2.4(f)

Part 4.2.4(c) requires the City to establish procedures for reviewing and approving construction site stormwater management plans and erosion prevention and sediment control (EPSC) plans. Part 4.2.4(f) requires the City to maintain procedures for construction plan review and approval that evaluate plan completeness, potential water quality impacts, and the adequacy and effectiveness of proposed stormwater management measures.

b) Responsible Party/Department

Stormwater Services Utilities Department in association with the Engineering Department

c) Activity Description

The City reviews construction site plans, Notices of Intent (NOIs), SWPPPs, and supporting documentation for regulated construction activities to verify compliance with the *Stormwater Management Ordinance*, the TN CGP, and applicable City stormwater management requirements. Submitted materials are reviewed for completeness and evaluated to determine whether proposed EPSC measures, construction site pollution prevention practices, and other stormwater controls are adequate to minimize potential water quality impacts. Reviewers utilize established procedures and standardized review checklists to evaluate submittals and identify deficiencies requiring revision prior to approval.

As an approved QLP, the City administers construction stormwater permits for regulated construction activities within its jurisdiction. Applicants submit NOIs, SWPPPs, and supporting documentation to the City for review. The City provides comments for the applicant when revisions to submitted documents are necessary. Revised plans are reviewed until all applicable requirements are satisfied. Following approval of the required submittals, the City issues a Notice of Coverage (NOC) that provides coverage under the TN CGP and authorizes the permittee to proceed in accordance with approved plans and permit requirements.

Following plan approval, the City conducts a pre-construction meeting with project representatives prior to the start of land-disturbing activities. The pre-construction meeting provides an opportunity to review permit requirements, approved stormwater controls,

inspection expectations, project responsibilities, and other site-specific considerations necessary to support compliance throughout construction.

d) Measurable Goals and Implementation Schedule

- Review 100 % of construction site plans, Notices of Intent (NOIs), Stormwater Pollution Prevention Plans (SWPPPs), and supporting documentation for regulated construction activities in accordance with established review procedures.
- Evaluate submitted plans for completeness, potential water quality impacts, and the adequacy and effectiveness of proposed erosion prevention, sediment control, and pollution prevention measures.
- Provide review comments and conduct additional reviews of revised plans, as necessary, until applicable requirements are satisfied.
- Review and approve all construction site plans requiring review under the City's Qualifying Local Program (QLP).
- Conduct pre-construction meetings for construction activities requiring permit coverage under the City's QLP.
- **Implementation Schedule:** Ongoing. Construction site plans are reviewed as applications are received. Pre-construction meetings are conducted prior to commencement of land-disturbing activities for projects requiring permit coverage under the City's QLP.

e) Compliance Tracking and Documentation

Construction site plan review records, NOIs, SWPPPs, review checklists, review comments, approval documentation, NOCs, pre-construction meeting records, and related correspondence are maintained electronically and tracked through the City's construction stormwater management program.

Annual report documentation includes:

- Number of construction site plans reviewed.
- Confirmation that construction site plans were reviewed in accordance with established review and approval procedures.
- Confirmation that 100 percent of applicable construction site plans received review in accordance with permit requirements.

f) Supporting Documents

- City's *Stormwater Management Ordinance*
- Tennessee CGP
- Kingsport NOI and SWPPP Checklist
- Site Plan Review SOP

4) PROGRAM ELEMENT: ACTIVE CONSTRUCTION SITE INVENTORY

a) Regulatory Reference: Part 4, Section 4.2.4(d)

Part 4.2.4(d) requires the City to maintain an inventory of actively permitted public and private construction sites subject to the construction site stormwater runoff control program. The inventory must be updated as projects are permitted and completed and must include project-specific information state in the Small MS4 permit. The inventory must be submitted to TDEC quarterly.

b) Responsible Party/Department

Stormwater Services

c) Activity Description

The City maintains an inventory of active public and private construction sites requiring coverage under the City's Qualifying Local Program (QLP). The inventory is updated as construction activities receive permit coverage and as projects achieve final stabilization and permit termination. The inventory includes project identification and contact information, project acreage and disturbed area, construction stormwater permit coverage status, and construction site plan approval information. The inventory is used to track active construction activities, support implementation of the construction stormwater runoff control program, and demonstrate compliance with permit requirements. The City maintains inventory records and associated permit documentation and makes inventory information available to TDEC quarterly.

d) Measurable Goals and Implementation Schedule

- Maintain the inventory information required by Part 4.2.4(d) of the Small MS4 Permit for active construction activities.
- Update the inventory as new construction activities receive permit coverage and as construction activities are completed and permit coverage is terminated.
- **Implementation Schedule:** Ongoing. The inventory is updated throughout the year as construction activities receive permit coverage, remain active, or are terminated. Quarterly reporting of the active list to TDEC is a QLP requirement.

e) Compliance Tracking and Documentation

Documentation is maintained electronically and used to demonstrate compliance with inventory requirements and support annual reporting requirements.

Annual report documentation includes:

- Total number of active construction activities.
- Total number of active non-priority construction activities with incomplete inventory information.

f) Supporting Documents

Active construction site inventory database

5) PROGRAM ELEMENT: PUBLIC ACCESS AND PUBLIC COMMENTS ON DEVELOPMENT AND REDEVELOPMENT PROJECTS

a) Regulatory Reference: Part 4, Section 4.2.4(g)

Part 4.2.4(e) requires the City to provide public access to information on proposed new development and redevelopment projects and to maintain methods for receiving and considering public comments on those projects.

b) Responsible Party/Department

Stormwater Services

c) Activity Description

Members of the public may request information or submit comments through direct contact with City staff, the City's website, and public meetings of the Kingsport Regional Planning Commission and Board of Mayor and Aldermen. Public comments and requests, along with City responses, are recorded as part of the administration of the construction stormwater runoff control program.

d) Measurable Goals and Implementation Schedule

- Maintain public access to information for construction site projects subject to the City's construction stormwater runoff control program.
- Review and consider public comments received regarding construction site projects.
- Maintain documentation of public comments and City responses, as applicable.

- **Implementation Schedule:** Ongoing. Public access to construction site information and opportunities for public comment are maintained throughout the permit term. Public comments are reviewed and considered as they are received.

e) Compliance Tracking and Documentation

Documentation related to public access and public participation for construction site projects, including public inquiries, public comments, City responses, and public meeting records, is maintained electronically and used to demonstrate compliance with permit requirements.

Annual report documentation includes:

- Confirmation that information for all construction site projects is accessible to the public.
- Number of comments received from the public regarding construction site projects.
- Confirmation that all public comments received regarding construction site projects were considered.

f) Supporting Documents

Public Involvement and Participation Plan

Active construction site inventory

6) PROGRAM ELEMENT: CONSTRUCTION SITE INSPECTION PROGRAM

a) Regulatory Reference: Part 4, Section 4.2.4(h) and 4.2.4(j)

Part 4.2.4(h) requires the City to maintain procedures for inspectors to evaluate and document construction site compliance. Part 4.2.4(j) establishes inspection requirements for construction activities, including inspection frequency requirements and documentation of inspection findings.

b) Responsible Party/Department

Stormwater Services

c) Activity Description

The City conducts inspections of active construction sites to evaluate compliance with approved SWPPPs, EPSC requirements, construction site pollution prevention measures, and other applicable stormwater management requirements. Inspections are performed throughout the construction process to assess the installation, operation, and maintenance of required stormwater controls and identify conditions that could result in pollutant discharges from the site. The City conducts inspections of all active Priority construction sites once per month at minimum and may conduct additional inspections in response to complaints, observed deficiencies, significant rainfall events, or other site-specific concerns. Inspections of non-priority construction sites must meet or exceed the requirements of the current Small MS4 permit.

Construction site inspections are conducted using established inspection practices and documentation tools maintained by the City. Prior to an inspection, inspectors review available project information, approved plans, and supporting documentation. During the inspection, City staff evaluate compliance with approved plans and permit requirements, verify that required stormwater controls are properly installed and maintained, identify deficiencies or changes in site conditions, and assess the overall effectiveness of construction site controls. Inspection findings are documented electronically using handheld devices and uploaded to the City's electronic tracking system.

When deficiencies are identified, the City utilizes its *Enforcement Response Plan* to determine and implement appropriate corrective actions and enforcement measures. Consistent with the enforcement requirements of the Small MS4 permit, enforcement responses are selected based

on the nature, severity, duration, and compliance history associated with the violation. Available enforcement tools include verbal warnings, written notices, Notices of Violation (NOVs), administrative orders, cease-and-desist orders, civil penalties, and other remedies authorized by the City's *Stormwater Management Ordinance*.

Follow-up inspections are conducted, as necessary, to verify implementation of corrective actions and return to compliance. Inspection findings, corrective actions, enforcement activities, follow-up inspections, and compliance status are documented and maintained in the City's electronic tracking system as part of the construction site stormwater runoff control program.

d) Measurable Goals and Implementation Schedule

- Conduct inspections of active construction sites to evaluate compliance with approved SWPPPs, EPSC requirements, construction site pollution prevention measures, and other applicable stormwater management requirements.
- Document inspection findings, deficiencies, corrective actions, and follow-up activities using the City's electronic inspection and tracking system.
- Implement corrective actions and enforcement responses, as necessary, in accordance with the City's *Enforcement Response Plan*.
- Conduct follow-up inspections, as necessary, to verify correction of deficiencies and return to compliance.
- **Implementation Schedule:** Ongoing. Construction site inspections are conducted throughout the year for active construction activities requiring permit coverage under the City's Qualifying Local Program (QLP). Follow-up inspections are conducted as necessary to verify corrective actions and compliance.

e) Compliance Tracking and Documentation

Construction site inspection records, electronic inspection reports, photographs, corrective action documentation, enforcement records, follow-up inspection records, and compliance status information are maintained electronically and tracked through the City's construction stormwater management program.

Annual report documentation includes:

- Confirmation that all non-priority construction activities were inspected in accordance with established City policies and Program requirements.
- Confirmation that all priority construction activities were inspected at least once per calendar month.
- A summary of enforcement actions taken during the reporting year, including verbal warnings, written notices, NOVs, citations or administrative orders, stop-work orders, withholding of plan approvals or other authorizations, and civil penalties.

f) Supporting Documents

Inspection SOP

City's *Enforcement Response Plan*

Electronic construction site inspection forms

Electronic inspection tracking system

City's *Stormwater Management Ordinance*

7) PROGRAM ELEMENT: CONSTRUCTION PROGRAM STAFF QUALIFICATIONS

a) Regulatory Reference: Part 4, Section 4.2.4(i)

Part 4.2.4(i) requires personnel responsible for construction site plan review and construction site inspections to possess the qualifications and certifications necessary to perform their assigned duties under the construction site stormwater runoff control program.

b) Responsible Party/Department

Stormwater Services

c) Activity Description

The City maintains qualified personnel to administer the construction site stormwater runoff control program. Staff responsible for construction site plan review and construction site inspections maintain certifications consistent with applicable state requirements. Construction site plan reviewers maintain certification through the Tennessee Erosion Prevention and Sediment Control Design Course (Level 2), while construction site inspectors maintain certification through the Tennessee Fundamentals of Erosion Prevention and Sediment Control Course (Level 1). The City supports continuing education and training opportunities to ensure personnel remain knowledgeable of applicable stormwater management requirements, erosion prevention and sediment control practices, and construction stormwater program implementation

d) Measurable Goals and Implementation Schedule

- Ensure construction site plan reviewers maintain applicable Level 2 certification requirements.
- Ensure construction site inspectors maintain applicable Level 1 certification requirements.
- Provide training and professional development opportunities, as necessary, to maintain staff qualifications and familiarity with current regulatory requirements.
- **Implementation Schedule:** Ongoing. Required certifications are maintained throughout the permit term and renewed as necessary in accordance with applicable certification program requirements.

e) Compliance Tracking and Documentation

Training records, certification records, course completion documentation, and other staff qualification records are maintained by the City and used to demonstrate compliance with personnel qualification requirements.

f) Supporting Documents

Personnel training and certification records

8) PROGRAM ELEMENT: PRIORITY CONSTRUCTION ACTIVITY PROGRAM

a) Regulatory Reference: Part 4, Section 4.2.4(j)

Part 4.2.4(j) requires the City to identify priority construction activities and implement additional oversight measures for those sites. Priority construction activities include projects that discharge directly into, or upstream of waters with unavailable parameters for siltation or ETW, and other sites designated by the permittee. The permit requires priority construction activities to receive a pre-construction meeting and be inspected at least once per calendar month.

b) Responsible Party/Department

Stormwater Services

c) Activity Description

The City identifies priority construction activities during the plan review process based on receiving water characteristics, applicable permit requirements, and site-specific conditions. Consistent with the City's *Stormwater Management Ordinance*, priority construction activities include land-disturbing activities that discharge directly to waters with unavailable parameters for

siltation or ETW. The Director may also designate other construction activities as priority construction activities. Priority construction activities are subject to additional requirements established by the TN CGP and receive enhanced oversight to protect sensitive receiving waters and minimize potential water quality impacts.

Prior to commencement of land-disturbing activities, owners must notify the City and participate in a pre-construction meeting with City staff and project representatives. The pre-construction meeting provides an opportunity to review applicable permit requirements, approved stormwater controls, inspection expectations, receiving water considerations, project responsibilities, and site-specific conditions that may require additional attention during construction.

Priority construction activities are incorporated into the City's construction site inspection program described in "Program Element 6" of Section 3.2.4 of this SWMP. In accordance with permit requirements, priority construction activities are inspected at least once per calendar month and may receive additional inspections when warranted by site conditions, observed deficiencies, complaints, rainfall events, or other compliance concerns. Inspection findings, corrective actions, and enforcement activities are documented and tracked through the City's electronic inspection tracking system. When deficiencies are identified, corrective actions and enforcement responses are implemented in accordance with the City's *Enforcement Response Plan*.

d) Measurable Goals and Implementation Schedule

- Identify priority construction activities in accordance with Part 4.2.4(j) of the Small MS4 Permit and the City's Stormwater Management Ordinance.
- Conduct a pre-construction meeting for all priority construction activities prior to commencement of land-disturbing activities.
- Inspect all priority construction activities at least once per calendar month.
- Implement corrective actions and enforcement responses, as necessary, in accordance with the City's *Enforcement Response Plan*.
- Document inspections, corrective actions, and enforcement activities associated with priority construction activities.
- **Implementation Schedule:** Ongoing. Priority construction activities are identified during project review and receive enhanced oversight throughout the duration of construction. Pre-construction meetings are conducted prior to commencement of land-disturbing activities, and inspections are performed at least once per calendar month while construction activities remain active.

e) Compliance Tracking and Documentation

Priority construction activity designations, pre-construction meeting records, inspection reports, photographs, corrective action documentation, enforcement records, and follow-up inspection records are maintained electronically and tracked through the City's construction stormwater management program.

Annual report documentation includes:

- Confirmation that all priority construction activities were inspected at least once per calendar month.
- Total number of priority construction activities during the permit year.
- Confirmation that all priority construction activities had pre-construction meetings.

- Confirmation that all priority construction activities inspections were conducted in accordance with the City's construction site runoff program.

f) Supporting Documents

City's Stormwater Management Ordinance

Inspection SOP

City Enforcement Response Plan

Electronic construction site Inspection forms

Electronic inspection tracking system

Pre-Construction meeting form

Active construction site inventory

3.2.5 Post-Construction Stormwater Management (MCM 5)

The goal of the post-construction stormwater management MCM is to minimize long-term water quality impacts from stormwater runoff associated with new development and redevelopment. The City complies with the requirements of the MCM by requiring applicable projects to incorporate permanent stormwater control measures (SCMs) and water quality buffers that are designed, installed, operated, and maintained in accordance with the City's *Stormwater Management Ordinance*, supporting stormwater management manuals, and applicable permit requirements. The program applies to new development and redevelopment projects that disturb one acre or more, including projects disturbing less than one acre when they are part of a larger common plan of development or sale.

The City's post-construction stormwater management program consists of the following Program elements:

- The City's *Stormwater Management Ordinance*, permanent stormwater design standards, and water quality buffers
- Water Quality Management Plan (WQMP) review and approval
- SCM construction verification, acceptance, inventory, and tracking
- SCM inspection, operation, and maintenance
- Post-construction enforcement response program

The remainder of Section 3.2.5 describes the activities, procedures, measurable goals, compliance tracking mechanisms, and supporting documents used by the City to implement each Program element and satisfy the requirements of Part 4.2.5 of the Small MS4 permit.

1) PROGRAM ELEMENT: STORMWATER MANAGEMENT ORDINANCE, PERMANENT STORMWATER DESIGN STANDARDS, AND WATER QUALITY BUFFERS

This Program element combines the City's regulatory authority, technical design standards, and water quality buffer requirements because these requirements are implemented through a coordinated framework consisting of the City's *Stormwater Management Ordinance* and *Northeast Tennessee Water Quality Stormwater Control Measure (SCM) Manual*. Together, these documents establish the legal authority, performance standards, design criteria, and buffer requirements that form the foundation of the City's post-construction stormwater management program.

- a) Regulatory Reference:** Part 4, Sections 4.2.5.1(c), 4.2.5.2, and 4.2.5.4

Part 4.2.5.1(c) requires the City to maintain legal authority to regulate permanent stormwater management practices associated with new development and redevelopment projects. Part 4.2.5.2 establishes post-construction stormwater management requirements intended to minimize pollutants in stormwater runoff and address the water quality and hydrologic impacts of development and redevelopment through the use of permanent stormwater management practices. Part 4.2.5.4 requires the City to establish and maintain water quality buffer requirements to protect streams and other receiving waters from the impacts of stormwater runoff.

b) Responsible Party/Department

Stormwater Services

c) Activity Description

The City implements its post-construction stormwater management program through the *Stormwater Management Ordinance*, the *Northeast Tennessee Water Quality Stormwater Control Measure (SCM) Manual*, and associated design standards. Together, these documents establish the legal authority, stormwater performance standards, design criteria, and administrative requirements applicable to new development and redevelopment projects subject to the City's post-construction stormwater management requirements.

The *Stormwater Management Ordinance* establishes requirements for permanent stormwater management and provides the legal authority necessary to implement and enforce the City's post-construction stormwater management program. The ordinance establishes requirements related to stormwater treatment, channel protection, water quality buffers, long-term operation and maintenance responsibilities, inspection authority, and enforcement. The ordinance also authorizes the City to review and approve water quality management plans (WQMP), inspect SCMs, require corrective actions, and implement enforcement measures when violations occur.

The *Northeast Tennessee Water Quality Stormwater Control Measure (SCM) Manual* establishes the technical standards, design criteria, and performance requirements used by the City to evaluate stormwater management plans and SCMs. The manual provides guidance and requirements for stormwater treatment practices, runoff reduction measures, channel protection, water quality buffers, and other permanent stormwater management practices intended to minimize the water quality and hydrologic impacts of development and redevelopment.

Water quality buffers are required and protected in accordance with the *Stormwater Management Ordinance* and the *Northeast Tennessee Water Quality Stormwater Control Measure (SCM) Manual*. The ordinance establishes requirements for the protection of buffer zones, while the SCM Manual provides technical standards and design criteria related to buffer width, vegetation, and other buffer design considerations.

d) Measurable Goals and Implementation Schedule

- Maintain and enforce the City's *Stormwater Management Ordinance*, permanent stormwater design standards, and water quality buffer requirements.
- Maintain stormwater treatment, channel protection, and water quality buffer requirements consistent with applicable permit requirements.
- Maintain and periodically update the City's post-construction stormwater management standards and technical guidance, as necessary, to remain consistent with applicable regulatory requirements and accepted engineering practices.

