

Stormwater Management Plan

I. PURPOSE

Early in 2002, the City of Tullahoma was informed by the Tennessee Department of Environment and Conservation that it would likely be designated as a regulated small MS4 (Municipal Separate Storm Sewer System) to be covered under the Phase II NPDES Storm Water Discharge Control Program. On December 9, 2002, the City of Tullahoma was officially designated as a small MS4 in accordance with EPA regulations at 40 CFR 123.35(b). The designation required that the City of Tullahoma apply for coverage under an NPDES Permit within 180 days of the date of designation. The City of Tullahoma did so and is permitted under tracking number TNS077631.

II. REGULATORY REQUIREMENTS

The Phase II Stormwater Regulations, found at 40 CFR Part 122, require the City of Tullahoma at a minimum, to develop, implement, and enforce a stormwater management program designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. The stormwater management program shall be based around 6 Minimum Control Measures. The 6 Minimum Control Measures are as follows:

- PUBLIC EDUCATION AND OUTREACH
- PUBLIC PARTICIPATION AND INVOLVEMENT
- ILLICIT DISCHARGE DETECTION AND ELIMINATION
- CONSTRUCTION SITE RUNOFF CONTROL
- POST-CONSTRUCTION RUNOFF CONTROL
- POLLUTION PREVENTION AND GOOD HOUSEKEEPING

III. PUBLIC EDUCATION AND OUTREACH

PERMIT REQUIREMENTS

Permit Section 4.2.1.1 requires that the City of Tullahoma implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce stormwater pollutants in stormwater runoff.

Permit Section 4.2.1.1.1 requires that the City prepare a clear set of requirements with respect to stormwater management at restaurants and similar food service establishments and ensure that these establishments have been made aware of those requirements.

COMPLIANCE MECHANISMS

To comply with Section 4.2.1.1 of the General Permit, the City of Tullahoma will implement the following four Best Management Practices (BMPs):

1. Classroom Education

The City will provide presentations and/or materials on water quality and stormwater issues for classroom use. School children at the 5th grade level will be targeted each year to receive stormwater education, aimed primarily at providing an understanding of the importance of the stormwater system and stormwater quality. By the end of year 2 of the permit period, the program should be presented to all 5th grade classes annually.

2. Public Educational Workshops

The City of Tullahoma will sponsor workshops, primarily for Industrial / Commercial facilities and the Construction Industry. The workshops will be used to educate the regulated public on the requirements of the City's NPDES Permit and the Tullahoma Stormwater Management Ordinance. The City will likely hold separate workshops for Industrial / Commercial facilities and for the Construction Industry. By the end of year 2 of the permit period, the City should have held at least one workshop each for the construction industry, industrial / commercial facilities, and restaurant / food preparation facilities.

3. Storm Drain Stenciling

City crews will label storm drains to educate the general public to the fact that these drains discharge directly to Waters of the State. All drains will be labeled by the end of the 5-year permit period.

4. Web Site

The City's web site will be updated to include information on the stormwater program. The site should include copies of the ordinance and other regulatory documents, notification of upcoming events, contact information, and links to other stormwater sites such as the State's web site.

A potential BMP that may be implemented by the City, if determined necessary after an annual review, is as follows:

5. Informative Brochures

The City will utilize a series of brochures / fliers to educate specific types of facilities, such as restaurants, commercial car washes, etc., on the types of BMPs they can implement at their facility to improve stormwater quality in the area.

The educational program outlined above will be carried out in such a way as to reach as many people as possible over the period covered by the City's first NPDES Permit. While it is likely that items such as the classroom education will continue beyond the permit period, the specific educational techniques utilized beyond the permit period will depend greatly on the requirements of the State's

next General Permit for Small MS4s.

To comply with Section 4.2.1.1.1 of the General Permit, the City of Tullahoma will require that restaurants and certain other food preparation facilities prepare a written plan outlining the best management practices that they will utilize to minimize impacts from their establishment to the quality or quantity of waters discharged to the Tullahoma MS4. This requirement and the required contents of the written plan are located at Sections 8.0 to 8.3 of the Draft Tullahoma Stormwater Management Ordinance.

IV. PUBLIC PARTICIPATION AND INVOLVEMENT

PERMIT REQUIREMENTS

Section 4.2.2.1 of the Permit requires that at a minimum, the City shall comply with State and local public notice requirements when implementing a public involvement / participation program.

COMPLIANCE MECHANISMS

To comply with Section 4.2.2.1 of the Permit, the City of Tullahoma will implement the following four BMPs:

1. Public Notice

The City will publish a public notice and provide a review and comment period prior to passing the stormwater management ordinance. This public notice and review process will also be utilized prior to making any major modifications to the ordinance, after its initial approval.

2. Public Meetings

The City of Tullahoma will occasionally hold public meetings, as milestones are reached and new BMPs are to be implemented, to inform the public of upcoming changes and to receive comments on the program and the proposed changes. Public meetings will be held in specific basins prior to major initiatives taking place within the basin.

3. Watershed Clean-up

The City will attempt to partner with environmental / civic groups or possibly school groups to host watershed clean-up events. The events will target specific watersheds and will consist of trash and debris removal from the stormwater conveyance systems and tributaries. By the end of the permit period, at least one event shall have been held in each watershed.

4. Stormwater Hotline

The City will designate a telephone number and web address to be used for water

quality and stormwater related complaints and issues.

A potential BMP that may be implemented by the City, if determined necessary after an annual review, is as follows:

5. Stormwater Advisory Committee

The City will develop a committee to discuss and make decisions concerning stormwater program elements and implementation.

These techniques will continue at least through the life of the first NPDES Permit, but will likely be necessary to continue into the foreseeable future.

V. ILLICIT DISCHARGE DETECTION AND ELIMINATION

PERMIT REQUIREMENTS

Section 4.2.3.1.1 of the Permit requires that the City of Tullahoma develop, implement, and enforce a program to detect and eliminate illicit discharges (as defined in 40 CFR Part 122.26(b)(2)) into the small MS4. 40 CFR Part 122.26(b)(2) defines an illicit discharge as any discharge to a municipal separate storm sewer that is not entirely composed of storm water, except discharges authorized under an NPDES permit (other than the NPDES permit for discharges from the MS4) and discharges resulting from fire fighting activities.

Section 4.2.3.1.2 of the Permit requires that the City develop a storm sewer system map, showing the location of all outfalls (ie., points where the city storm sewer system discharges into wet weather conveyances owned or operated by another MS4, or into waters with use classifications designated by the State) and the names and location of all use-designated waters of the state that receive discharges from those outfalls.

Section 4.2.3.1.3 of the Permit requires that the City effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into the storm sewer system and implement appropriate enforcement procedures and actions for non-compliance.

Section 4.2.3.1.4 of the Permit requires that the City develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to the stormwater system.

Section 4.2.3.1.5 of the Permit requires that the City inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

Section 4.2.3.1.6 of the Permit requires that the City address the following sources of non-storm water discharges only if they are identified as a significant contributor of pollutants to the MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined in 40 CFR §35.2005(20)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning

condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (discharges or flows from fire fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the state).

Section 4.2.3.2 of the Permit requires that the City, by ordinance or other regulatory mechanism, prohibit contamination of stormwater runoff from industrial and commercial properties, including restaurants, auto repair shops, auto supply shops, and large commercial parking areas.

COMPLIANCE MECHANISMS

The City of Tullahoma will comply with each of the Permit requirements listed above through implementation of the following BMPs:

1. Stormwater Management Ordinance Development and Approval

The Tullahoma Stormwater Management Ordinance will address the issue of illicit discharges. The ordinance will prohibit non-stormwater discharges, except for uncontaminated discharges of the types listed in the General Permit. The ordinance will require notification of any spills that could potentially result in an illicit discharge to the stormwater system. It will also allow that any person responsible for a property, which is the source of an illicit discharge, may be required to implement, at that person's expense the BMPs necessary to prevent the further discharge of pollutants to the stormwater system. The ordinance will also make it unlawful for any person to discharge stormwater to any stream, ditch, storm sewer, or any other storm drain within the city without first obtaining the required State Permit coverage for the type of activity being conducted.

2. Dry Weather Screening

The City of Tullahoma, Department of Public Works will inspect all MS4 outfalls during dry weather to search for flow. A schedule and form of documentation will be implemented by the Department to assure that all outfalls are inspected during the time period specified in the Permit Application. Attempts will be made to track any flows identified to their source to determine whether an illicit discharge exists. Appropriate enforcement actions as necessary to eliminate the illicit discharge will be implemented by the Director of Public Works, immediately upon discovery of the discharge. By the end of the 5-year permit period, the City should be inspecting all outfalls on an annual basis.

3. GIS Storm System Mapping

The City of Tullahoma will develop a GIS compatible database of all stormwater infrastructure, including ditches, storm sewers, culverts, catch basins, etc. The mapping will identify all outfalls and waters of the state, which will be a necessary prerequisite to the completion of the dry weather screening.