- Require applicable new development and redevelopment projects to comply with the City's permanent stormwater management requirements and water quality buffer requirements.
- **Implementation Schedule:** Ongoing. The *Stormwater Management Ordinance*, *Northeast Tennessee Water Quality Stormwater Control Measure (SCM) Manual*, and associated design standards remain in effect throughout the permit term and are applied to applicable development and redevelopment projects as they are proposed and reviewed.

e) Compliance Tracking and Documentation

The City maintains records associated with post-construction stormwater management requirements, including adopted ordinances, stormwater management manuals, water quality buffer requirements, design standards, and related Program documentation. Documentation is used to demonstrate the City's legal authority to implement and enforce post-construction stormwater management requirements and to support annual reporting requirements.

Annual report documentation includes:

- Confirmation that the City has established an ordinance to address post-construction runoff.
- Confirmation that the City maintains post-construction stormwater management requirements that address permanent stormwater treatment, stormwater control measures (SCMs), and water quality buffers.

f) Supporting Documents

City's Stormwater Management Ordinance

Northeast Tennessee Water Quality Stormwater Control Measure (SCM) Manual

2) PROGRAM ELEMENT: WATER QUALITY MANAGEMENT PLAN REVIEW AND APPROVAL

a) Regulatory Reference: Part 4, Section 4.2.5.6

Part 4.2.5.6 requires the City to maintain procedures for the review and approval of post-construction water quality management plans. The review process must evaluate plan completeness and verify compliance with applicable stormwater management requirements, design standards, SCM performance criteria, and water quality buffer requirements.

b) Responsible Party/Department

Stormwater Services

c) Activity Description

The City reviews Water Quality Management Plans (WQMPs) and support documentation for applicable new development and redevelopment projects to verify compliance with the *Stormwater Management Ordinance*, the *Northeast Tennessee Water Quality Stormwater Control Measure (SCM) Manual*, and other applicable post-construction stormwater management requirements. WQMPs must demonstrate that proposed SCMs, water quality treatment practices, and water quality buffers are designed in accordance with applicable City requirements and performance standards.

Submitted WQMPs are reviewed for completeness and evaluated to determine whether proposed SCMs and water quality buffers satisfy applicable ordinance requirements, design criteria, and stormwater treatment standards. City staff utilize established review procedures, technical standards, and review checklists to evaluate plan submittals and identify deficiencies requiring revision prior to approval. Review of WQMPs may include coordination with other City

departments, as necessary, to evaluate project compliance with applicable development requirements.

When deficiencies are identified, comments are provided to the applicant and revised plans are resubmitted for additional review. Plans are not approved until compliance with applicable requirements has been demonstrated. Plan review activities, review comments, revisions, and approvals are documented and tracked through the City's electronic development review system. Approved WQMPs establish the basis for subsequent construction verification, SCM acceptance, operation and maintenance requirements, and long-term compliance activities.

d) Measurable Goals and Implementation Schedule

The measurable goals for this Program element mirror the management measure and annual reporting requirements associated with Part 4.2.5.6, which focus on ensuring that all applicable development and redevelopment projects are reviewed in accordance with the City's established plan review and approval procedures.

- Review WQMPs and supporting documentation for all applicable new development and redevelopment projects.
- Evaluate WQMPs for completeness and compliance with the City's *Stormwater Management Ordinance*, *Northeast Tennessee Water Quality Stormwater Control Measure (SCM) Manual*, water quality buffer requirements, and other applicable post-construction stormwater management standards.
- Document review comments, plan revisions, and final approval decisions through the City's development review process.
- Review 100 percent of applicable new development and redevelopment projects in accordance with the City's established WQMP review and approval procedures.
- **Implementation Schedule:** Ongoing. WQPMs are reviewed throughout the year as development and redevelopment applications are submitted. Reviews, comments, revisions, and approvals are documented through the City's development review and tracking system.

e) Compliance Tracking and Documentation

WQMPs, review checklists, review comments, plan revisions, approval documentation, and related correspondence are maintained electronically and tracked through the City's development review process. Documentation is used to demonstrate compliance with post-construction stormwater management plan review and approval requirements and to support annual reporting requirements. The City documents plan submittals, review comments, revisions, and approvals through its electronic tracking system.

Annual report documentation includes:

- Number of new development and redevelopment projects reviewed during the reporting period.
- Number of new development and redevelopment projects reviewed in accordance with the City's established WQMP review and approval procedures.

f) Supporting Documents

City's Stormwater Management Ordinance

Northeast Tennessee Water Quality Stormwater Control Measure (SCM) Manual

Water Quality Management Plan Checklist

Site Plan Review SOP

3) PROGRAM ELEMENT: STORMWATER CONTROL MEASURE (SCM) CONSTRUCTION VERIFICATION, ACCEPTANCE, INVENTORY, AND TRACKING

a) Regulatory Reference: Part 4, Sections 4.2.5.6 and 4.2.5.8

Part 4.2.5.6 requires the City to maintain a verification process to document that SCMs have been installed in accordance with approved design specifications. The verification process must be completed within 90 days of SCM installation.

Part 4.2.5.8 requires the City to maintain an inventory and tracking system for permanent stormwater control measures (SCMs). The inventory must contain information necessary to identify, locate, inspect, maintain, and track SCMs and must be made available to the Division and the public upon request.

b) Responsible Party/Department

Stormwater Services

c) Activity Description

The City verifies that SCMs and water quality buffers are constructed in accordance with the approved WQMP. Following construction, permittees are required to submit record drawings and an as-built certification sealed by an appropriate design professional verifying that SCMs and water quality buffers have been constructed in accordance with the approved WQMP and will function as designed. The as-built certification must include supporting information necessary to demonstrate compliance with approved design specifications, approved construction plans, and applicable performance standards.

The City reviews submitted record drawings, as-built certifications, and supporting documentation and may conduct inspections to verify that SCMs and water quality buffers have been installed in accordance with approved plans. SCMs are not accepted until compliance with applicable design requirements has been demonstrated. When deficiencies are identified, corrective actions may be required prior to SCM acceptance. Noncompliant projects are addressed through the City's enforcement procedures and ERP, as applicable.

Following verification and acceptance, SCMs are entered into the City's SCM inventory and tracking system. The inventory is maintained as a searchable electronic database and contains information necessary to identify and locate public and private SCMs and support long-term inspection, maintenance, and compliance activities. Inventory records include SCM location and project identification information, a brief description of the SCM type and design characteristics, responsible party contact information, inspection schedules, maintenance procedures and frequencies, photographs of installed SCMs, and maintenance and inspection records. The inventory is available to TDEC and the public upon request.

d) Measurable Goals and Implementation Schedule

- Verify that permanent SCMs and water quality buffers are constructed in accordance with approved WQMPs, approved design plans, and applicable post-construction stormwater management requirements.
- Review as-built certifications, record drawings, and supporting documentation submitted following construction of SCMs and water quality buffers.
- Complete SCM verification and acceptance activities in accordance with applicable permit requirements.

- Maintain a searchable SCM inventory and tracking system containing required information for all public and private SCMs.
- Update the SCM inventory and tracking system as SCMs are verified, accepted, modified, or removed from service.
- **Implementation Schedule:** Ongoing. SCM verification, acceptance, inventory, and tracking activities are conducted following construction of SCMs and water quality buffers and continue throughout the operational life of the SCM. SCM inventory records are maintained and updated as necessary to reflect current facility conditions and ownership information.

e) Compliance Tracking and Documentation

The City maintains record drawings, as-built certifications, SCM acceptance documentation, SCM inventory records, photographs, inspection records, maintenance records, and related project documentation. Documentation is maintained electronically and used to demonstrate compliance with SCM verification, acceptance, inventory, and tracking requirements. SCM information is maintained within the City's searchable inventory and tracking system and is available to TDEC and the public upon request.

Annual report documentation includes:

- Confirmation that all SCMs installed during the reporting period were verified within 90 days of installation in accordance with established verification procedures.
- Number of SCMs verified
- Confirmation that all SCMs in the inventory tracking system have complete information.
- Total number of requests for the inventory tracking system.

f) Supporting Documents

City's Stormwater Management Ordinance

Northeast Tennessee Water Quality Stormwater Control Measure (SCM) Manual

SCM inventory and tracking System

4) PROGRAM ELEMENT: SCM INSPECTION, OPERATION, AND MAINTENANCE

a) Regulatory Reference: Part 4, Section 4.2.5.7

Part 4.2.5.7 requires the City to maintain legal authority and procedures necessary to ensure the long-term operation, inspection, and maintenance of permanent SCMs. The permit requires processes for assigning maintenance responsibility, providing access for inspection and maintenance activities, conducting inspections, maintaining inspection and maintenance records, and implementing corrective actions and enforcement measures when SCMs are not properly operated or maintained.

b) Responsible Party/Department

Stormwater Services

c) Activity Description

The City requires permanent SCMs to be properly operated and maintained to ensure continued compliance with approved design requirements and long-term stormwater treatment objectives. Responsibility for inspection, operation, and maintenance of SCMs is assigned to the property owner or other responsible party in accordance with the City's *Stormwater Management Ordinance*. The ordinance provides the City with the authority to inspect SCMs and require corrective actions when SCMs are not properly operated or maintained.

The City's *Northeast Tennessee SCM Inspection & Maintenance Manual* establishes inspection and maintenance requirements for permanent SCMs and provides guidance regarding inspection frequencies, qualified inspectors, inspection documentation, maintenance activities, repair procedures, and owner responsibilities. Owners are responsible for conducting and documenting required inspections and maintenance activities and maintaining associated records. Inspection and maintenance records must be retained and made available to the City upon request.

The City conducts inspections of SCMs to verify proper operation and maintenance and to identify deficiencies requiring corrective action. When deficiencies are identified, the City may require repairs, maintenance, or other corrective measures necessary to restore the SCM to proper operating condition. Long-term compliance activities, including corrective actions and enforcement responses, are coordinated with the city's post-construction enforcement response program described in "Program Element 5" of Section 3.2.5 of this SWMP.

d) Measurable Goals and Implementation Schedule

- Maintain procedures necessary to ensure the long-term operation and maintenance of permanent SCMs.
- Ensure maintenance responsibility for SCMs is assigned and documented in accordance with City requirements.
- Require owners or responsible parties to conduct and document inspections and maintenance activities in accordance with the City's SCM Inspection and Maintenance Manual.
- Maintain inspection and maintenance records necessary to demonstrate proper SCM operation and maintenance.
- Address SCM operation and maintenance deficiencies in accordance with City requirements and applicable enforcement procedures.
- **Implementation Schedule:** Ongoing. SCM operation, inspection, and maintenance activities occur throughout the operational life of each SCM. Inspection and maintenance records are maintained and reviewed as necessary to support long-term compliance with post-construction stormwater management requirements.

e) Compliance Tracking and Documentation

The City maintains SCM inspection reports, maintenance records, maintenance agreements or other documents assigning maintenance responsibility, photographs, corrective action documentation, and related SCM records necessary to demonstrate compliance with post-construction stormwater management requirements. Inspection and maintenance records are retained in accordance with City requirements and are available for review by the City upon request.

Annual report documentation includes:

- Confirmation that the City maintains legal authority and procedures to ensure long-term SCM operation and maintenance.
- Confirmation that maintenance responsibility has been assigned for applicable SCMs and that the City maintains access rights necessary to inspect and enforce maintenance requirements.
- Number of SCMs that have not been properly operated or maintained during the reporting period.

- Confirmation that post-construction enforcement actions were implemented in accordance with the applicable enforcement procedures, when necessary.

f) Supporting Documents

City's Stormwater Management Ordinance

Northeast Tennessee SCM Inspection & Maintenance Manual

5) PROGRAM ELEMENT: POST-CONSTRUCTION ENFORCEMENT RESPONSE PROGRAM

a) Regulatory Reference: Part 4, Sections 4.2.5.7 and 4.5

Part 4.2.5.7 requires the City to maintain legal authority and procedures necessary to ensure the long-term operation and maintenance of permanent SCMs, including implementation of corrective actions and enforcement measures when SCMs are not properly operated or maintained. Part 4.5 requires the City to maintain and implement an *Enforcement Response Plan* (ERP) that identifies appropriate enforcement responses for violations of applicable permit requirements and stormwater management regulations.

b) Responsible Party/Department

Stormwater Services

c) Activity Description

The City implements post-construction enforcement through the *Stormwater Management Ordinance* and the City's ERP. The ordinance authorizes the City to require corrective actions, issue enforcement responses, perform necessary corrective actions when responsible parties fail to do so, recover associated costs, and pursue additional enforcement remedies as necessary to achieve compliance.

When deficiencies are identified, the City evaluates the nature and severity of the deficiency and implements corrective actions and enforcement responses in accordance with the ERP.

Enforcement responses may include notices, corrective action requirements, administrative enforcement measures, civil penalties, and other remedies authorized by the ordinance.

The post-construction enforcement response program works in conjunction with "Program Element 4" of Section 3.2.5 of this SWMP to help ensure permanent SCMs are properly operated and maintained throughout their operational life and continue to function in accordance with approved design requirements.

d) Measurable Goals and Implementation Schedule

- Implement post-construction enforcement activities in accordance with the City's *Stormwater Management Ordinance* and ERP.
- Document corrective actions, enforcement activities, and compliance status associated with post-construction stormwater management requirements.
- **Implementation Schedule:** Ongoing. Enforcement activities are implemented as necessary when deficiencies or violations associated with permanent SCMs are identified.

e) Compliance Tracking and Documentation

The City maintains records of enforcement responses associated with post-construction stormwater compliance activities. Documentation is maintained electronically and used to demonstrate compliance with post-construction stormwater management requirements and enforcement procedures.

Annual report documentation includes:

- Confirmation that the City maintains adequate legal authority to require, inspect, enforce, and oversee the long-term operation and maintenance of permanent SCMs.
- Confirmation that post-construction enforcement activities were implemented in accordance with the City's enforcement procedures.
- Number of SCMs that were not properly operated or maintained during the reporting period.

f) Supporting Documents

City's Stormwater Management Ordinance

City's Enforcement Response Plan

3.2.6 Pollution Prevention and Good Housekeeping for Municipal Operations (MCM 6)

The goal of the pollution prevention and good housekeeping for municipal operations MCM is to reduce pollutant discharges from municipal facilities and municipal operations through implementation of pollution prevention practices, good housekeeping measures, facility inspections, and employee training. The City complies with MCM requirements through operation and maintenance (O&M) facility plans, routine facility inspections, employee education and training, and a comprehensive set of *Stormwater Standard Operating Procedures* (SOPs) that establish pollution prevention and good housekeeping practices for municipal facilities and operations. These SOPs address activities such as material handling and storage, vehicle and equipment maintenance, fueling, street and stormwater system maintenance, parks and grounds maintenance, waste management, and other municipal operations with the potential to affect stormwater quality.

The City's pollution prevention and good housekeeping program consists of the following Program elements:

- Operation and maintenance (O&M) facility plans
- Facility site inspections
- Employee education and training

The remainder of Section 3.2.6 describes the activities, procedures, measurable goals, compliance tracking mechanisms, and supporting documents used by the City to implement each Program element and satisfy the requirements of Part 4.2.6 of the Small MS4 permit.

1) PROGRAM ELEMENT: OPERATION AND MAINTENANCE (O&M) FACILITY PLANS

a) Regulatory Reference: Part 4, Section 4.2.6.2

Part 4.2.6.2 requires the City to develop and implement operation and maintenance (O&M) facility plans for applicable municipal operations facilities. O&M Facility Plans identify potential pollutant sources and establish pollution prevention and good housekeeping practices designed to reduce the discharge of pollutants from municipal facilities and operations. The permit also requires facility-specific procedures for municipal activities with the potential to impact stormwater quality.

b) Responsible Party/Department

Stormwater Services

c) Activity Description

The City maintains O&M facility plans for municipal facilities subject to the requirements of the pollution prevention and good housekeeping program. These plans identify potential pollutant

sources, establish pollution prevention and good housekeeping practices, and document procedures intended to minimize the discharge of pollutants to the MS4 from municipal operations.

The City maintains O&M facility plans for the following facilities:

- Streets & Sanitation Division, 609 W. Industry Drive
- Fleet Maintenance Facility, 625 W. Industry Drive
- Traffic Facility, 1155 Konnarock Road
- Water Services Operations Center, 1113 Konnarock Road
- Water Treatment Plant, 2436 Sherwood Road
- Wastewater Treatment Plant, 620 W. Industry Drive

The O&M facility plans incorporate applicable standard operating procedures (SOPs) that establish pollution prevention and good housekeeping practices for municipal operations, including activities such as waste management, fueling, material storage, vehicle and equipment maintenance, storm sewer system maintenance, street sweeping, parks maintenance, chemical application, and other municipal operations with the potential to affect stormwater quality.

d) Measurable Goals and Implementation Schedule

- Maintain an O&M facility plan for each municipal operations facility required by the Small MS4 permit.
- Implement pollution prevention and good housekeeping practices identified in each O&M facility plan.
- Maintain and implement applicable SOPs associated with municipal operations and activities conducted at permitted facilities.
- Review and update O&M facility plans, as necessary, to reflect operational changes and permit requirements.
- **Implementation Schedule:** Ongoing. O&M facility plans and associated SOPs are implemented year-round at all applicable municipal operations facilities.

e) Compliance Tracking and Documentation

The City maintains O&M facility plans, SOPs, facility-specific pollution prevention documentation, corrective action records, and related documentation associated with implementation of the pollution prevention and good housekeeping program.

Annual report documentation includes:

- Number of municipal operations facilities subject to the O&M facility plan requirements.
- Confirmation that all required municipal operations facilities have an O&M facility plan.

f) Supporting Documents

O&M facility plans

Standard Operating Procedures for Stormwater Management

2) PROGRAM ELEMENT: FACILITY SITE INSPECTIONS

a) Regulatory Reference: Part 4, Section 4.2.6.2

Part 4.2.6.2 requires the City to conduct inspections of municipal operations facilities to evaluate implementation of pollution prevention and good housekeeping practices and identify deficiencies requiring corrective action.

b) Responsible Party/Department

Stormwater Services

c) Activity Description

The City conducts inspections of municipal operations facilities to evaluate implementation of O&M facility plans, assess compliance with applicable pollution prevention and good housekeeping requirements, and identify conditions that could result in pollutant discharges to the MS4. Facility inspections are conducted using a standardized inspection form and include evaluation of site conditions, pollution prevention practices, housekeeping measures, material storage areas, waste management practices, and other activities with the potential to affect stormwater quality.

The City conducts inspections of the six municipal facilities identified in “Program Element 1” of this SWMP (Section 3.2.6) at a minimum frequency of once per year. Inspection findings are documented, and corrective actions are identified and tracked, as necessary, to address deficiencies and improve facility compliance with pollution prevention and good housekeeping requirements.

d) Measurable Goals and Implementation Schedule

- Conduct a facility inspection at each municipal operations facility required to maintain an O&M facility plan.
- Document inspection findings using the City's facility inspection form.
- Identify and track corrective actions necessary to address deficiencies identified during inspections.
- Verify implementation of corrective actions, as necessary.
- **Implementation Schedule:** Annual. Facility inspections are conducted at least once per year at each municipal operations facility subject to the O&M facility plan requirements.

e) Compliance Tracking and Documentation

The City maintains completed inspection forms, inspection reports, photographs, corrective action records, and related documentation associated with municipal facility inspections. Inspection records are used to document implementation of O&M facility plans and support annual reporting requirements.

Annual report documentation includes:

- Number of municipal operations facilities not inspected in accordance with the pollution prevention and good housekeeping program.

f) Supporting Documents

O&M facility plans
Completed inspection reports

3) PROGRAM ELEMENT: EMPLOYEE EDUCATION AND TRAINING

a) Regulatory Reference: Part 4, Section 4.2.1.3 and Section 4.2.6.1

The Small MS4 permit requires the City to conduct activities that are targeted toward municipal employees. The training program must address awareness of water quality impacts associated with daily operations, pollution prevention and good housekeeping practices, and procedures for identifying and reporting illicit connections, illicit discharges, sanitary sewer diversions or seepages, spills, and other conditions that may affect water quality.

b) Responsible Party/Department

Stormwater Services

c) Activity Description

The City's *Public Information and Education (PIE) Plan* describes the pollution prevention and good housekeeping training for municipal employees. Employee education activities are designed to increase awareness of the water quality impacts associated with daily municipal operations and to promote practices that prevent or reduce pollutant discharges to the MS4.

Training addresses pollution prevention and good housekeeping practices applicable to municipal facilities and operations. Training also promotes awareness of procedures for identifying and reporting illicit connections, illicit discharges, sanitary sewer diversions or seepages, spills, and other conditions that could adversely affect stormwater quality. Municipal employees whose duties have the potential to affect stormwater quality receive training appropriate to their job responsibilities. See the PIE Plan in Appendix A for more information.

d) Measurable Goals and Implementation Schedule

- Conduct employee education and training activities in accordance with the City's *Public Information and Education (PIE) Plan*.
- Document employee education and training activities
- **Implementation Schedule:** Ongoing. Employee education and training activities are conducted throughout the permit term in accordance with the City's *Public Information and Education (PIE) Plan* and employee training program.

e) Compliance Tracking and Documentation

The City maintains training materials, attendance records, sign-in sheets, agendas, presentation materials, and other documentation associated with employee education and training activities. Documentation is maintained to demonstrate implementation of employee education and training requirements and support annual reporting requirements.

Annual report documentation includes:

- Total number of employees new to the MS4 program or new to a job category who were not educated in accordance with the *Public Information and Education (PIE) Plan* within six months.
- Total number of existing employees who were not educated in accordance with the *Public Information and Education (PIE) Plan* within the permit term.

f) Supporting Documents

Public Information and Education (PIE) Plan

Training sign-in sheets

3.3 Stormwater Monitoring

Part 4.6 of the Small MS4 permit requires the City to develop and implement a monitoring and assessment program that provides data and information to identify pollutant sources, evaluate the effectiveness of the Program, assess impacts to receiving waters, and support future water quality management decisions. The permit provides two monitoring options. The City has elected to implement the monitoring program described in Part 4.6.1.1.1 (Option 1) and conducts monitoring in accordance with applicable TDEC monitoring, assessment, and reporting requirements. The following sections describe the objectives of the City's monitoring program and the approach used to conduct monitoring, manage monitoring data, and satisfy the reporting requirements of Part 4.6 of the Small MS4 permit.

3.3.1 Monitoring Objectives

The City implements a stormwater monitoring and assessment program in accordance with Part 4.6 of the Small MS4 permit. Monitoring activities focus on permit-required monitoring of stream segments within the MS4 jurisdiction that have been identified by TDEC as having unavailable parameters for nutrients, pathogens, and/or siltation.

The objectives of the monitoring program are to:

- Assess compliance with the Small MS4 permit.
- Measure the effectiveness of the Program .
- Evaluate stormwater impacts to receiving waters.
- Identify sources of pollutants associated with unavailable waters and applicable TMDLs.
- Gather data to support future Program decisions, prioritization of activities, and implementation of corrective actions.

3.3.2 Monitoring Approach

Monitoring activities are conducted for stream segments identified by TDEC as having unavailable parameters for nutrients, pathogens, and/or siltation within the MS4 jurisdiction. The City utilizes the TDEC-designated list of waters with unavailable parameters applicable to the MS4 jurisdiction to identify stream segments requiring monitoring and assessment activities.

Biological Stream Sampling: For stream segments identified by TDEC as having unavailable parameters for siltation and/or nutrients, the City conducts biological stream sampling and habitat assessments in accordance with Part 4.6.1.1.1 (Option 1) of the Small MS4 permit. Biological monitoring is conducted using the Semi-Quantitative Single Habitat (SQSH) Method as described in the most current version of the *Quality System Standard Operating Procedure for Macroinvertebrate Stream Survey*. At least one biological sample is collected from each applicable stream segment, and all identified stream segments within the MS4 jurisdiction are sampled during each five-year monitoring cycle.

The City documents biological monitoring results using the Electronic Data Deliverable (EDD) forms requested by TDEC. The *Macroinvertebrate Taxa Report* workbook is used to document taxa identification and reporting associated with SQSH biological sampling. Completed EDD forms are submitted to TDEC via email (tdec.watershedplanning@tn.gov) and are included with the City's annual report during years in which biological monitoring is conducted.

Bacteriological Stream Sampling: For stream segments identified by TDEC as having unavailable parameters for pathogens, the City conducts bacteriological stream sampling in accordance with Part 4.6.1.1.1 (Option 1) of the Small MS4 permit. Sampling is performed using the methods identified in the most current version of the *Quality System Standard Operating Procedure for Chemical and Bacteriological Sampling of Surface Water*. Monitoring consists of the collection of five samples within a thirty-day period to establish a geometric mean and is conducted during the summer monitoring season (March through November). At least one monitoring series is completed for each applicable stream segment, and all identified stream segments within the MS4 jurisdiction are sampled during each five-year monitoring cycle.

The City documents bacteriological monitoring results using electronic reporting formats accepted by TDEC. The City may utilize the TDEC *E. coli and Field Water Parameter Report* workbook, or a similar electronic reporting format, to document field water quality parameters and E. coli monitoring results.

Completed forms are submitted to TDEC through via email (tdec.watershedplanning@tn.gov) and are included with the City's annual report during years in which biological monitoring is conducted.

Visual Stream Surveys: The City conducts visual stream surveys for stream segments within the MS4 jurisdiction that have been identified by TDEC as having unavailable parameters for siltation, pathogens, and/or nutrients.

Visual stream surveys are performed immediately upstream and downstream of each MS4 outfall that discharges to an affected stream segment. All stream segments within the MS4 jurisdiction that have been identified as having unavailable parameters are surveyed at least once during each five-year monitoring cycle.

The City utilizes State-recognized stream assessment protocols and field survey methods when conducting visual stream surveys, such as protocols developed by the Natural Resources Conservation Service (NRCS), the Maryland Department of Natural Resources, and the Tennessee Habitat Assessment Protocol and associated Stream Survey Field Sheets.

The City documents stream assessment findings using the Electronic Data Deliverable (EDD) form requested by TDEC. The *Field Stream Survey and Habitat Sheets* workbook is used to capture and report field conditions and observations, including water quality parameters, habitat assessments, photographs, and stream survey information collected. Completed EDD forms are submitted to TDEC through via email (tdec.watershedplanning@tn.gov) and are included with the City's annual report during years in which biological monitoring is conducted.

Annual report documentation includes:

- Confirmation that monitoring was performed in accordance with Part 4.6.1.1.1 (Option 1).
- A summary of monitoring results collected during the reporting period.
- Applicable Electronic Data Deliverable (EDD) forms and supporting monitoring documentation.

3.4 Stormwater Management Program Enforcement Response

Part 4.5 of the Small MS4 permit requires the City to maintain sufficient legal authority to enforce permit requirements and implement appropriate corrective actions when violations are identified. The permit also requires the City to maintain and implement an enforcement response plan (ERP) that establishes procedures for enforcement, enforcement tracking, and identification of chronic violators.

Part 4.5.3 requires the City to document and track enforcement activities, corrective actions, and compliance status. Part 4.5.4 requires the City to identify and track chronic violators and implement appropriate escalated enforcement responses when necessary. Part 4.5.5 requires the City to report enforcement activities associated with the illicit discharge detection and elimination (IDDE) program, construction site stormwater runoff control program, and post-construction stormwater management program as part of the annual reporting process.

The following sections describe the City's enforcement requirements, enforcement response procedures, enforcement tracking practices, chronic violator procedures, and annual reporting requirements used to satisfy Part 4.5 of the Small MS4 permit.

3.4.1 Enforcement Response Program

The City implements Program enforcement through the City's *Stormwater Management Ordinance* and the *Enforcement Response Plan*. The ERP establishes a structured and consistent approach for responding to violations associated with the illicit discharge detection and elimination program, the construction site stormwater runoff control program, and the post-construction stormwater management program.

When violations are identified, the City evaluates the nature, severity, duration, frequency, and potential impact of the violation and implements an appropriate enforcement response. Enforcement responses are selected in accordance with the ERP and may include verbal warnings, written notices, Notices of Violation (NOVs), administrative orders, stop-work orders, withholding of approvals or authorizations, civil penalties, and other remedies authorized by the *Stormwater Management Ordinance*.

The ERP is intended to encourage timely correction of deficiencies and return violators to compliance while providing a progressive enforcement framework for situations involving repeated violations, significant impacts to water quality, or failure to implement required corrective actions. Enforcement activities are documented and tracked in accordance with the requirements of Part 4.5 of the Small MS4 permit.

3.4.2 Enforcement Tracking and Chronic Violators

The City tracks instances of noncompliance electronically. Enforcement records include, at a minimum, the owner/operator, project or facility location, description of the violation, schedule for returning to compliance, enforcement responses implemented, supporting enforcement documentation, referrals to other departments or agencies, and the date the violation was resolved.

The City identifies and tracks chronic violators of any Program component. To reduce repeat violations, the City tracks compliance history, applies incentives and/or disincentives, and increases inspection frequency, as appropriate. When corrective actions are not taken, the City implements progressive enforcement measures and, if necessary, performs the required corrective work and recovers the associated costs from the owner/operator.

3.4.4 Annual Reporting

The City documents and reports Program enforcement activities in accordance with Part 4.5.5 of the Small MS4 permit. Annual reporting includes enforcement activities associated with the illicit discharge detection and elimination program, construction site stormwater runoff control program, and post-construction stormwater management program.

Annual report documentation includes:

- Summary of enforcement actions taken during the reporting year, including verbal warnings, written notices, Notices of Violation (NOVs), citations or administrative orders, stop-work orders, withholding of plan approvals or other authorizations, and civil penalties.

3.5 Program Evaluation

Part 4.7 of the Small MS4 permit requires the City to conduct an annual evaluation of the City's Program to evaluate compliance with permit requirements, assess the effectiveness of the Program elements, and determine progress toward achieving the measurable goals and requirements established by the permit.

The City conducts an annual evaluation of the Program as part of the annual report preparation process. During development of the annual report, City staff review Program activities, Program elements, measurable goals, implementation status, monitoring results, enforcement activities, and supporting documentation to evaluate compliance with permit requirements and the overall effectiveness of the Program. Staff discuss Program performance, identify deficiencies or opportunities for improvement, and consider any needed modifications or updates prior to finalizing the annual report.

The results of the annual evaluation are used to support continuous improvement of the Program and to help ensure ongoing compliance with the requirements of the Small MS4 permit.

Annual report documentation includes:

- A narrative summary of the annual Program evaluation results.
- Identification of any ineffective activities, controls, measures, Program components, or BMPs and any proposed modifications or replacements.
- A summary of planned Program improvements, modifications, or corrective actions scheduled for implementation during the next reporting period.
- A compliance status determination for each minimum control measure (MCM 1 through MCM 6) and the stormwater monitoring program, including identification of any noncompliant Program components and associated corrective actions.

3.6 Annual Reporting

The City prepares and submits an annual report documenting implementation of the Program and compliance with the requirements of the Small MS4 permit. The annual report covers the period beginning July 1 and ending June 30 and is submitted to TDEC by September 30 following the end of the reporting period. The annual report is signed and certified in accordance with permit requirements and submitted electronically through the MyTDEC Forms website portal.

The annual report includes all reporting elements required by the permit. The report documents implementation of Program activities, measurable goals, monitoring activities, enforcement actions, and other information necessary to demonstrate compliance with permit requirements.

The annual report serves as the City's primary mechanism for documenting permit compliance, evaluating Program effectiveness, identifying Program improvements, and communicating Program activities and results to TDEC.

3.7 Program Modifications

The City may modify the Program during the permit term to improve Program effectiveness, address changing conditions, comply with updated requirements, or incorporate new facilities, BMPs, SCMs, controls, or Program components. Modifications are classified as either minor or major depending on the nature and scope of the proposed change.

3.7.1 Minor Program Modifications

Minor modifications are changes that do not reduce the scope or effectiveness of the Program and do not require a formal public notice process. Examples include adding new BMPs, SCMs, controls, facilities, or Program components; correcting typographical errors; increasing monitoring activities; removing outfalls

that no longer discharge pollutants; and replacing ineffective or infeasible BMPs or SCMs with suitable alternatives.

Minor modifications are documented and reported through the Annual Report. When BMPs or SCMs are replaced, the City documents the reason for the change and the expected effectiveness of the replacement measure.

3.7.2 Major Program Modifications

Major modifications are changes that remove or substantially reduce BMPs, SCMs, controls, requirements, or other Program components. Prior to implementing a major modification, the City must demonstrate that the proposed change will not reduce the effectiveness of the Program or adversely affect water quality.

Major modifications are subject to the City's formal public notice process. The City provides public notice of the proposed modification, makes the applicable Program documentation available for review, and provides TDEC an opportunity to review and comment on the proposed change. Any comments or concerns identified by TDEC are addressed before the modification is implemented.

3.7.3 Annual Report Requirements

The City documents Program modifications through the annual report process.

Annual report documentation includes:

- Identification of whether any changes were made to each Program element during the reporting period.
- Description of new BMPs, SCMs, controls, facilities, or Program components added to the Program.
- Description of BMPs or SCMs replaced during the reporting period and the reason for the replacement.
- Description of facilities added to the Program.
- Description of any major modifications implemented during the reporting period, including changes that removed or substantially modified program components.

APPENDIX A: PUBLIC INFORMATION AND EDUCATION (PIE) PLAN



Public Information and Education Plan

City of Kingsport, Tennessee

Permit No. TNS075388

The City of Kingsport, Tennessee (City) operates a small Municipal Separate Storm Sewer System (MS4) that is subject to the State of Tennessee's National Pollutant Discharge Elimination System (NPDES) Small MS4 Permit (TNS000000). Part 4.2.1 of the permit requires the City to develop and implement an education and outreach program on stormwater impacts. The objective of this program is to reduce or eliminate behaviors and practices that cause or contribute to the impacts of stormwater discharges on water bodies, and the steps that audiences can take to reduce pollutants in stormwater runoff. The permit requires the program to reach three major audiences: (1) the public; (2) the engineering and development community; and (3) City employees. Parts 4.2.1.1 through 4.2.1.3 of the permit establish the management measures that must be addressed for each audience, as well as the measurable goals and annual report requirements for activities performed by the City. In addition, the program must be documented in a written Public Information and Education (PIE) Plan, to include:

- a. Specific public information/education activities that are designed to meet the management measure;
- b. Identification of job categories and applicable management measures for employee education;
- c. A schedule/calendar of events for each year; and,
- d. Methodology to evaluate components to assess overall effectiveness and the need for improvement.

This document is the City's PIE Plan. On the pages that follow, Tables 1, 2, and 3 present the activities the City will perform to address the management measures for each of the three major audiences. Each table identifies the number of activities required (as stated by the measurable goal established in the permit) and describes the activity(s) to be implemented by the City to meet the measurable goal for the major audience. For each activity, the tables further provide the frequency and schedule, management measure(s) addressed, and the documentation to be kept/provided by the City to meet the permit's Annual Report requirements. The last rows of each table provide an accounting of the number of activities to be performed and the number of times each management measure is address.

As indicated by the City's Notice of Intent, the City population as of the effective date of the NPDES Small MS4 Permit (September 1, 2022) is 55,582. This population was used to determine the measurable goal (i.e., number of activities) as required by the permit.

Table 1. Education and Outreach Activities to be Conducted for the General Public

Kingsport is required to conduct or sponsor a minimum of <u>six activities annually</u> that addresses EACH of the following management measures: a. General awareness of the impacts on water quality b. Awareness of the importance of SCM maintenance for SCM operators c. Awareness of proper storage, use, and disposal of pesticides, herbicides, fertilizers, oil, and other automotive related fluids d. Awareness of identifying and reporting procedures for illicit connections/discharges, sanitary sewer seepage, spills, etc.						
Activity Title and Description	Schedule (approx.)	Management Measures Addressed				Required Documentation
		a	b	c	d	
TNSA Social Media Campaign The City will purchase an annual subscription to the social media campaign offered by the Tennessee Stormwater Association (TNSA). The campaign provides bi-weekly posts on Facebook and Instagram, which address a variety of stormwater and pollution prevention awareness topics.	Bi-weekly throughout year	✓	✓	✓	✓	The following metrics are supplied by TNSA to the City for annual reporting: • dates of posts • description and intent of each event • approx. # of people reached • amount of monetary support
Kingsport Public Works Facebook Page The City will use the Facebook social media platform to post locally relevant information on the noted management measures.	Quarterly	✓	✓	✓	✓	The City will report: • dates of posts • description and intent of each event • approx. # of people reached • amount of monetary support
City Website The City's website will include educational information, videos, and links that address the noted management measures.	Daily throughout year	✓	✓	✓	✓	The City will report: • description and intent of posts/links • date(s) the website was available • approximate # of people reached (using webpage hits)
Stormy the Raindrop Outreach The City's Stormy the Raindrop character will travel to local venues to teach people about the urban water cycle and stormwater runoff. The City will select the events to attend each year.	At least 3-times throughout year					The City will report: • Description, location, & intent of each event • Topics addressed (or Stormy's script) • dates of each event • approximate # of people reached at each event
- Event 1		✓		✓	✓	
- Event 2		✓		✓	✓	
- Event 3		✓		✓	✓	
Newspaper Articles						The City will report:

The City has a dedicated section available to them in the local newspaper. The City will use newspaper articles to address the noted management measures.	Two per year					- description and intent of each newspaper article - copy/photo of each - dates of each article - approximate # of people reached with each article
- Article 1			✓			
- Article 2			✓			
Stormwater Literature Distribution The City uses a variety of stormwater literature to address the noted minimum management measures. These include but are not limited to; brochures and activity booklets placed in municipal buildings, Water Quality Report sent to all water customers, and distribution of literature at events.	Daily Throughout year	✓		✓	✓	The City will report: - Locations where brochures and activity booklets are distributed (keep photos) - Description of the literature distributed at each event/location/mailing - Approximate # of people reached with each distribution
Storm Drain Art Contest Annually, the City works with local groups to paint stormwater messages on and around storm drains. The storm drains are in highly visible public areas to raise awareness of the noted management issues.	Visible daily Throughout year	✓				The City will report: - Locations of painted storm drains - Intent of the project - Photos of storm drains - Track webpage hits
SCM Owner's Manual The City will develop a manual aimed at owners of SCMs. The manual will help owners identify critical SCM features and maintenance needs; understand the parties and actions identified in the Maintenance Covenants, perform routine inspection; and prepare for maintenance activities.	Throughout year starting September 1, 2024	✓	✓	✓	✓	The City will report: - URL of SCM Owner's Manual - Track webpage hits
Number of Times Management Measure is Addressed <i>(minimum of 6 required for each management measure)</i>		9	6	8	8	

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Table 2. Education and Outreach Activities to be Conducted for the Engineering and Development Community

Kingsport is required to conduct or sponsor a minimum of <u>two activities per year</u> that addresses EACH of the following management measures:				
e. Awareness of the stormwater ordinances, regulations, and guidance materials related to long-term water quality impacts from post-construction runoff f. Awareness of the stormwater ordinances, regulations, and guidance materials related to long-term water quality impacts from construction site runoff				
Activity Title and Description	Schedule (approx.)	Management Measures Addressed		Required Documentation
		e	f	
City Website For the engineering and development community, the City will maintain educational information pertaining to construction and post-construction runoff, and links to relevant documents: • The Tennessee Construction General Permit • Relevant City ordinances • The City's stormwater design and stormwater utility credit manuals	Available daily Throughout year	✓	✓	The City will report: • description of posts/links • date(s) the website was available • approximate # of people reached
Preconstruction Meetings The City provides educational information to contractors and developers on the noted management measures prior to the issuance of a grading permit	As new permits are issued Throughout year	✓	✓	The City will report: • Description and intent of topics addressed • Date of each meeting • # of participants
Fats, Oils & Grease Program The City has educational information on its website for restaurants and food service establishments that meets the noted management measure	Daily throughout year	✓		The City will report: • Description and intent of website and brochure information • # of website hits
Number of Times Management Measure is Addressed <i>(minimum of 2 required for each management measure)</i>		3	2	

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Table 3. Education and Outreach Activities to be Conducted for City Employees

All applicable staff must be trained at least once per permit term (new employees within 6 months of hire) on each of the issues identified under the management measures listed below:									
g. Awareness of water quality impacts from daily operations									
h. Pollution prevention and good housekeeping									
i. Understanding SOPs for identifying and reporting procedures for illicit connections/discharges, sanitary sewer diversions or seepages, spills, etc.									
Activity Title and Description	Schedule (approx.)	Management Measures Addressed			Required Documentation				
		g	h	i					
Annual City Staff Training The following City departments with responsibilities pertaining to municipal good housekeeping and pollution prevention will be trained annually: <table><tr><td>Utilities</td><td>Public Works</td></tr><tr><td>Parks & Rec</td><td>Fleet Maintenance</td></tr></table> Video, titled <i>Rain Check Stormwater Pollution Prevention for MS4s and IDDE-Illicit Discharge Detection & Elimination “A Grate Concern”</i> by Excal Visual, Inc., will be used for training.	Utilities	Public Works	Parks & Rec	Fleet Maintenance	Annually throughout year	✓	✓	✓	The total number of existing employees NOT trained annually
Utilities	Public Works								
Parks & Rec	Fleet Maintenance								
New Hire Training All new City employees will receive training on municipal pollution prevention as part of the onboarding process using videos on municipal pollution prevention and good housekeeping.	Upon hiring throughout year	✓	✓	✓	The total number of new employees NOT trained within 6 months of hire				
Number of Times Management Measure is Addressed (minimum of 1 required for each management measure)		2	2	2					

APPENDIX B: PUBLIC INVOLVEMENT AND PARTICIPATION PLAN



Public Involvement and Participation Plan

City of Kingsport, Tennessee

Permit No. TNS075388

Part 4.2.2 of the small MS4 permit requires the City to develop and implement a program for public involvement and participation as a component of the City's stormwater management program. The objective is to promote, publicize, and facilitate citizen's participation in the development and implementation of the stormwater management program to reduce the discharge of pollutants. The permit requires the program to reach two major audiences: (1) the public; and (2) the commercial and development community. Parts 4.2.2.1 and 4.2.2.2 of the permit establish the management measures that must be addressed for each audience, as well as the measurable goals and annual report requirements for activities performed by the City. A publicity plan for public involvement and participation opportunities is also a requirement.

This document comprises the City's public involvement and participation plan. Table 1 presents the minimum requirements of the public involvement /participation program and how the City intends to address each requirement. Tables 2 and 3 present the activities the City will perform to address the management measures for both audiences. Each table identifies the number of activities required (as stated by the measurable goal established in the permit) and describes the activity(s) to be implemented by the City to meet the measurable goal for the major audience. For each activity, the tables further provide the frequency and schedule, management measure(s) addressed, and the documentation to be kept/provided by the City to meet the permit's Annual Report requirements. The last rows of each table provide an accounting of the number of activities to be performed and number of times each management measure is address.

As indicated by the City's Notice of Intent, the City population as of the effective date of the NPDES small MS4 Permit (September 1, 2022) is 55,582. This population was used to determine the measurable goal (i.e., number of activities) as required by the permit.

Table 1. Activities to be Implemented to Address the Minimum Requirements for Public Involvement and Participation

The minimum requirements of the public involvement/participation program as established in Part 4.2.2 of the permit are listed in the light grey rows with the character bullet (a, b, c, etc.) used in the permit.

Activity Title	Description	Frequency	Schedule	Required Documentation	Public Notice Required?
a. Specific public involvement/participation activities that are designed to meet the management measures					
b. Schedule/calendar of events for each year					
e. Publicity plan for public involvement and participation opportunities by methods designed to reach the intended audience					
Publicity Plan	Tables 2 and 3 of the City’s publicity plan will describe the activities/methods, frequency, and schedule the City will implement to meet the management measures of Part 4.2.2 of the permit.	One time	By January 1, 2024	Copy of the written publicity plan	No
c. Methodology to evaluate components to assess overall effectiveness and the need for improvement					
Stormwater Management Program Evaluation	In keeping with Part 4.6.2 of the permit, the City’s Stormwater Management Program will be evaluated annually to assess overall effectiveness and any needs for improvement during the preparation of the City’s Annual Report. The evaluation will be based on the achievement of the required management measures and documentation/reporting requirements.	Annually	July to September of each permit year	Narrative descriptions in the Annual Report that summarize: - the evaluation of program components and corresponding City activities as identified in the Notice of Intent; - modifications or replacement of ineffective activities; - modifications and improvements scheduled for the next reporting period.	Yes (for major program changes only*)
d. A mechanism for citizen reporting of illegal spillage, dumping, or otherwise illicit disposal of materials into the MS4 system					
IDDE Reporting Mechanisms	See Publicity Plan Table 2, “Illicit Discharge Reporting Mechanisms” and PIE Plan, Table 3, “Annual Staff Training” & “New Hire Training”				
f. Create opportunities for the public to participate in the decision-making process for developing, implementing, and updating the stormwater management program					
h. Develop and implement a public notice process in accordance with subpart 4.4.1 (of the permit)					
Public Access to Program Records	The City will provide copies of the following documents on the City website: - the Stormwater Management Plan (SWMP) - the most recent Annual Report	Daily	Throughout each year	- Stormwater Resources found on the main page on the website - Annual reports are posted on the website	No
Public Review of the Stormwater	The City will provide notice to the public for review of the Stormwater Management Program, via the SWMP and any written plans posted to the City website, and include	One Time	Before 09/30/2024	Permit Year 2 Annual Report: A copy of the public notice	Yes (Permit Year 2 only)



Activity Title	Description	Frequency	Schedule	Required Documentation	Public Notice Required?
Management Program	contact information, mechanisms, and a deadline for receipt of comments. Once the review period has ended, the City will compile comments and post responses on its website in a timely manner. Any changes made to the program as a result of this process will be documented as required by the permit.			• Compilation of public comments with City responses • List of changes to the program resulting from public comments Permit Years 1, 3, 4, and 5 Annual Report • Indicate that the program is not placed on public notice	
Public Notice for Major Program Modifications	The City will implement formal public notice as described in the SWMP for major modifications to the stormwater management program. TDEC-DWR shall be included in the distribution list for public notice at water.permits@tn.gov . All comments and questions provided by the public will be documented, along with City responses.	Only when major program changes are made		• Identify whether changes are made to program elements • Description of added and replaced minor modifications • Descriptions of added facilities covered under the permit • Description(s) of major modifications	Yes (for major program changes only*)
g. Mechanisms, procedures, and processes for public access to information on new development and redevelopment (construction) projects and for receiving and considering comments from the public on those new development and redevelopment projects					
Public Access to Projects	The City will receive requests and comments by the public for access to information on new development and redevelopment projects via the following mechanisms: • calls placed to City offices • links on the City website to the City’s Stormwater Engineers email • public meetings of the Kingsport Regional Planning Commission and/or Board of Mayor and Alderman	Regular business hours and public meetings held monthly	Every weekday excluding holidays Public meeting schedule located on City website	• Yes/No whether information for all construction site projects accessible to the public • Number of comments received from the public on construction site projects • Yes/No whether all comments from the public on construction site projects are considered • Comments received and City responses.	No

* Per Part 4.4.1 of the permit, major program changes are those that subtract BMPs, SCMs, components, controls, or requirements of the Stormwater Management Program once it has been clearly demonstrated that even with the elimination of the component, the Program will continue to achieve a reduction in pollutants and shall not cause or contribute to the violations of State water quality standards in the receiving stream.

Table 2. Public Participation/Involvement Activities to be Conducted for the General Public

Kingsport is required to conduct and/or sponsor a minimum of <u>six activities annually</u> that address EACH of the management measures listed below: a. Conduct activities to address pollution prevention applicable to everyday citizen activities b. Conduct activities to emphasize how common everyday actions impact water quality (or activities that address other local stormwater management issues) c. Conduct activities on the storage, use and disposal of household hazardous waste, automotive related fluids, pesticides, herbicides, and fertilizer use d. Conduct activities on identifying and reporting of illicit connections/discharges, sanitary sewer overflows, spills, etc.						
Activity Title and Description	Schedule (approx.)	Management Measures Addressed				Required Documentation
		a	b	c	d	
Stream Clean-ups The City hosts stream clean-up events to remove trash and debris from City streams. The City provides advertising, in-person support, supplies and bagged trash pickup. The noted management measures are addressed during the volunteer orientation the day of the event.	Twice per year					The City will report: • Description and intent of each event • Date of each event • City contribution to event (monetary or in-kind services) • Approximate # of people reached per event
- Stream site #1 to be determined annually		✓	✓	✓	✓	
- Stream site #2 to be determined annually		✓	✓	✓	✓	
Keep Kingsport Beautiful Litter Pickups City provides monetary support and Public Works provides bagged trash pickup and disposal for KKB events. A City staff person will attend and provide in-person education during volunteer orientation to address the noted management measures.	Twice per year					The City will report: • Description and intent of each event • Date of each event • City contribution to event (monetary or in-kind services) • Approximate # of people reached per event
- Site #1 to be determined annually by KKB		✓	✓	✓	✓	
- Site #2 to be determined annually by KKB		✓	✓	✓	✓	
Storm Drain Art Contest The City partners with the Office of Cultural Arts and Engage Kingsport to host this annual event. The event covers the noted management measures.	Annually (Fall)	✓	✓			The City will report: • Description and intent of event • Date(s) events were held • City contribution to event (monetary or in-kind services) • Approximate # of people reached per event
Tree Seedling Distribution The City purchases seedlings and distributes free of charge to citizens. The event addresses the noted management measures.	Annually (Spring)	✓	✓			The City will report: • Description and intent of event • Date event was held

						- City contribution to event (monetary or in-kind services) - Approximate # of people reached per event
Public Works Day The City hosts an annual event inviting the public to learn more about Kingsport's Public Works. The event is open to the public and allows staff to engage with citizens about the value of public works professionals and necessities of public works projects and programs. The event addresses the noted management measures.	Annually (Spring)	✓	✓	✓	✓	The City will report: - Description and intent of event - Date(s) events were held - City contribution to event (monetary or in-kind services) - Approximate # of people reached per event
Keep Kingsport Beautiful Conservation Camp The City participates in a multiple day interactive camp sponsored by KKB. Area fourth grade students learn about a variety of conservation topics (e.g. watersheds, water pollution and pollution prevention). The event addresses the noted management measure.	Annually (Fall)	✓	✓	✓		The City will report: - Description and intent of event - Date(s) events were held - City contribution to event (monetary or in-kind services) - Approximate # of people reached per event
Public Comments Accepted on Stormwater Management Program The City posts its Stormwater Management Plan and annual reports on its website. The public is encouraged to submit comments. This activity addresses the noted management measures.	Daily throughout year	✓	✓	✓	✓	The City will report: - Compilation of comments received by public - Responses provided by staff - Approximate # of people reached using web hits
Rain Barrel Distribution Event City Staff purchase parts for and construct rain barrels for purchase by residents for very little cost with proceeds going to Keep Kingsport Beautiful. The event is advertised on Facebook. An informational flyer is included with each rain barrel. The event addresses the noted management measures.	Annually (Spring)	✓	✓			The City will report: - Intent of event - Date of distribution - City contribution to the event (monetary or in-kind services) - Number of barrels distributed
Illicit Discharge Reporting Mechanisms The City will maintain multiple mechanisms for reporting of suspected illicit discharges by citizens and City staff: - via the ConnectKingsport App - a link on the City's website for the Stormwater Hotline - via general email to the City (provided on the City's website)	Daily throughout year				✓	The City will report: - Number of suspected illicit discharges and illegal dumping issues during the permit year - The reporting mechanism used for each report (phone, email, City staff, etc.)

- via phone calls to the City's Stormwater Management department or City offices in general (for City employees) via the reporting mechanism established in Table 3, 1st and 2nd Activities of the City's PIE Plan.						The City's response, investigations, and outcomes for each suspected discharge (as required in Part 4.2.3 of the permit)
Number of Times Management Measure is Addressed (minimum of 6 required for each management measure)		9	9	7	7	

Table 3. Public Participation/Involvement Activities to be Conducted for the Commercial and Development Community

Kingsport is required to conduct and/or sponsor a minimum of two activities per year that address EACH of the management measures listed below: e. Conduct activities to address pollution prevention applicable to the commercial and development community f. Conduct activities to emphasize how actions of the commercial and development community impact water quality (or activities that address other local stormwater management issues)				
Activity Title and Description	Schedule (approx.)	Management Measures Addressed		Required Documentation
		n	o	
Fats, Oils & Grease Program The City interacts with the restaurant and food service establishments during inspections for permitting purposes that meets the noted management measure	Throughout year	✓	✓	The City will report: - Intent of inspections - Number of inspections conducted during each permit year - Number of people reached
Plan Review and Permitting Meetings As part of the plans review process, the City engages the development community using a script or checklist to addresses noted management measures	As permits are issued throughout year	✓	✓	The City will report: - Description and intent of meetings - Date of each meeting # of participants at each meeting
Number of Times Management Measure is Addressed (minimum of 2 required for each management measure)		2	2	

APPENDIX C: STANDARD OPERATION PROCEDURES (SOPS) FOR STORMWATER MANAGEMENT



STANDARD OPERATING PROCEDURES (SOPs)

for

Stormwater Management

City of Kingsport, Tennessee

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Inspections

	S TANDARD O PERATING P ROCEDURE	SOP Name: Waste Management
City of Kingsport, TN	Stormwater Management	All Departments

Description

All solid and liquid wastes must be disposed of properly. Some of the most common sources of pollution at municipal facilities are a result of littering, improper collection of debris, and improper disposal of solid or liquid waste. When services are contracted, this written procedure should be provided to the contractor so they have the proper operational procedures. In addition, the contract should specify that the contractor is responsible for abiding by all applicable city, state, and federal codes, laws, and regulations.

Procedures

General

- Provide cover, if feasible, for all waste storage areas including keeping dumpster lids closed.
- Provide a low containment berm, if feasible, around waste storage areas.
- Conduct periodic inspections of solid and liquid waste storage areas to check for leaks and spills.
- Conduct periodic inspections of work areas to ensure that all wastes are being disposed of properly.
- Follow the Spill Prevention and Response procedure to respond to and clean up any spills or leaks.
- Clean storage areas when necessary using dry cleanup methods (except in areas where the wash water will enter the sanitary sewer and is an approved discharge).
- Return dumpsters to the supplier when cleaning is necessary or if the dumpster is leaking.
- Properly handle and dispose of all hazardous wastes. See the Outdoor Material Storage procedure for more information.

Possible Pollutants

Construction Debris

Organics

Oil and Grease

Trash

Metals

Paint

Toxins

Good Housekeeping

Dumpster/waste management

Employee/Contractor Training

Proper cleanup and disposal procedures

Dry cleaning methods

Stormwater retrofits

Related Procedures

Large Outdoor Festivals and Events

Outdoor Material Storage

Standard Operating Procedure

Solid Waste

- Solid waste that cannot be recycled should be disposed of in the trash dumpster.
- Recycle solid wastes when possible, including the following:
 - o Glass
 - o Plastic containers
 - o Cardboard and Paper
 - o Organic material
 - o Scrap metal
 - o Wood debris
 - o Used batteries
 - o Used oil filters
 - o Light bulbs
- Follow the Street Sweeper Cleaning and Waste procedure for proper disposal of street sweepings.

Liquid Waste

- Never place liquids in a dumpster.
- If unable to recycle, old latex paints should be mixed with floor dry or other adsorbent material to solidify prior to disposal in the trash.
- If unable to recycle, enamels and other oil-based paints should be applied to cardboard, newspaper, or similar materials and allowed to dry prior to disposal in the trash.
- Recycle liquid wastes, including the following:
 - o Used oil
 - o Used antifreeze
 - o Used solvents

Employee Training

- Train applicable employees who dispose of wastes on this written procedure. Information on how to avoid and report spills will be presented during the training.
- Periodically conduct refresher training on the SOP for applicable employees who dispose of wastes.

Records

The following records could be used to document activities performed:

- Records of employee training with sign-in sheet.

Optional Additional Resources

Frequency of trash and recycling pick ups.

List of Recycling Sites:

List of Companies Accepting Hazardous Waste

	S TANDARD O PERATING P ROCEDURE	SOP Name: Fueling
City of Kingsport, TN	Stormwater Management	All Departments

FUELING

1. Preparation

- a. Train employees on proper fueling methods and spill cleanup techniques.
- b. Install a canopy or roof over aboveground storage tanks and fuel transfer areas.
- c. Absorbent spill clean-up materials and spill kits shall be available in fueling areas and on mobile fueling vehicles and shall be disposed of properly after use.

2. Process

- a. Shut off the engine.
- b. Ensure that the fuel is the proper type of fuel for the vehicle.
- c. Nozzles used in vehicle and equipment fueling shall be equipped with an automatic shut off to prevent overfill.
- d. Fuel vehicle carefully to minimize drips to the ground.
- e. Fuel tanks shall not be 'topped off'.
- f. Mobile fueling shall be minimized. Whenever practical, vehicles and equipment shall be transported to the designated fueling area in the Facilities area.
- g. When fueling small equipment from portable containers, fuel in an area away from storm drains and water bodies.

3. Clean Up

- a. Immediately clean up spills using dry absorbent (e.g., kitty litter, sawdust, etc.) sweep up absorbent material and properly dispose of contaminated clean up materials.
- b. Large spills shall be contained as best as possible and the HazMat team should be notified ASAP.

4. Documentation

- a. Comply with underground storage tank records and monitoring requirements.
- b. Document training of employees.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Material Storage
City of Kingsport, TN	Stormwater Management	All Departments

Description

The responsible management of automotive products, fertilizers, pesticides, paints, chemicals, and other materials at a city facility can significantly reduce polluted stormwater runoff. All materials should be handled properly including unloading, use, storage, and disposal. Proper management of materials can also reduce the likelihood of accidental spills or releases. When services are contracted, this written procedure should be provided to the contractor so they have the proper operational procedures. In addition, the contract should specify that the contractor is responsible for abiding by all applicable city, state, and federal codes, laws, and regulations.

Procedures

General

- Establish material storage and inventory controls to minimize the amount of materials used and stored.
- Periodically inspect material storage areas to ensure that all materials are being stored properly when not in use.
- Clean the material storage area when necessary using dry cleanup methods.
- Properly dispose of unused materials.
- Store materials in a manner that reduces the potential for transport in stormwater flows.

Materials Stored in Containers

- Whenever possible, containerize and cover stored materials to prevent stormwater from coming in contact with materials. Secondary containment may be required.
- Store containers in a location where they will not be accidentally damaged by equipment or vehicles.
- Provide tight-fitting lids for all containers.

Possible Pollutants

Sediment
Organics
Oil and Grease
Trash
Metals
Toxins

Good Housekeeping

Employee/Contractor Training
Proper cleanup and disposal procedures
Dry cleaning methods

Related Procedures

Salt and Sand Storage
Spill Prevention and Response
Waste Management

Standard Operating Procedure

- Follow the Spill Prevention and Response procedure to respond to and clean up any spills or leaks.
- Inspect storage containers regularly for signs of leaking or deterioration.
- Replace or repair leaking storage containers.
- Use care to avoid spills when transferring materials from one container to another.
- Use powered equipment or get assistance when moving materials to and from a storage area. Handle containers appropriately and get help if needed. Use care to prevent punctures in the containers from equipment.

Loose Materials

- Consolidate loose material (gravel, mulch, etc.) and berm where needed to prevent run-on of stormwater.
- Follow the Salt and Sand Storage procedure for piles of salt and sand.
- Large inert materials such as piping and road signs can be stored outside without a protective covering. These materials do not impact stormwater quality.
- Rusting iron is a potential source for stormwater pollution and should not come in contact with stormwater.

Hazardous Materials

- Identify all hazardous materials stored at the facility.
- Maintain a Material Safety Data Sheet (MSDS) for each hazardous chemical.
- Clearly label all containers with the name, chemical, unit number, expiration date, handling instructions, and health and environmental standards.
- Provide special handling, storage (e.g., metal lockers), and disposal for all hazardous materials.

Employee Training

- Train applicable employees on this written procedure. Information on how to respond to spills will be presented during the training.
- Periodically conduct refresher training on the SOP for applicable employees who perform outdoor material storage activities.

Records

The following records could be used to document activities performed:

- Records of employee training with sign-in sheet.
- MSDSs.
- Packing lists, purchasing records, inventory records.

Optional Additional Resources

City codes and ordinances that relate to outdoor materials storage.

Locations of hazardous materials.

Loading and unloading operations.

Spill Prevention Control and Countermeasures Plan

	S TANDARD O PERATING P ROCEDURE	SOP Name: Vehicle and Equipment Cleaning
City of Kingsport, TN	Stormwater Management	All Departments

VEHICLE AND EQUIPMENT WASHING

1. Preparation

- Provide wash areas for small vehicles and equipment inside the maintenance building that has a drain system which is attached to the sanitary sewer system.
- Provide wash areas for large vehicles on an approved outside wash pad that has a drain system which is attached to the sanitary sewer system.
- No equipment and/or vehicle washing will be done where the drain system is connected to the storm sewer system.

2. Process

- Minimize water and soap use when washing vehicles inside the shop building.
- Soap should not be used when washing vehicles outside the shop building. Water only.
- Use hoses with automatic shut off nozzles to minimize water usage.
- When washing outside the building, it is the operators' responsibility to make sure all wash water is contained on the wash pad and does not have access to the storm drain.
- Never wash vehicles over or a storm drain.

3. Clean Up

- Sweep wash areas after every washing to collect what solids can be collected to prevent them from washing down the drain system.
- Clean solids from the settling pits on an as needed basis.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Transporting Equipment
City of Kingsport, TN	Stormwater Management	All Departments

TRANSPORTING EQUIPMENT

1. Preparation

- a. Determine equipment needed for transport and method (trailer, truck bed) needed to transport equipment.
- b. Conduct pre- trip inspection of equipment

2. Process

- a. Load and secure equipment on trailer or truck
- b. Load and secure fuel containers for equipment usage

3. Clean-up

- a. Off load equipment
- b. Store equipment and trailer in proper locate on
- c. Conduct post-trip inspection of equipment
- d. Wash equipment, if needed, according to the SOP for Cleaning Equipment SOP

4. Documentation

- a. Pre-trip and post trip inspection report

	S TANDARD O PERATING P ROCEDURE	SOP Name: Vehicle and Equipment Storage
City of Kingsport, TN	Stormwater Management	All Departments

VEHICLE AND EQUIPMENT STORAGE

1. Preparation

- a. Inspect parking areas for stains/leaks on a regular basis.
- b. Provide drip pans or adsorbents for leaking vehicles.

2. Process

- a. Whenever possible, store vehicles inside where floor drains have been connected to sanitary sewer system.
- b. When inside storage is not available, Vehicles and equipment will be parked in the approved designated areas.
- c. Maintain vehicles to prevent leaks as much as possible.
- d. Address any known leaks or drips as soon as possible. When a leak is detected a drip pan will be placed under the leaking vehicle to collect the drip.
- e. The shop will provide a labeled location to empty and store drip pans.
- f. If any leaks are discovered, a drip pan will be used to collect the fluids and vehicle will be scheduled for repairs.
- g. Clean up all spills using dry methods.
- h. Never store leaking vehicles over a storm drain.

3. Clean Up

- a. Any leaks that are spilled on the asphalt will be cleaned up with dry absorbent; the dry absorbent will be swept up and disposed of in the garbage.
- b. The paved surfaces around the building will be swept every two weeks, weather permitting.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Vehicle and Equipment Washing
City of Kingsport, TN	Stormwater Management	All Departments

WASHING

1. Preparation

- Provide wash areas for small vehicles inside the maintenance building that has a drain system which is attached to the sanitary sewer system.
- Provide wash areas for large vehicles on an approved outside wash pad that has a drain system which is attached to the sanitary sewer system.
- No vehicle washing will be done where the drain system is connected to the storm sewer system.

2. Process

- Minimize water and soap use when washing vehicles inside the shop building.
- Soap should not be used when washing vehicles outside the shop building. Water Only.
- Use hoses with automatic shut off nozzles to minimize water usage.
- When washing outside the building, it is the operators' responsibility to make sure all wash water is contained on the wash pad and does not have access to the storm drain.
- Never wash vehicles over or a storm drain.

3. Clean Up

- Sweep wash areas after every washing to collect what solids can be collected to prevent them from washing down the drain system.
- Clean solids from the settling pits on an as needed basis.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Pet Waste Management
City of Kingsport, TN	Stormwater Management	Parks and Recreation

PET WASTE MANAGEMENT

1. Preparation

- a. Adopt and enforce ordinances that require pet owners to clean up pet wastes and use leashes in public areas. If public off-leash areas are designated, make sure they are clearly defined. Avoid designating public off-leash areas near streams and water bodies.
- b. Whenever practical and cost effective, install dispensers for pet waste bags and provide disposal containers at locations such as trail heads or parks where pet waste has been a problem. Provide signs with instructions for proper cleanup and disposal.

2. Process

- a. Check parks and trails for pet waste as needed.
- b. Check public open space for pet waste prior to mowing.
- c. Provide ordinance enforcement as needed.

3. Clean up

- a. Remove all pet waste; provide temporary storage in a covered waste container, and dispose of properly. Preferred method of disposal is at a solid waste disposal facility.

4. Documentation

- a. Document problem areas for possible increased enforcement and/or public education signs.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Parks and Open Space Management
City of Kingsport, TN	Stormwater Management	Parks and Recreation

Description

Parks and open space maintenance activities involves the disposal of clippings from mowing, planting, weeding, trees, hedges and shrubs; raking of leaves; disposal of garbage and litter; spraying of pesticides, fertilizing; and the cleaning and upkeep of park restrooms, buildings, and tables. Refer to the Fertilizer, Pesticide, and Herbicide Application procedure for information on the application of landscape chemicals. When services are contracted, this written procedure should be provided to the contractor so they have the proper operational procedures. In addition, the contract should specify that the contractor is responsible for abiding by all applicable city, state, and federal codes, laws, and regulations.

Procedures

General

- Inspect newly landscaped areas on a regular basis after installed until the appropriate timing of maintenance is established.
- Report damage to landscape areas or bare areas void of vegetation that may result in sediment being transported off site.
- Collect and dispose of sediment from walkways and parking areas.
- Collect and dispose of trash from landscaped areas.
- Control run-off to limit soil erosion; do not use plastic under mulch, bark or wood chips, only use permeable fabrics.
- Do not attempt to clean up any unidentified or possibly hazardous materials found on or around landscaped areas during maintenance; notify the supervisor immediately upon discovery of hazardous materials.
- Refer to the Fertilizer, Pesticide, and Herbicide Application procedure for information on the application of landscape chemicals.

Possible Pollutants

Organics
Chemicals
Sediment
Fuel

Good Housekeeping

Secondary containment
Employee training

Related Procedures

Fertilizer, Herbicide, and

Standard Operating Procedure

Mowing

- Remove paper, debris, and trash from the landscaped and surrounding areas and dispose of properly prior to mowing activities.
- Mulch-mow grasses whenever possible, do not allow any grass clippings to wash off into any drainage ways.
- Properly dispose of vegetation and other wastes after mowing, pulling weeds, and trimming.

Irrigation

- Any obvious problems such as broken sprinkler heads, ponded water, and dry, un-watered areas need to be reported immediately.
- Only irrigate at a rate which can infiltrate into the soil, limit run-off from watering lawns, and landscaping.

Landscape Equipment

- Brush off mowers (reels and decks) and tractors over grassy areas. Leave clippings on grassy areas or dispose of in trash or by composting. Do not hose off mowers over paved areas that drain to the storm drain system.
- Fuel all equipment following the Vehicle Fueling procedure.
- Maintain (including washing) all equipment by following the Heavy Equipment and Vehicle Maintenance procedure.

Potentially Hazardous Material

- Unidentifiable materials: DO NOT HANDLE OBJECT – CALL 911 or 9-911 from City facility phone.
- Used vehicle oil
 - o Take to fleet maintenance and fill out log in foreman's office.
- Used car batteries
 - o Take to fleet maintenance and fill out log in foreman's office.

Other Activities

- Install pet waste stations with bags and trash receptors in locations where pet waste has shown to accumulate.
- All port-a-potties should be placed in flat, secure locations where they are less likely to be knocked over. All port-a-potties should be in a location that would retain any spillage opposed to washing into storm sewer or waterway.

Employee Training

- Train applicable employees who are involved with parks and open space maintenance activities on this written procedure. Information regarding proper storage practices and how to prevent and report spills will be presented during the training.

- Periodically conduct refresher training on the SOP for applicable employees who are involved with parks and open space maintenance activities.

Records

The following records could be used to document activities performed:

- Records of employee training with sign-in sheet.

Optional Additional Resources

City codes and ordinances that relate to parks and open space management, such as a noxious weed ordinance.

List of municipal properties to manage and frequency of management.

Instructions on how to operate equipment.

Integrated pest management techniques.

Landscape planning.

Procedures for using non-municipal (e.g., volunteer) personnel

	S TANDARD O PERATING P ROCEDURE	SOP Name: Parking Lot Maintenance
City of Kingsport, TN	Stormwater Management	Streets and Sanitation

PARKING LOT MAINTENANCE

1. Preparation

- a. Conduct regular employee training to reinforce proper housekeeping.
- b. Restrict parking in areas to be swept prior to and during sweeping using regulations as necessary.
- c. Perform regular maintenance and services in accordance with the recommended vehicle maintenance schedule on sweepers to increase and maintain efficiency.

2. Process

- a. Sweep parking areas, as needed, or as directed.
- b. Hand sweep sections of gutter if soil and debris accumulate.
- c. Pick-up litter as required to keep parking areas clean and orderly.

3. Clean-up

- a. Dispose of sweepings properly (appropriate solid waste facility).
- b. Street sweepers to be cleaned out in a manner as instructed by the manufacturer and in a location that swept materials cannot be introduced into a storm drain.
- c. Swept materials will not be stored in locations where storm water could transport fines into the storm drain system.

4. Documentation

- a. Keep work orders to track swept parking areas and approximate quantities.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Chemical Application (Pesticides, Herbicides and Fertilizers)
City of Kingsport, TN	Stormwater Management	Grounds Maintenance

CHEMICAL APPLICATION PESTICIDES, HERBICIDES, FERTILIZERS

1. Preparation

- Make sure your state Chemical Handling Certification is complete and up-to-date before handling any chemicals.
- Calibrate fertilizer and pesticide application equipment to avoid excessive application.
- Use pesticides only if there is an actual pest problem.
- Time and apply the application of fertilizers, herbicides or pesticides to coincide with the manufacturer's recommendation for best results ("Read the Label").
- Know the weather conditions. Do not use pesticides if rain is expected within a 24-hour period. Apply pesticides only when wind speeds are low (less than 5 mph).

2. Process

- Follow the manufacturer's recommendations for mixing, application and disposal. ("Read the Label").
- Do not mix or prepare pesticides for application near storm drains, preferably mix inside a protected area with impervious secondary containment (preferably indoors) so that spills or leaks will not contact soils.
- Employ techniques to minimize off-target application (e.g. spray drift, over broadcasting.) of pesticides and fertilizers.

3. Clean-up

- Sweep or blow pavements or sidewalks where fertilizers or other solid chemicals have fallen, back onto grassy areas before applying irrigation water.
- Triple rinse pesticide and herbicide containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- Always follow all federal and state regulations governing use, storage and disposal of fertilizers, herbicides or pesticides and their containers. ("Read the Label")

4. Documentation

- Keep copies of MSD sheets for all pesticides, fertilizers and other hazardous products used.
- Record fertilizing and pesticide application activities, including date, individual who did the application, amount of product used and approximate area covered.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Mowing and Trimming
City of Kingsport, TN	Stormwater Management	Grounds Maintenance

MOWING AND TRIMMING

1. Preparation

- a. Review the overall process with all employees.
- b. Check the oil and fuel levels of the mowers and other equipment; fill if needed.

2. Process

- a. Protect catch basins where applicable.
- b. Put on eye and hearing protection.
- c. Mow and trim the lawn.
- d. Sweep or blow clippings to grass areas.
- e. Remove inlet protection.

3. Clean-up

- a. Mowers are to be scraped and brushed at shop – dry spoils are dry swept and disposed of.
- b. Wash equipment in approved wash station.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Planting Vegetation (Starters)
City of Kingsport, TN	Stormwater Management	<i>Grounds Maintenance</i>

PLANTING VEGETATION (STARTERS)

1. Preparation

- a. Decide where any spoils will be taken.

2. Process

- a. Dig holes; place spoils near the hole where they may easily be placed back around roots. Avoid placing spoils in the gutter.
- b. Bring each plant near the edge of the hole dug for it.
- c. Check the depth of the hole, and adjust the depth if necessary. The depth of the hole for a tree should be as deep as the root ball, so that the top of the root ball is level with the top of the hole.
- d. Carefully remove pot or burlap.
- e. Place the plant in the hole.
- f. Backfill the hole with existing spoils, compost, and a litter fertilizer if desired. Do not use excessive amendments.
- g. Water the plant.
- h. Stake the plant, if necessary, to stabilize it.

3. Clean-up

- a. Move any extra spoils into truck or trailer. Place the spoils on a tarp if there is likelihood that some of the dirt would be lost through openings in the bed.
- b. Sweep dirt from surrounding pavement(s) into the planter area
- c. Transport spoils to their designated fill or disposal

	S TANDARD O PERATING P ROCEDURE	SOP Name: Planting Vegetation (Seeds)
City of Kingsport, TN	Stormwater Management	<i>Grounds Maintenance</i>

PLANTING VEGETATION (SEEDS)

1. Preparation

- a. Decide on the application rate, method, water source, and ensure adequate materials are on hand.
- b. Grade and prepare the soil to receive the seed. Place any extra soil in a convenient location to collect.

2. Process

- a. Place the seed and any cover using the pre-determined application method (and rate).
- b. Lightly moisten the seed.

3. Clean-up

- a. Move any extra spoils into truck or trailer. Place the spoils on a tarp if there is likelihood that some of the dirt would be lost through openings in the bed.
- b. Sweep dirt, seed, and any cover material from surrounding pavement(s) into the planter area.
- c. Transport spoils to their designated fill or disposal area.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Catch Basin Cleaning
City of Kingsport, TN	Stormwater Management	Streets and Sanitation

CATCH BASIN CLEANING

1. Preparation

- a. Clean sediment and trash off grate.
- b. Do visual inspection on outside of grate.
- c. Make sure nothing needs to be replaced.
- d. Do inside visual inspection to see what needs to be cleaned.

2. Process

- a. Clean using a high powered vacuum truck to start sucking out standing water and sediment.
- b. Use a high pressure washer to clean any remaining material out of catch basin, while capturing the slurry with the vacuum.
- c. After catch basin is clean, send the rodder of the vacuum truck downstream to clean pipe and pull back sediment that might have gotten downstream of pipe.
- d. Move truck downstream of pipe to next catch basin.

3. Clean-up

- a. When vacuum truck is full of sediment take it to the designated location to dump all the sediment out of truck into a drying bed.
- b. When it evaporates, clean it up with a backhoe, put it into a dump truck and take it to the landfill.

4. Documentation

- a. Keep logs of number of catch basins cleaned.
- b. Record the amount of waste collected.
- c. Keep any notes or comments of any problems.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Creek Management
City of Kingsport, TN	Stormwater Management	Streets and Sanitation

CREEK MANAGEMENT

1. Preparation

- a. Monitor streams on a regular basis (Suggested interval?).
- b. Check culverts and crossings after every storm.
- c. Maintain access to stream channels wherever possible.
- d. Identify areas requiring maintenance
- e. Determine what manpower or equipment will be required.
- f. Identify access and easements to area requiring maintenance.
- g. Determine method of maintenance that will be least damaging to the channel.
- h. Obtain Stream Alteration Permit.

2. Process

- a. Remove unwanted material (debris, branches, soil) from the creek channel and place it in a truck to be hauled away

3. Clean-up

- a. Stabilize all disturbed soils.
- b. Remove all tracking from paved surfaces near maintenance site, if applicable.
- c. Haul all debris or sediment removed from area to approved dumping site.

4. Documentation

- a. Keep log of actions performed including date and individuals involved.
- b. Record the amount of materials removed or imported.
- c. Keep any notes or comments of any problems.
- d. Use “before” and “after” photographs to document activities as applicable.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Ditch Management
City of Kingsport, TN	Stormwater Management	Streets and Sanitation

DITCH MANAGEMENT

1. Preparation

- a. Monitor ditches on a regular basis (Suggested interval?).
- b. Maintain access to ditch channels wherever possible.
- c. Contact affected property owners and utility owners.

2. Process

- a. Identify areas requiring maintenance
- b. Determine what manpower or equipment will be required.
- c. Identify access and easements to area requiring maintenance.
- d. Determine method of maintenance that will be least damaging to the channel and adjacent properties or utilities.

3. Clean-up

- a. Stabilize all disturbed soils.
- b. Remove all tracking from paved surfaces near maintenance site, if applicable.
- c. Haul all debris or sediment removed from area to approved dumping site.

4. Documentation

- a. Keep log of actions performed including date and individuals involved.
- b. Record the amount of materials removed or imported.
- c. Keep any notes or comments of any problems.
- d. Use “before” and “after” photographs to document activities as applicable.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Chip Seal
City of Kingsport, TN	Stormwater Management	Streets and Sanitation

CHIP SEAL

1. Preparation

- a. Clean and dry areas where materials are to be applied.
- b. Apply temporary covers to manholes and catch basins to prevent oil and materials from getting inside of them.

2. Process

- a. Apply emulsion at recommended rate.
- b. Spread chips closely behind emulsion distributor, slowly such that the chips do not roll when they hit the surface.
- c. Roll chips. Rollers follow closely behind the chip spreader. Roll entire surface twice.
- d. Maximum speed 5 mph.

3. Clean-up

- a. All loose aggregate is removed from the roadway by sweeping it up (see SOP for Street Sweeping).
- b. Excessive asphalt applications and spills are removed with shovels and scraping tools.
- c. Remove the temporary covers from manholes and catch basins. If it appears that any chip seal materials have gotten into the inlet boxes, remove the material according to the SOP for inlet boxes.
- d. Dispose of the waste material that has been swept and scraped up by taking it to the landfill.

4. Documentation

- a. Record location and date on the maintenance database and map

	S TANDARD O PERATING P ROCEDURE	SOP Name: Slurry Seal
City of Kingsport, TN	Stormwater Management	Streets and Sanitation

SLURRY SEAL

1. Preparation

- a. Remove weeds from the roads.
- b. Sweep areas where materials are to be applied, and allow to dry, if necessary.
- c. Verify that existing pavement has been inspected for detrimental effects of poor drainage.
- d. Cover/protect catch basins and manholes.

2. Process

- a. Apply materials in a smooth and uniform manner. Slurry material should not run onto adjacent pavement surface, curb and gutter or waterways.

3. Clean-up

- a. If loose aggregate is remaining in street or curb, sweep it up.
- b. Ensure that excess emulsion materials are removed from the site and stored for later use in an area or container that is not exposed to the weather.
- c. Remove covers/protection from catch basins and manholes, and valves.

4. Documentation

- a. Record location and date on the maintenance database and map

	S TANDARD O PERATING P ROCEDURE	SOP Name: Overlays and Patching
City of Kingsport, TN	Stormwater Management	Streets and Sanitation

OVERLAYS AND PATCHING

1. Preparation

- Measure and mark locations of manholes and valves on the curb
- Manholes and catch basins are covered as needed to prevent oil and materials from getting inside the structures or system.
- Cracks should be properly sealed. Alligator cracks and potholes should be removed and patched. Rutting should be milled.
- Surface should be clean and dry.
- Uniform tack coat applied and cured prior to placement of overlay.
- If milling is required, install inlet protection as needed.

2. Process

- Check hot asphalt mix for proper temperature, percentage asphalt, gradation, air voids and any other agency requirements.
- Raise manhole lids and valves to elevation of new asphalt surface with riser rings.
- Surface texture should be uniform, no tearing or scuffing.
- Rolling should be done to achieve proper in-place air void specification.

3. Clean-up

- Covering should be removed as soon as the threat of imported materials entering the system is reduced and prior to a storm event.
- After pavement has cooled, sweep gutters to remove loose aggregate.

4. Documentation

- Record location and date on the maintenance database and map

	S TANDARD O PERATING P ROCEDURE	SOP Name: Crack Seal
City of Kingsport, TN	Stormwater Management	Streets and Sanitation

CRACK SEAL

1. Preparation

- a. Cover Manholes and catch basins to prevent oil and materials from getting inside the structures or system.
- b. Remove weeds from the road
- c. Air-blast the cracks to remove sediments from the crack to allow for proper adhesion.
- d. Ensure that surface is clean and dry.

2. Process

- a. Proper temperature of material should be maintained.
- b. Sufficient material is applied to form the specified configuration.

3. Clean-up

- a. Excessive sealant application or spills are removed.
- b. Sweep all loose debris from the pavement and dispose of it in the local landfill.

4. Documentation

- a. Record location and date on the maintenance database and map

	S TANDARD O PERATING P ROCEDURE	SOP Name: Shouldering
City of Kingsport, TN	Stormwater Management	Streets and Sanitation

SHOULDERING

1. Preparation

- a. Set up temporary traffic control devices.

2. Process

- a. Place import material as needed and perform grading to achieve proper drainage.
- b. Mulch clippings to help reduce the amount of supplemental fertilizer required

3. Clean-up

- a. Clean any loose material off asphalt or gutter.

4. Documentation

- a. Record location and date on the maintenance database and map

	S TANDARD O PERATING P ROCEDURE	SOP Name: Secondary Road Maintenance
City of Kingsport, TN	Stormwater Management	Streets and Sanitation

SECONDARY ROAD MAINTENANCE

1. Preparation

- Determine length amount and type of roadbase or gravel that will be needed.
- Determine proper equipment to be used and or any safety hazards.
- Design proper drainage: slopes, berms etc.

2. Process

- Have truck drivers follow a designated route for hauling in the soil (See SOP for Soil and Gravel).
- If soil is too dry to achieve compaction, loosen surface material and moisture condition.
- Smooth or grade soil with the desired crown or cross-slope.
- Compact soil.

3. Clean-up

- Replace filter fabric with washed rock (if necessary) on monthly maintenance.
- Clean up equipment according to the SOP for Cleaning Equipment
- Clean up any debris on traveled roads, and dispose of it in the landfill.

4. Documentation

- Fill out daily activity report in log book or journal. Include date, time, personnel, and location.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Concrete Work
City of Kingsport, TN	Stormwater Management	Streets/Water/Sewer

CONCRETE WORK

1. Preparation

- a. Train employees and contractors in proper concrete waste management.
- b. Store dry and wet materials under cover, away from drainage areas
- c. Remove any damaged concrete that may need to be replaced.
- d. Prepare and compact sub-base.
- e. Set forms and place any reinforcing steel that may be required.
- f. Determine how much new concrete will be needed.
- g. Locate or construct approved concrete washout facility.

2. Process

- a. Install inlet protection as needed.
- b. Avoid mixing excess amounts of fresh concrete on-site.
- c. Moisten subbase just prior to placing new concrete. This helps keep the soil from wicking moisture out of the concrete into the ground.
- d. Place new concrete in forms.
- e. Consolidate new concrete
- f. Screed off surface
- g. Let concrete obtain its initial set
- h. Apply appropriate surface finish
- i. Remove forms when concrete will not slump

3. Clean-up

- a. Perform washout of concrete trucks and equipment in designated areas only
- b. Do not washout concrete trucks or equipment into stormdrains, open ditches, streets or streams
- c. Cement and concrete dust from grinding activities is swept up and removed from the site.
- d. Remove dirt or debris from street and gutter.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Snow Removal and De-icing
City of Kingsport, TN	Stormwater Management	Streets and Sanitation

SNOW REMOVAL AND DE-ICING

1. Preparation

- Store de-icing material under a covered storage area or in an area where water coming off the de-icing materials is collected and delivered to the sanitary sewer or reused as salt brine.
- Slope loading area away from storm drain inlets
- Design drainage from loading area to collect runoff before entering storm water system
- Wash out vehicles (if necessary) in approved washout area before preparing them for snow removal.
- Calibrate spreaders to minimize amount of de-icing material used and still be effective
- Provide vehicles with spill cleanup kits in case of hydraulic line rupture or other spills
- Train employees in spill cleanup procedures and proper handling and storage of de-icing materials

2. Process

- Load material into trucks carefully to minimize spillage
- Periodically dry sweep loading area to reduce the amount of de-icing materials exposed to runoff
- Distribute the minimum amount of de-icing material to be effective on roads
- Do not allow spreaders to idle while distributing de-icing materials.
- Park trucks loaded with de-icing material inside when possible

3. Cleanup

- Sweep up all spilled de-icing material around loading area
- Clean out trucks after snow removal duty in approved washout area
- Provide maintenance for vehicles in covered area
- If sand is used in de-icing operations, sweep up residual sand from streets when weather permits

	S TANDARD O PERATING P ROCEDURE	SOP Name: Street Sweeping
City of Kingsport, TN	Stormwater Management	Streets and Sanitation

STREET SWEEPING

1. Preparation

- a. Prioritize cleaning routes to use at the highest frequency in areas with the highest pollutant loading.
- b. Restrict street parking prior to and during sweeping using regulations as necessary
- c. Increase sweeping frequency just before the rainy season, unless sweeping occurs continuously throughout the year.
- d. Perform preventative maintenance and services on sweepers to increase and maintain their efficiency

2. Process

- a. Streets are to be swept as needed or specified by the city. Street maps are used to ensure all streets are swept at a specified interval
- b. Drive street sweeper safely and pickup debris
- c. When full, take the sweeper to an approved street sweeper cleaning station.

3. Clean-up

- a. Street sweepers are to be cleaned out in an approved street sweeper cleaning station
- b. Street sweeping cleaning stations shall separate the solids from the liquids.
- c. Once solids have dried out, haul them to the local landfill
- d. Decant water is to be collected and routed to an approved wastewater collection system area only.
- e. Haul all dumped material to the landfill.

4. Documentation

- a. Keep accurate logs to track streets swept and streets still requiring sweeping.
- b. Log the amount of debris collected and hauled off.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Transporting Soil and Gravel
City of Kingsport, TN	Stormwater Management	Water/Sewer/Storm

TRANSPORTING SOIL AND GRAVEL

1. Preparation

- Dry out wet materials before transporting.
- Spray down dusty materials to keep from blowing.
- Make sure you know and understand the SWPPP requirements for the site you will be working at.
- Determine the location that the truck and other equipment will be cleaned afterwards

2. Process

- Use a stabilized construction entrance to access or leave the site where materials are being transported to/from.
- Cover truck bed with a secured tarp before transporting.
- Follow the SWPPP requirements for the specific site to/from which the materials are being hauled.
- Make sure not to overfill materials when loading trucks.

3. Clean up

- Use sweeper to clean up any materials tracked out on the roads from site.
- Wash out truck and other equipment when needed in properly designated areas.

4. Documentation

- Keep records of any material that is tracked out of site and what was done to clean it up and how long it took to clean up and what the weather conditions were at the time.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Utility and Storm Sewer System Maintenance
City of Kingsport, TN	Stormwater Management	Streets/Water/Sewer

Description

This fact sheet addresses utility and storm sewer system maintenance. Utilities include sewer and potable water conveyance systems. The storm sewer system includes pipes, catch basins, inlets, outlets, culverts, detention and retention ponds, and drainageways. The storm sewer system is cleaned as part of routine maintenance and on an emergency basis in the event of flooding. Maintaining the storm sewer system on a regular basis will remove pollutants, prevent clogging of the downstream conveyance system, restore the system's sediment trapping capability, and ensure the system functions properly to avoid flooding. Flooding, ponding, and uncontrolled sheet flow can result in property damage and increase soil erosion and tracking of soil onto city streets. When services are contracted, this written procedure should be provided to the contractor so they have the proper operational procedures. In addition, the contract should specify that the contractor is responsible for abiding by all applicable city, state, and federal codes, laws, and regulations.

Procedures

General

- Follow the inspection and maintenance schedules for utility and storm sewer systems. Where feasible, grading activities will be scheduled during dry weather.
- Where feasible, schedule maintenance activities during dry weather.
- Monitor the jet/vacuum truck closely for leaks and use a drip pan as needed.
- Wash and fuel the jet/vacuum truck per the Equipment/Vehicle Maintenance procedure.
- Stay alert for any signs of illicit discharges. This includes "dry weather" flows or pipes or hoses emptying into the storm sewer system.
- Report any suspicious discharges or dumping to your supervisor.

Possible Pollutants

Sediment
Nutrients
Metals
Hydrocarbons
Trash

Good Housekeeping

Waste Management
Employee/Contractor Training
Proper Cleanup and Disposal
Procedures

Related Procedures

Heavy Equipment and Vehicle
Maintenance
Parks and Open Space
Maintenance
Spill Prevention and Response
Street, Curb, and Gutter

Standard Operating Procedure

- Storm sewer system maintenance wastes may be either non-hazardous or hazardous. Solid nonhazardous waste may be disposed in a sanitary landfill or recycled. Liquid non-hazardous wastes must be evaporated or discharged to the sanitary sewer system before disposing of it into the landfill. Hazardous waste must be transported and disposed of at a permitted disposal or treatment facility.
- Do not temporarily store collected storm system cleaning debris adjacent to any surface water, storm drain inlet, or drainageway.

Storm Sewer System Pipes

- Clean storm sewer system pipes by jetting the pipes and using a jet/vacuum truck to remove the material.
 - o Set the truck over the manhole downstream from the pipeline to be jetted.
 - o Jet water up against flow to the upstream manhole. Jet back downstream controlling pressure to avoid service interruptions in low areas.
 - o Vacuum the debris and washwater.
 - o After jetting the pipe, hose down manhole and jetting nozzle inside of manhole before bringing to surface.
 - o Spills and oversprays will be washed and vacuumed clean.

Catch Basins, Inlet and Outlet Structures, and Culverts

- Manual cleaning
 - o Bail out sediment-laden water with a shovel into the street then dispose of it into a truck. Or, crew enters catch basin and fills buckets with sediment that are then carried to a dump truck. Clean water is used to refill the catch basin.
- Vacuum cleaning
 - o Set the truck over the manhole downstream from the pipeline to be jetted.
 - o Jet water up against flow to the upstream manhole. Jet back downstream controlling pressure to avoid service interruptions in low areas.
 - o Vacuum the debris and washwater.
 - o After jetting the pipe, hose down manhole and jetting nozzle inside of manhole before bringing to surface.
 - o Spills and oversprays will be washed and vacuumed clean.
- Replace or maintain “no dumping” plaques as necessary.
- Remove trash from trash racks and grated openings.

Detention and Retention Ponds

- Inspect the outlet works and remove trash from the trash racks and grated openings. Also remove vegetation adjacent to the outlet works to minimize clogging.

- Use a skimmer; a device that strains large debris, in front of the pump and filter to prevent most clogging problems. Remove and service the fountains and aerator motors as recommended.
- Immediately report noticeable damage to the pond requiring additional maintenance.
- Report any suspected water quality problems if the water is suspected to be contaminated due to a change in vegetation growth or appearance.
- Inspect side slopes of the pond for areas eroding or requiring vegetation. Seed and cover with erosion control blanket to reestablish vegetation cover to prevent erosion.
- Inspect for plants on the state's noxious weed list that need to be treated.
- Perform mosquito and vector control activities per municipal and state guidelines.

Drainageways

Drainageways include drainage channels, ditches, grass swales, and washes.

- Conduct maintenance of drainageways in a series of sections or phases over several years to minimize erosion if extended drainageway lengths are involved.
- Insure all head gates, valves, and flumes are working properly.
- Inspect outfall pipes leading to drainageways for erosion and repair if necessary.
- Remove trash and debris from the drainageways, grates, flumes, and headgates and properly dispose of material in a covered trash container or remove it to an approved landfill as soon as possible.
- Flush out/dig out the drainageway, as necessary, to remove sediment which could impede the flow. The entire drainageway may need to be regraded if the invert has filled in with silt.
- If feasible, repair any areas where rip rap has fallen out of place or collapsed. Schedule maintenance if additional repairs are needed.
- Trim trees and shrubs as necessary.
- Inspect the drainageways for any signs of erosion, leaking, and damage. Maintain and repair damaged or washed out portions of drainageway embankments and easements.
- Inspect all signs and repair and replace as necessary.
- Leave a riparian fringe when mowing drainageways to catch pollutants before reaching the drainageway. Do not leave grass clippings in the drainageway. Do not apply landscape chemicals in the channel area.
- Identify noxious weeds and apply treatment to eliminate as specified by the municipality.

Potable Line Flushing

- Remove any debris from the inlet that will be used for the flushed water.
- Connect the hydrant being flushed with a dechlorinating diffuser.
- Direct the flow downstream to the nearest inlet.
- Keep inlet clear of debris during the flushing operation.

Waterline Breaks

- Contain spoils away from the storm sewer systems (e.g., inlets, drainage way) by building berms around the excavation area.
- Install inlet protection downstream of waterline break to prevent sub-grade material from entering storm sewer system.
- Dewater the excavation by using a vacuum truck.

- Flush the pipe after the repair by using a dechlorinating diffuser.
- Clean streets from any debris and sediment deposited as a result of the waterline break.

Sanitary Sewer Backup

- Jet upstream from the first dry manhole.
- Clear line stoppage to prevent backup into house basements and manhole overflows.
- Contain overflows by blocking nearby storm sewer system inlets.
- Clean up spills by washing and vacuuming the affected areas.

Safety

- Safety training and awareness play a significant part in the maintenance of utility and storm sewer systems.
- It is also important to be aware of the work environment as maintenance activities require limited clearance to buildings, working near high wire electrical poles, underground utilities, narrow ditch banks, standing water, other municipal staff, and many other safety related concerns.
- Weather conditions also dictate safety as snow, rain, ice, mud, heat and cold can all contribute to the working conditions.
- Subsurface inspections, if necessary, will be conducted in accordance with confined space entry procedures.
- Applicable personal protective equipment will be worn at all times.

Employee Training

- Train applicable employees who perform utility and storm sewer system activities on this written procedure. Information regarding how to avoid and report spills will be presented during the training.
- Periodically conduct refresher training on the SOP for applicable employees who perform utility and storm sewer system activities.

Records

The following records could be used to document activities performed:

- Records of employee training with sign-in sheet.

Optional Additional Resources

City codes and ordinances that relate to utility or storm sewer system maintenance.

Inspection and maintenance frequency plan for the storm sewer system.

Specific instructions on how to operate applicable equipment.

Instructions on how to track the amount of debris collected

	S TANDARD O PERATING P ROCEDURE	SOP Name: Salt Storage
City of Kingsport, TN	Stormwater Management	Streets and Sanitation

Description

Deicers, including salt and sand, are commonly used during snow removal activities. Improper handling of deicers, salt and sand can contribute pollutants to waterways. When services are contracted, this written procedure should be provided to the contractor so they have the proper operational procedures. In addition, the contract should specify that the contractor is responsible for abiding by all applicable city, state, and federal codes, laws, and regulations.

Procedures

Solid Deicer Storage

- Deicers should be stored under cover, such as inside a covered structure or under a tarp.
- Containment barriers should be placed to prevent transport of the material beyond the storage area unless stored inside a structure.
- Whenever possible, storage areas should be outside of the 100-year floodplain for protection against flooding.
- Any temporary salt and sand storage areas should be protected from erosive forces of wind and rain.
- Do not overload material spreaders.
- Sweep the area outside of the material storage area after loading and unloading.

Liquid Deicer Storage

- Establish liquid deicer inventory controls to minimize the amount of deicer used and stored.
- Store tanks/containers in a location where they will not be accidentally damaged by equipment or vehicles.
- Periodically inspect storage tanks/containers to ensure that all materials are being stored properly when not in use.
- Clean the storage tank/container area when necessary using dry clean up methods.
- Follow all State and Federal above-ground and underground storage tank requirements.

Possible Pollutants

Sediment
Chemicals

Good Housekeeping

Covered outdoor storage areas
Dry clean up methods
Employee training

Related Procedures

Heavy Equipment and Vehicle
Maintenance
Material Storage
Salt and Sand Storage
Snow and Ice Control
Snow Storage

Standard Operating Procedure

- When receiving bulk deliveries or when loading liquid deicers into truck mounted tanks, minimize leaks and clean up spills as soon as they occur.

Employee Training

- Train applicable employees who are involved in salt and sand storage activities on this written procedure. Information on proper storage practices and on how to prevent and report spills will be presented during training.
- Periodically conduct refresher training on the SOP for applicable employees who are involved in salt and sand storage activities.

Records

The following records could be used to document activities performed:

- Record of any major spills and the action taken.
- Records of employee training with sign-in sheet.

Optional Additional Resources

City codes and ordinances that relate to salt and sand storage.
Chemical purchasing policies.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Salt Application
City of Kingsport, TN	Stormwater Management	Streets and Sanitation

Description

Deicers can contaminate surface and ground water and damage vegetation adjacent to roadways. Salt will change the chemical balance of local waterways and sand can be picked up by stormwater resulting in higher dissolved and suspended sediment loads in waterways. Sand also presents an air quality concern. When services are contracted, this written procedure should be provided to the contractor so they have the proper operational procedures. In addition, the contract should specify that the contractor is responsible for abiding by all applicable city, state, and federal codes, laws, and regulations.

Procedures

Plowing

- Inspect plowing equipment for leaks prior to use. Follow the Equipment and Vehicle Maintenance procedure for responding to leaking vehicles.
- Take care when connecting or releasing plow shovels and clean up any hydraulic fluid that may leak onto the pavement.
- Wash snow removal equipment only at approved washing stations following the Outdoor Vehicle Maintenance procedure.
- Do not pile snow in front of storm sewer inlets to allow inflow of snowmelt runoff.

Deicer Application

- Apply only the recommended amount of deicer to roadways.
- Spreaders should be calibrated at the beginning of each season and inspections for maintenance or repair should be conducted after each storm.
- As soon as weather conditions allow, follow-up with street sweeping to remove remaining deicer from roadways.

Possible Pollutants

Sediment
Toxics

Good Housekeeping

Dry cleanup methods
Employee training

Related Procedures

Heavy Equipment and Vehicle Maintenance
Material Storage
Salt and Sand Storage
Snow Storage
Spill Prevention and Response
Vehicle fueling

	S TANDARD O PERATING P ROCEDURE	SOP Name: Trash and Garbage Collection
City of Kingsport, TN	Stormwater Management	Streets and Sanitation

Description

All solid and liquid wastes must be disposed of properly. Some of the most common sources of pollution at municipal facilities are a result of littering, improper collection of debris, and improper disposal of solid or liquid waste. When services are contracted, this written procedure should be provided to the contractor so they have the proper operational procedures. In addition, the contract should specify that the contractor is responsible for abiding by all applicable city, state, and federal codes, laws, and regulations.

Procedures

General

- Provide cover, if feasible, for all waste storage areas including keeping dumpster lids closed.
- Provide a low containment berm, if feasible, around waste storage areas.
- Conduct periodic inspections of solid and liquid waste storage areas to check for leaks and spills.
- Conduct periodic inspections of work areas to ensure that all wastes are being disposed of properly.
- Follow the Spill Prevention and Response procedure to respond to and clean up any spills or leaks.
- Clean storage areas when necessary using dry clean up methods (except in areas where the wash water will enter the sanitary sewer and is an approved discharge).
- Return dumpsters to the supplier when cleaning is necessary or if the dumpster is leaking.
- Properly handle and dispose of all hazardous wastes. See the Outdoor Material Storage procedure for more information.

Possible Pollutants

Construction Debris

Organics

Oil and Grease

Trash

Metals

Paint

Toxins

Good Housekeeping

Dumpster/waste management

Employee/Contractor Training

Proper cleanup and disposal procedures

Dry cleaning methods

Stormwater retrofits

Related Procedures
Large Outdoor Festivals and Events
Outdoor Material Storage
Spill Prevention and Response
Street Sweeper Cleaning and Waste

Standard Operating Procedure

Solid Waste

- Solid waste that cannot be recycled should be disposed of in the trash dumpster.
- Recycle solid wastes when possible, including the following:
 - o Glass
 - o Plastic containers
 - o Cardboard and Paper
 - o Organic material
 - o Scrap metal
 - o Wood debris
 - o Used batteries
 - o Used oil filters
 - o Light bulbs
- Follow the Street Sweeper Cleaning and Waste procedure for proper disposal of street sweepings.

Liquid Waste

- Never place liquids in a dumpster.
- If unable to recycle, old latex paints should be mixed with floor dry or other adsorbent material to solidify prior to disposal in the trash.
- If unable to recycle, enamels and other oil-based paints should be applied to cardboard, newspaper, or similar materials and allowed to dry prior to disposal in the trash.
- Recycle liquid wastes, including the following:
 - o Used oil
 - o Used antifreeze
 - o Used solvents

Employee Training

- Train applicable employees who dispose of wastes on this written procedure. Information on how to avoid and report spills will be presented during the training.
- Periodically conduct refresher training on the SOP for applicable employees who dispose of wastes.

Records

The following records could be used to document activities performed:

- Records of employee training with sign-in sheet.

Optional Additional Resources

Frequency of trash and recycling pick ups.

List of Recycling Sites:

List of Companies Accepting Hazardous Waste

	S TANDARD O PERATING P ROCEDURE	SOP Name: Painting
City of Kingsport, TN	Stormwater Management	Traffic

CURB PAINTING

1. Preparation

- Calculate the amount of paint required for the job
- Use water based paints if possible.
- Determine whether the wastes will be hazardous or not and the required proper disposal of said wastes
- Determine locations of storm drain inlets and sewer inlets that may need to be protected
- Prepare surfaces to be painted without generating wastewater by sandblasting and/or scraping.
- Thoroughly sweep up all sand, blasting, and/or paint scrapings
- If paint stripping is needed, use a citrus-based paint remover whenever possible, which is less toxic than chemical strippers?
- If wastewater will be generated, use curb, dyke, etc. around the activity to collect the filter and collect the debris.

2. Process

- Paint curb.
- Prevent over-spraying of paints and/or excessive sandblasting
- Use drip pans and drop clothes in areas of mixing paints and painting
- Store latex paint rollers and brushes in air tight bags to be reused later with the same color.
- Have available absorbent material and other BMP's ready for an accidental paint spill.

3. Clean-up

- Paint out brushes and rollers as much as possible. Squeeze excess paint from brushes and rollers back into the containers prior to cleaning them.
- Pour excess paint from trays and buckets back into the paint can containers and wipe with cloth or paper towels. Dispose of the towels according to the recommendations on the paint being used.
- Rinse water-based paint brushes in the sink after pre-cleaning. Never pour excess paint or wastewater from cleanup of paint in the storm drain.
- Cleanup oil based paints with paint thinner. Never clean oil based brushes in a sink or over a storm drain. Filter solvents for reuse if possible and/or store in approved drum for recycling.
- Dispose of waste collected by placing it in a garbage container. Left-over paint and solvents should be stored for later use (do not place these liquids in the garbage).

4. Documentation

- Write-up/report of any discharges into storm drain system

	S TANDARD O PERATING P ROCEDURE	SOP Name: Planned Excavation Repair / Replacement
City of Kingsport, TN	Stormwater Management	Water/Sewer Maintenance

PLANNED EXCAVATION REPAIR / REAPLACEMENT

1. Preparation

- a. Determine where discharge flow will go
- b. Place inlet protection at nearest downstream storm drain inlet
- c. Clean gutters leading to inlet
- d. Isolate area to be worked on
- e. Neutralize any chlorine residual/pathogens before discharging water

2. Process

- a. Make efforts to keep water from pipeline from entering the excavation
- b. Direct any discharge to pre-determined area
- c. Backfill and compact excavation
- d. Haul of excavated material or stock pile nearby

3. Clean up

- a. Clear gutter/waterway where water flowed
- b. Clean up all areas around excavation
- c. Clean up travel path of trucked material

4. Documentation

- a. Complete documentation

	S TANDARD O PERATING P ROCEDURE	SOP Name: Unplanned Excavation Repair / Replacement
City of Kingsport, TN	Stormwater Management	Water/Sewer Maintenance

UNPLANNED EXCAVATION REPAIR / REAPLACEMENT

1. Preparation

- a. Make sure service trucks have wattles, gravel bags, or other materials for inlet protection.

2. Process

- a. Slow the discharge.
- b. Inspect flow path of discharged water
- c. Protect stormwater inlet areas
- d. Follow planned repair procedures.
- e. Haul off spoils of excavation
- f. Consider use of silt filter bags on pumps

3. Clean-up

- a. Repair eroded areas as needed
- b. Follow planned repair procedures
- c. Clean up the travel path of trucked excavated material

	S TANDARD O PERATING P ROCEDURE	SOP Name: Waterline Flushing for Routine Maintenance
City of Kingsport, TN	Stormwater Management	Water Maintenance

WATERLINE FLUSHING FOR ROUTINE MAINTENANCE

1. Preparation

- a. Determine flow path of discharge to inlet of waterway.
- b. Determine chlorine residual
- c. Neutralize chlorine residual

2. Process

- a. Clean flow path.
- b. Protect inlet structures.
- c. Use diffuser to dissipate pressure to reduce erosion possibilities.

3. Clean-up

- a. Clean flow path
- b. Remove inlet protection.

4. Documentation

- a. Residual tests of discharge water.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Equipment and Vehicle Maintenance
City of Kingsport, TN	Stormwater Management	Fleet

Description

Regular maintenance of city vehicles and equipment, or city-contracted vehicles and equipment prolongs the life of the city's assets and prevents the leaking of hazardous fluids commonly associated with normal wear and tear of vehicles and equipment. Potential pollutants generated at vehicle maintenance facilities include oil, antifreeze, brake fluid and cleaner, solvents, batteries and fuels. When services are contracted, this written procedure should be provided to the contractor so they have the proper operational procedures. In addition, the contract should specify that the contractor is responsible for abiding by all applicable city, state, and federal codes, laws, and regulations.

Procedures

Maintenance activities should be performed inside a Municipal Services Center building unless the equipment is too large to fit inside or temporary repairs need to be made before the equipment can be moved to the maintenance building. Consult the Outdoor Fleet Maintenance procedure when it is necessary to perform repairs outside of the facility (breakdowns, service calls, etc.).

Vehicle Storage

- Monitor vehicles and equipment closely for leaks and use drip pans as needed until repairs can be performed.
- When drip pans are used, check frequently to avoid overtopping and properly dispose of fluids.
- Drain fluids from leaking or wrecked vehicles and from motor parts as soon as possible. Dispose of fluids properly.

Possible Pollutants

Metals
Toxins
Solvents (degreasers, paint thinners, etc.)
Antifreeze
Brake fluid and brake pad dust
Battery acid
Motor oil
Fuel (gasoline, diesel, kerosene)
Lubricating grease

Good Housekeeping

Drip pans
Tarps
Covered outdoor storage areas
Secondary containment
Proper disposal of used fluids
Spill cleanup materials
Dry cleanup methods
Employee training

Related Procedures
Material Storage
Outdoor Fleet Maintenance
Spill Prevention and Response
Street Sweeper Cleaning and
Waste
Vehicle Fueling
Vehicle Washing

Standard Operating Procedure

Vehicle Maintenance

- Conduct routine inspections of heavy equipment and vehicles to proactively identify potential maintenance needs.
- Perform routine preventive maintenance to ensure heavy equipment and vehicles are operating optimally.
- Recycle or dispose of all wastes properly and promptly.
- Do not dump any liquids or other materials outside, especially near or in storm drains or ditches. Sweep and pick up trash and debris as needed.

Body Repair and Painting

- Whenever possible, conduct all body repair and painting work indoors.
- Use dry cleanup methods such as vacuuming or sweeping to clean up all metal filings, dust, and paint chips from grinding, shaving, and sanding, and dispose of the waste properly. Debris from wet sanding can be allowed to dry overnight on the shop floor, then swept or vacuumed. Never discharge these wastes to the storm or sanitary sewer system.
- Minimize waste from paints and thinners by carefully calculating paint needs based on surface area and using the proper sprayer cup size.
- Do not use water to control over-spray or dust in the paint booth unless this wastewater is collected. This water should be treated and permission must be granted by the wastewater treatment plant prior to discharge into the sanitary sewer system.
- Do not dispose of spray gun cleaner waste in the storm drain.
- Use sanding tools equipped with vacuum capability (if available) to pick up debris and dust.

Material Management

- Store maintenance materials and waste containers (e.g., used oil and antifreeze) in labeled containers under cover or in secondary containment (e.g., double-walled tanks). Chemicals should not be combined in containers.
- All hazardous wastes must be labeled and stored according to hazardous waste regulations.
- Carefully transfer fluids from collection devices to designated storage areas as soon as possible. Do not store the transferred fluids adjacent to the containers (for example, oil drip pans with used oil in them should not be placed next to the used oil tank).
- Store new batteries securely to avoid breakage and acid spills.
- Store used batteries indoors or in secondary containment to contain potential leaks. Recycle used batteries.
- Conduct periodic inspections of storage areas to detect possible leaks.
- Do not wash or hose down storage areas except where wash water will enter the sanitary sewer as an approved discharge. Use dry clean-up methods whenever possible.
- Keep lids on waste barrels and containers, and store them indoors or under cover to reduce exposure to rain.

- Periodically inspect and maintain all pretreatment equipment, including sumps, separators, and grease traps to ensure proper functioning.

Parts Cleaning

- Use designated areas for engine, parts, or radiator cleaning. Do not wash or rinse parts outdoors. If parts cleaning equipment is not available, use drip pans or other containment to capture parts cleaning fluids.
- Use steam cleaning or pressure washing of parts whenever possible instead of solvent cleaning.
- When steam cleaning or pressure washing, only discharge wastewater to an oil/water separator connected to the sanitary sewer.
- When using solvents to clean parts, rinse and drain parts over the designated solvent tank so that fluids will not drip or spill onto the floor. Use drip boards or pans to catch excess solutions and divert them back to the tank. Allow parts to dry over the hot tank.
- Recycle cleaning solution when it becomes too dirty to use. Never discharge cleaning waste to the sanitary sewer or storm sewer.

Vehicle and Equipment Washing

- Vehicles should be washed in the city's vehicle and equipment wash area/bay or taken to a commercial car wash.

Employee Training

- Train applicable employees who perform heavy equipment and vehicle maintenance on this written procedure. Information regarding how to avoid and report spills will be presented during the training.
- Periodically conduct refresher training on the SOP for applicable employees who perform heavy equipment and vehicle maintenance.

Records

The following records could be used to document activities performed:

- Record of any major spills and the action taken.
- Records of employee training with sign-in sheet.
- Heavy equipment and vehicle maintenance logs.

Optional Additional Resources

City codes and ordinances that relate to vehicle and equipment maintenance.

Chemical purchasing policies.

Loading and unloading bulk materials.

Guidelines for staff to dedicate a percentage of their time to vehicle and equipment maintenance.

Specific directions on how to use the city's vehicle wash area.

Spill Prevention Control and Countermeasures Plan

	S TANDARD O PERATING P ROCEDURE	SOP Name: Outdoor fleet Maintenance
City of Kingsport, TN	Stormwater Management	Fleet

Description

Although it is recommended that fleet maintenance activities be conducted indoors or under cover, it is sometimes necessary to perform fleet maintenance outdoors (e.g., equipment is too large to fit inside the maintenance building, temporary repairs need to be made before the equipment can be moved to the maintenance building, breakdowns, service calls).

Some potential pollutants typically associated with outdoor fleet maintenance activities include oil, antifreeze, brake fluid and cleaner, solvents, batteries, and fuels. Consult the Spill Prevention and Response procedure and the Vehicle Fueling procedure for additional information on those topics. When services are contracted, this written procedure should be provided to the contractor so they have the proper operational procedures. In addition, the contract should specify that the contractor is responsible for abiding by all applicable city, state, and federal codes, laws, and regulations.

Procedures

Fleet Maintenance

- Fleet maintenance should be performed inside whenever possible.
- If indoor maintenance is not possible, ensure maintenance is performed in a location where contact with stormwater is minimized, through berming and appropriate routing of drainage.
- Provide inlet protection (berms, weighted inlet covers, etc.) for all adjacent inlets when work is occurring in close proximity to a storm drain inlet.
- Have absorbent pads and drip pans accessible to capture leaks and spills during maintenance activities.
- Keep equipment clean and do not allow excessive build-up of oil and grease.
- Perform regular preventative maintenance to minimize the occurrence of leaks and major repairs.
- Recycle and/or dispose of all wastes properly and promptly.

Possible Pollutants

Metals

Toxins

Solvents (degreasers, paint thinners, etc.)

Antifreeze

Brake fluid and brake pad dust

Battery acid

Motor oil

Fuel (gasoline, diesel, kerosene)

Lubricating grease

Good Housekeeping

Drip pans

Tarps

Covered outdoor storage areas

Secondary containment

Proper disposal of used fluids

Spill cleanup materials

Dry cleanup methods
Employee training

Related Procedures

Heavy Equipment and Vehicle Maintenance

Material Storage

Spill Prevention and Response

Vehicle Fueling

- Do not dump any liquids or other materials outside, especially near or in storm drains or ditches. Sweep and pick up trash and debris as needed.
- Clean up spills promptly using dry methods (do not hose down). Consult the Spill Prevention and Response procedure for more information. Cleanup is completed only after absorbent and rags are disposed of properly.

Body Repair and Painting

- Whenever possible, conduct all body repair and painting work indoors.
- Use dry cleanup methods such as vacuuming or sweeping to clean up all metal filings, dust, and paint chips from grinding, shaving, and sanding. Dispose of the waste properly. Debris from wet sanding can be allowed to dry overnight, then swept and vacuumed. Liquid from wet sanding should not be allowed to enter the storm drain. Never discharge these wastes to the storm or sanitary sewer systems.
- Minimize waste from paints and thinners by carefully calculating paint needs based on surface area and using the proper sprayer cup size.
- Clean spray guns in a self-contained cleaner. Do not dispose of cleaner waste in the storm drain.
- Use sanding tools equipped with vacuum capability (if available) to pick up debris and dust.

Material Management

- Store maintenance materials and waste containers (e.g., used oil and antifreeze) in labeled containers under cover or in secondary containment (e.g., double-walled tanks). Chemicals should not be combined in containers.
- All hazardous wastes must be labeled and stored according to hazardous waste regulations.
- Carefully transfer fluids from collection devices to designated storage areas as soon as possible.

Do not store the transferred fluids adjacent to the containers.

- Store new batteries securely to avoid breakage and acid spills.
- Store used batteries indoors or in secondary containment to contain potential leaks. Recycle used batteries.
- Conduct periodic inspections of storage areas to detect possible leaks.
- Do not wash or hose down the storage area except in areas where the wash water will only enter the sanitary sewer drain as an approved discharge. Use dry clean-up methods as often as possible.
- Keep lids on waste barrels and containers, and store them indoors or under cover to reduce exposure to rain.
- Periodically inspect and maintain all pretreatment equipment, including sumps, separators, and grease traps to ensure proper functioning.

Parts Cleaning

- Use designated areas for engine, parts, or radiator cleaning. Do not wash or rinse parts outdoors. If parts cleaning equipment is not available, use drip pans or other containment to capture parts cleaning fluids.
- Use steam cleaning or pressure washing of parts whenever possible instead of solvent cleaning.
- When steam cleaning or pressure washing is used, only discharge wastewater to an oil/water separator connected to the sanitary sewer.
- When using solvents, rinse and drain parts over the designated solvent tank so that fluids will not drip or spill onto the floor. Use drip boards or pans to catch excess solutions and divert them back to the tank. Allow parts to dry over the hot tank.
- Recycle cleaning solution when it becomes too dirty to use. Never discharge cleaning waste to the storm or sanitary sewer systems.

Vehicle and Equipment Washing

- Vehicles should be washed, whenever possible, in the city's vehicle and equipment wash area/bay or taken to a commercial car wash.

Employee Training

- Train applicable employees on this written procedure. Information regarding how to avoid and report spills will be presented during the training.
- Periodically conduct refresher training on the SOP for applicable employees who perform outdoor vehicle maintenance.

Records

The following records could be used to document activities performed:

- Record of any major spills and the action taken.
- Records of employee training with sign-in sheet.
- Heavy equipment and vehicle maintenance logs.

Optional Additional Resources

City codes and ordinances that relate to fleet maintenance.

Chemical purchasing policies.

Guidelines for staff to dedicate a percentage of their time to vehicle and equipment maintenance.

Specific directions on how to use the municipality's vehicle wash area.

Spill Prevention Control and Countermeasure Plan

	S TANDARD O PERATING P ROCEDURE	SOP Name: Complaint Response and Tracking
City of Kingsport, TN	Stormwater Management	Stormwater

1. Preparation

- a. Have a system in place to receive phone calls and collect information regarding suspected illicit discharges.

2. Process

- a. Use the Incident Tracking Sheet to collect the appropriate information from the caller. Then, transfer the Incident Tracking Sheet to the proper authority (ie. department head, stormwater specialist, construction inspector, code enforcement officer, or other assigned personnel).
- b. Promptly investigate reported incident within 7 days.

3. Response

- a. Clean catch basin, clean storm drain, or initiate spill response, as applicable. Follow relevant SOPs.

4. Documentation

- a. File all completed forms (ie. incident tracking, catch basins cleaning, storm drain cleaning).
- b. Document any further action taken.
- c. Review incidents reported by citizens on an annual basis to evaluate the call-in inspection program.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Illicit Discharge Investigation
City of Kingsport, TN	Stormwater Management	Stormwater

1. Preparation

- a. Be alert for potential illicit discharges to the municipal storm water system while going about normal work activities.

2. Process

- a. Call the appropriate authority (ie. department head, stormwater specialist, construction inspector, code enforcement officer or a supervisor) if you see evidence of an illicit discharge.
- b. Assess the general area of the illicit discharge to see if you can identify its source.
- c. Whenever possible, take photographs of the suspected illicit discharge.
- d. Responding stormwater department personnel or code enforcement officer will complete the following:
- e. Use the IDDE Incident Tracking Sheet to document observations.
- f. Obtain sample for visual observation and complete an Outfall Inspection Form, if applicable.
- g. Follow the procedure of SOP IDDE - Tracing Illicit Discharges.

3. Clean-up

- a. Clean catch basin, clean storm drain, or initiate spill response, as needed. Follow relevant SOPs.

4. Documentation

- a. File all completed forms (ie. Incident Tracking Form, Outfall Inspection Form, Catch Basin Cleaning Form, and Storm Drain Cleaning Log).
- b. Document any further action taken.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Outfall Inspections
City of Kingsport, TN	Stormwater Management	Stormwater

1. Preparation

- a. Know the past and present weather conditions. Conduct inspections during dry weather periods.
- b. Gather all necessary equipment including: tape measure, clear container, clipboard with necessary forms, flashlight, and camera (optional).
- c. Obtain maps showing outfall locations and identifiers.
- d. Obtain outfall description and observations from previous inspections, so the outfall can be accurately identified and observations compared.

2. Process

- a. Perform an inspection of each outfall every permit cycle. Whenever, possible use the same personnel for consistency in observations.
- b. Identify each outfall with a consistent and unique identifier. Use maps and previous inspection reports to confirm the outfall identity and location.
- c. If dry weather flow is present at the outfall, then document and evaluate the discharge by completing the following steps:
 1. Collect field samples for visual observations in a clean, clear container and in a manner that avoids stirring up sediment that might distort the observation.
 2. Characterize and record observations on basic sensory and physical indicators (e.g., outfall condition, flow, odor, color, oil sheen) on the Outfall Inspection Form.
 3. Compare observations to previous inspections.
 4. If the flow does not appear to be an obvious illicit discharge (e.g., flow is clear, odorless, etc.), attempt to identify the source of the flow (groundwater, intermittent stream, etc.)
- d. If an illicit discharge (such as raw sewage, petroleum products, paint, etc.) is encountered or suspected, follow the procedure of SOP IDDE - Tracing Illicit Discharges.

3. Cleanup - as necessary

4. Documentation

- a. File completed outfall inspection forms.
- b. Update maps if new outfalls are observed and inspected.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Illicit Discharge Removal
City of Kingsport, TN	Stormwater Management	Stormwater

1. Preparation

- a. Obtain available property ownership information for the source of the illicit discharge.

2. Process

- a. Determine who is financially responsible; and follow associated procedures as given below.

For Private Property Owner:

Contact Owner,

Issue Notice of Violation for violations of the municipal ordinance, and

Determine schedule for removal.

For Municipal Facility:

Notify appropriate municipal authority or department head,

Schedule removal, and

Remove illicit connection.

- b. Suspend access to storm drain if threats of serious physical harm to humans or the environment are possible.

- c. Direct responsible party to initiate repairs/corrections/cleanup. Coordinate with enforcement official for escalating penalties in accordance with the municipal ordinance.

- d. Repair/correct cause of discharge if municipality is responsible. Schedule the work through the appropriate municipal authority or department head..

- e. Seek technical assistance from the TDEC Water Resources Division, if needed.

3. Clean up

- a. Confirm illicit discharge is removed or eliminated by follow-up inspection.

4. Documentation

- a. Maintain records of notice of violation and penalties.

- b. Document repairs, corrections, and any other actions required.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Tracing Illicit Discharges
City of Kingsport, TN	Stormwater Management	Stormwater

1. Preparation

- a. Review / consider information collected when illicit discharge was initially identified and document using Incident Tracking Form or Outfall Inspection Form.
- b. Obtain storm drain mapping for the area of the reported illicit discharge.
- c. Gather all necessary equipment including: tape measure, clear container, clipboard with necessary forms, flashlight, and camera (optional).

2. Process

- a. Survey the general area / surrounding properties to identify potential sources of the illicit discharge as a first step.
- b. Trace illicit discharges using visual inspections of upstream points as a second step. Use available mapping to identify tributary pipes, catch basins, etc.
- c. If the source of the illicit discharge cannot be determined by a survey of the area or observation of the storm drain system, then consider the following additional steps:
 1. Use weirs, sandbags, dams, or optical brightener monitoring traps to collect or pool intermittent discharges during dry weather.
 2. Smoke test or televise the storm drain system to trace high priority, difficult to detect illicit discharges.
 3. Dye test individual discharge points within suspected buildings.
 4. Consider collecting bacterial samples of flowing discharges to confirm/refute illicit discharge.
- d. If the source is located, follow SOP IDDE - Removing Illicit Discharges.
- e. If the source cannot be found, add the location to a future inspection program.

3. Clean up

- a. Clean catch basin, clean storm drain, or initiate spill response, as applicable. Follow relevant SOPs.

4. Documentation

- a. Document tracing results for future reference.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Site Plan Review
City of Kingsport, TN	Stormwater Management	Stormwater

1. Preparation

- a. Receipt of concept or preliminary plan.
- b. Obtain applicable checklists (SWPPP, Water Quality, Special Pollution Abatement Plan, etc.).

2. Process

- a. Review plan for completeness.
- b. Provide comments to the developer and design professional regarding deficiencies.
- c. Receive updated plans.
- d. Review submittal for completeness.
- e. Plan approval.

3. Documentation

- a. Document approval with checklists, response letters, etc.

	S TANDARD O PERATING P ROCEDURE	SOP Name: Inspections
City of Kingsport, TN	Stormwater Management	Stormwater

1. Preparation

- a. Obtain construction site or permanent maintenance form.
- b. Gather all necessary information (construction plan sheets, as-builts, O&M documents, etc.)

2. Process

- a. Perform thorough inspection of site best management practices for compliance.
- b. Note any deficiencies or changes.
- c. Use the enforcement response plan to assess commensurate enforcement action.
- d. Update the SWPPP if necessary.
- e. Follow up on enforcement response to determine if further action is warranted.

3. Documentation

- a. Document results on inspection form and update enforcement history.

APPENDIX D: ENFORCEMENT RESPONSE PLAN

RESOLUTION NO. 2017-106

A RESOLUTION AMENDING RESOLUTION NO. 2008-134 OF THE CITY OF KINGSPORT PERTAINING TO AN ENFORCEMENT RESPONSE PLAN FOR THE STORMWATER MANAGEMENT ORDINANCE

WHEREAS, the Tennessee Department of Environment and Conservation has issued a new NPDES General Permit for Small Municipal Storm Sewer Systems to the City of Kingsport; and

WHEREAS, the permit necessitates some changes to the Enforcement Response Plan.

Now therefore,

BE IT RESOLVED BY THE BOARD OF MAYOR AND ALDERMEN AS FOLLOWS:

SECTION I. That Resolution No. 2008-134 is amended as follows:

ENFORCEMENT RESPONSE PLAN

Introduction

The intent of this document is to provide guidance to city officials in enforcing the stormwater management ordinance. It should be used only as a guide while recognizing that each situation is unique. The provisions of this enforcement response plan are not mandatory. Actual enforcement procedures should consider any unusual aspects of a violation or condition, as well as special characteristics of an enforcement action, in determining the proper response.

While the purpose is to provide guidance for administration of the stormwater management ordinance, it is not intended to limit the judgment and flexibility of the director in determining an appropriate response.

Development Project Plan Review, Approval and Enforcement

The city conducts site plan review through the development project engineer, including interdepartmental consultations, to ensure comprehensive input. A letter to the developer states the city's response, soliciting any changes to the stormwater management plan. Any changes must be submitted in writing and reviewed by city staff before approval is granted.

The site plan must specifically address in the stormwater management plan how it will comply with performance standards stated in the city's stormwater management ordinance.

To ensure that permanent stormwater BMPs are installed as designed, appropriately stamped as-built certifications must be provided to the director for review and approval prior to the release of a performance bond. The owner must also supply stormwater management facility certification forms, provided by the city, attesting that the facilities are constructed according to the approved design.

NPDES Permit Referrals

If the city becomes aware that a construction activity, or an industrial stormwater discharge, exists and that the discharge must be permitted under an NPDES permit but is not so permitted, or if the city has not been able, through its enforcement mechanisms and protocol, to bring an NPDES-permitted discharge into compliance with the city's stormwater management ordinance, the city shall notify TDEC of this situation by supplying the following information to the local environmental field office (EFO): 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); and records of communication with the owner or operator regarding filing requirements or violation, including the last two follow-up inspections, two notices of violation or administrative orders, and any response from the owner or operator.

Complaint Management

The city investigates all stormwater-related complaints. They are received in several ways; either verbally, by hotline, web page, phone or from other city departments. Ensuing investigations must be initiated within seven days from the receipt of the complaint. Violations documented as a result of complaint investigation will lead to commensurate enforcement activities.

Inspection

The city conducts inspections of permitted or unpermitted sites, activities, or projects to assess compliance with the approved stormwater pollution prevention plan and/or erosion and sediment control plan and evaluate the potential for discharge of sediment and other construction related wastes. Documentation of observations is achieved through the completion of applicable inspection reports. Enforcement occurs by initiation of corrective actions, enforcement actions and penalties, as defined in and per the terms of the City's stormwater management ordinance.

Enforcement Tracking

The city tracks instances of non-compliance either in paper files or electronically. The enforcement case documentation shall 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; any referrals to different departments or agencies; and date violation was resolved.

Chronic Violators

The city identifies chronic violators of any stormwater management program component and reduces the rate of noncompliance recidivism by tracking the violations, applying incentives and/or disincentives, and increasing the inspection frequency at the owner/operator's site. If corrective actions are not taken, the city pursues progressive enforcement and, if need be, performs the necessary work and assesses against the owner the costs incurred for repairs.

Enforcement Responses

The order of precedence for enforcement responses outlined in this guide should not be construed to prevent the director from taking a stronger action without first implementing less stringent steps, if in his opinion, a more forceful response is necessary.

Minor infractions may be resolved by a verbal warning, or written notice advising the owner/operator/person of the nature of the violation. If such action fails to generate an adequate response by the owner/operator/person, further enforcement actions as provided by the ordinance may be taken.

Verbal Warning

In the case of the most minor violation of a permit or the ordinance, a telephone call or informal meeting may be sufficient to obtain the desired compliance. Verbal warnings should be documented by contemporaneous notes.

Written Notice

A written notice is the lowest level of formal response to a violation. It is intended for minor violations which would not cause harm to the environment.

Notice of Violation

A notice of violation (NOV) is an official notification to inform a non-compliant owner of a violation of the stormwater management ordinance. Within ten (10) days of receipt of this notice, a written explanation of the violation and a plan for the satisfactory correction and prevention thereof, to include specific required actions, shall be submitted by the owner to the director. Inspection to ensure performance of any corrective actions may be conducted by the director at his discretion. Submission of this plan in no way relieves the owner of liability for any violations occurring before or after receipt of the notice of violation.

Administrative Orders

Administrative orders (AO) are enforcement documents which direct owners to perform, or to cease, specific activities. Administrative orders may also invoke a penalty. There are three (3) primary types of administrative orders: consent orders; compliance orders; and cease and desist orders.

A show cause hearing should be offered prior to enforcement of an administrative order or assessment of damages or a civil penalty. The purpose of a show cause hearing is to provide a forum for the owner to present a defense to charges as outlined, or, for the director to obtain additional information from the owner to determine whether to proceed with enforcement.

Consent orders are entered into between the city and the owner to assure compliance as to specific actions to be taken by the owner to correct non-compliance within a specified time period. The director may enter into consent orders, assurances of voluntary compliance or other similar documents establishing an agreement with any owner responsible for noncompliance. Such documents shall include specific action to be taken by the owner to correct the noncompliance within a time period specified in the document. Such documents shall have the same force and effect as orders issued pursuant to Sections 38-87 and 38-.

Compliance orders may be issued when the director finds that an owner has violated, or continues to violate, the ordinance or an order issued thereunder. It is similar to a consent order except that the consent of the owner is not implied in its issuance. When the director finds that an owner has violated or continues to violate any section of this article, or a permit or order issued under this article, the director may issue an order to the owner responsible for the violation directing that the owner come into compliance within a specified time, and such order may include assessment of a penalty to be paid if the owner does not come into compliance within the time provided. Compliance orders also may contain other requirements to address the noncompliance, including the construction of appropriate structures, installation of devices, self-monitoring and management practices designed to minimize the amount of pollutants discharged offsite. A compliance order does not relieve the owner of liability for any violation, including any continuing violation. Issuance of a compliance order shall not be a bar against or a prerequisite for taking any other action against the owner.

Cease and desist orders may be issued when the director finds that an owner has violated or continues to violate, the stormwater management ordinance or order issued thereunder. The order shall require that the owner:

- (a) Comply forthwith; and
- (b) Take such appropriate remedial or preventive action as may be needed or deemed necessary to properly address a continuing or threatened violation, including halting operations and terminating the discharge. Issuance of a cease and desist order shall not be a bar against or a prerequisite for taking any other action against the owner.

Administrative orders contain the following components:

- (a) Title - The title specifies the type of order being issued (see below), to whom it is being issued, summarizes the purpose of the order, and contains an identification number.

(b) Legal Authority - The authority under which the order is issued (the stormwater management ordinance).

(c) The Finding of Noncompliance - All violations must be described including the dates, the specific permit and/or ordinance provisions violated, and any damages known and attributable to the violation.

(d) Required Activity - All orders should specify the required actions, such as installation of BMPs, additional inspections, appearance at show cause hearings, etc.

(e) Milestone Dates for Corrective Actions - When compliance schedules are appropriate, all milestone dates must be established including due dates for required written reports.

(f) Supplemental Clauses - The document should contain standard clauses which provide that:

1. Compliance with the terms and conditions of the administrative order shall not be construed to relieve the owner of its obligation to comply with applicable state, federal or local law, or the permit;
2. Violation of the administrative order itself may subject the owner to additional penalties as set out in the stormwater management ordinance;
3. No provision of the order shall be construed to limit the city's authority to issue supplementary or additional orders, or to take action deemed necessary to implement this program or ordinance;
4. The order shall be binding upon the owner, its officers, directors, agents, employees, successors, assigns, and all persons, firms or corporations acting under, through or on behalf of the owner.

Administrative orders issued as a result of a violation of the stormwater management ordinance shall contain a penalty as determined using Tables 'A' and "B" in this document. Administrative orders may also be used to advise an owner of the need to take, or cease, certain actions, and in such case, may or may not be associated with penalties as defined in the ordinance or in this guide.

In accordance with the City of Kingsport Code of Ordinances, section 38-342 a show cause hearing should be offered prior to enforcement of an administrative order or assessment of damages or a civil penalty. The purpose of a show cause hearing is to provide a forum for the owner to present a defense to charges as outlined, or for the director to obtain additional information from the owner to determine whether to proceed with enforcement. An owner may appeal the decision of the director to the stormwater appeals board as permitted by the City of Kingsport Code of Ordinances, section 38-343.

Civil Litigation

Pursuant to Section 38-343 of the stormwater management ordinance, the director may, through the city attorney, petition the appropriate court(s) for issuance of preliminary or permanent injunctions to restrain or compel activities by an owner.

Penalties, Administrative or Civil

The stormwater management ordinance authorizes assessment of penalties not to exceed \$5,000 per violation per day. Additionally, Section 38-87 of the ordinance authorizes the director to assess a civil penalty for actual damages incurred by the city. Before the enforcement of any administrative penalty, a show cause hearing must be offered to the owner.

If a violation results in conditions requiring the expenditure of public funds for mitigation of damages, a penalty shall be assessed in such amount as to offset the public funds so expended. This will in no way reduce or offset the liability of the owner with respect to damages incurred.

Explanation of Use of Tables

This guide is based primarily on the use of two tables; "A", and "B". Table "A" indicates how point values are assigned for each violation, considering the severity, duration, degree of harm, and compliance history of the owner. All possible violations may not be listed; however, this does not preclude an appropriate enforcement response.

In Table "A", three columns are associated with each listed violation – the "Initial Points" column, the "Repeat Value" column, and the "Cumulative" column. If no history of violations is noted, the value in the "Initial Points" column may be used in conjunction with Table "B" to assess a typical response to the violation.

If the user has a history of similar violations, the initial point value plus the product of the number of previous occurrences times the repeat value should be used as shown in the following formula: Total Point Value (TP) = P + (N x R), where;

P = Initial Point Value for a single violation

N = Number of previous occurrences

R = Repeat Value from Table "A"

Should more than one violation be noted at a time, the cumulative column should be consulted. If violations are cumulative in nature, the sum of the individual point values should be used to judge the response. If not, the greatest individual values should be used to judge response, with the documentation for that response, however, noting all violations.

Once a point value is determined, Table "B" should be consulted for recommended responses. Table "B" provides a schedule of appropriate responses based upon the number of "points" determined by Table "A".

Example

An owner violates the terms of the stormwater management ordinance. This violation is considered significant and causes harm. Investigation reveals the owner has been cited twice in the past for the same violation: Total Point Value (TP) = P + (N x R)

Therefore: TP = 3 + (2 x 1) = 5

Where 3 = Points charged for isolated but significant discharge from Table "A"

2 = Number of previous occurrences; and

1 = Repeat value from Table "A".

Resulting options: Civil injunction or administrative order with up to \$500.00 penalty.

TABLE "A"
Response Guide for Violation

<u>DESCRIPTION OF VIOLATION</u>	<u>INITIAL POINTS</u>	<u>REPEAT VALUE</u>	<u>CUMULATIVE</u>
EROSION PREVENTION AND SEDIMENT CONTROL			
Violation of a single requirement:			
Not significant	1	1	No
Significant, no harm	2	1	Yes
Significant, causes harm	3	1	Yes
Violation of more than one requirement:			
Not significant	2	1	Yes

Significant, no harm	3	1	Yes
Significant, causes harm	4	1	Yes

UNAUTHORIZED DISCHARGES

Illicit Discharges:

Owner unaware of requirement, no harm	1	N/A	No
Owner unaware of requirement, harm	2	N/A	No
Owner aware of requirement, no harm	2	1	Yes
Owner aware of requirement, harm	3	1	Yes

Illicit Connections:

Owner unaware of requirement, no harm	1	N/A	No
Owner unaware of requirement, harm	2	N/A	No
Owner aware of requirement, no harm	2	1	Yes
Owner aware of requirement, harm	3	1	Yes

INSPECTION

Entry denied	2	2	Yes
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Inspection Records

Incomplete	1	2	No
Not available	1	2	No

MAINTENANCE

Failure to properly operate and maintain BMPs

1	1	Yes
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STORMWATER MANAGEMENT

Pre-Construction

Failure to obtain NOC	2	1	No
Failure to obtain grading permit	2	1	No
Failure to provide performance bond	2	1	No

Construction

Failure to provide water quality SCMs	2	2	No
Failure to provide channel protection	2	2	No
Failure to provide downstream impact analysis	2	2	No

Post-Construction

Failure to provide special pollution abatement plan	2	2	No
Failure to provide as-built	2	2	No
Failure to provide covenant	2	2	No

TABLE "B" VIOLATION RESPONSE GUIDE

POINT TOTAL	ACTION
1	Written warning
2	Notice of Violation
3	Administrative Order with up to \$150 Penalty
4	Administrative Order with up to \$300 Penalty
5	Administrative Order with up to \$500 Penalty
6	Administrative Order with up to \$1,000 Penalty
7	Administrative Order with up to \$2,000 Penalty

- | | |
|----|---|
| 8 | Administrative Order with up to \$3,000 Penalty |
| 9 | Administrative Order with up to \$4,000 Penalty |
| 10 | Administrative Order with up to \$5,000 Penalty |

A cease and desist order may be issued at any time and a civil injunction may be requested at any time, for any violation, if in the opinion of the director in consultation with the city attorney, such action is justified, needed or appropriate.

Criminal Action

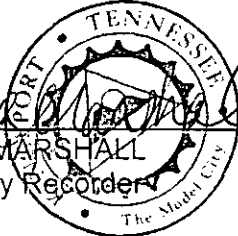
In cases where criminal acts are suspected by the director, after consultation with the city attorney, information shall be gathered and forwarded to the district attorney of the appropriate county for action. Criminal prosecution, if pursued, shall be in addition to other actions authorized by ordinance.

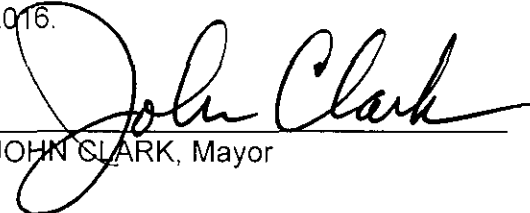
SECTION II. That this resolution shall take effect from and after its adoption, the public welfare requiring it.

ADOPTED this the 6th day of December, 2016.

ATTEST:


ANGELA MARSHALL
Deputy City Recorder




JOHN CLARK, Mayor

APPROVED AS TO FORM:


J. MICHAEL BILLINGSLEY, City Attorney