4. Industrial and Commercial Facilities Inspection

The Department of Public Works will routinely inspect a given number of commercial and industrial facilities to determine their compliance status with stormwater regulations and to inspect for illicit discharges. All facilities should be inspected prior to the end of the 5-year permit period.

5. Training

Municipal employees shall be trained to recognize illicit discharges, the hazards associated with illicit discharges, and procedures to eliminate illicit discharges.

VI. CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

PERMIT REQUIREMENTS

Section 4.2.4.1 of the Permit requires that the City of Tullahoma develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more.

Section 4.2.4.1.1 of the Permit requires the City to develop an ordinance, or other regulatory mechanism, to require erosion and sediment controls, as well as sanctions to ensure compliance. This regulatory mechanism must be in place within 18 months of coverage under the Permit.

Section 4.2.4.1.2 of the Permit requires the City to develop requirements for construction site operators to implement appropriate erosion and sediment control best management practices.

Section 4.2.4.1.3 of the Permit requires that the City develop requirements corresponding to the Tennessee Construction General Permit, effective July 1, 2000, as follows:

- (a) Necessity of an erosion prevention and sediment control/pollution prevention plan
- (b) Pre-construction vegetative ground cover shall not be disturbed more than 20 calendar days prior to grading or earth moving unless the area is seeded and/or mulched or other temporary cover is installed
- (c) Construction must be sequenced and phased to minimize exposure of bare soil, with no disturbance more than 20 days prior to grading or earth moving;
- (d) Temporary or permanent soil stabilization shall be accomplished within 15 days after final grading or other earthwork.
- (e) Erosion and sediment control measures shall be designed to control the rainfall and runoff from a 2 year, 24 hour storm, as a minimum.
- (f) For common drainage locations that serve an area with 10 or more acres disturbed at one time, a temporary (or permanent) sediment basin that provides storage for a calculated volume of runoff from a 2 year, 24 hour storm and runoff

coefficient from each disturbed acre drained, or equivalent control measures, shall be provided until final stabilization of the site. Where no such calculation has been performed, a temporary (or permanent) sediment basin providing 3,600 cubic feet of storage per acre drained, or equivalent control measures, shall be provided until final stabilization of the site.

Section 4.2.4.1.4 of the Permit requires the City to develop requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality.

Section 4.2.4.1.5 of the Permit requires the City to implement procedures for site plan review, which incorporate consideration of potential water quality impacts.

Section 4.2.4.1.6 of the Permit requires that the City implement procedures for receipt and consideration of information submitted by the public.

Section 4.2.4.1.7 of the Permit requires that the City implement procedures for site inspection and enforcement of control measures.

Section 4.2.4.1.8 of the Permit requires that the City staff be trained in the fundamentals of erosion prevention and sediment control and in how to review erosion and sediment control plans. At a minimum, one member of the staff must attend the Tennessee Fundamentals of Erosion Prevention and Sediment Control and the Erosion Prevention and Sediment Control Design Course.

Section 4.2.4.1.9 of the Permit requires that the City's program provide for the following:

- (a) Recognition of priority construction activity, including at a minimum those construction activities discharging directly into, or immediately upstream of, waters the state recognizes as impaired (for siltation) or high quality;
- (b) Pre-construction meetings with construction-site operators, for priority construction activities; and
- (c) Inspections by the MS4, of priority construction sites at least once per month.

Section 4.2.4.2 of the Permit requires that all of the requirements listed above under Section VI be implemented by the City within 24 months of the effective date of the City's Notice of Coverage. This requirement does not include the passing of an ordinance, which must be completed within 18 months.

COMPLIANCE MECHANISMS

The following BMPs will be implemented by the City of Tullahoma to comply with all of the requirements of the Construction Site Runoff Control portion of the Permit:

1. Stormwater Management Ordinance

The City will replace its existing ordinances that deal with construction site runoff controls with a more complete stormwater management ordinance. The

ordinance will require all construction sites of 1 acre or greater to acquire a permit. The ordinance will also provide requirements for certain construction sites of less than 1 acre to acquire a permit. The ordinance will outline all of the required submittals to be included in the application for a permit. It will also contain provisions for the review of the application, permit duration, pre-construction conferences, performance bond requirements, and general performance criteria for stormwater management. The ordinance establishes a definition of priority construction activity and outlines certain requirements, as required, for those activities. The ordinance contains enforcement procedures that includes the possibility of penalties up to \$5,000 per day per violation for facilities that do not comply.

2. Inspection Program

The City will inspect construction activities on a schedule sufficient to determine compliance of the site with stormwater regulations. A minimum inspection frequency will be developed for various classes of construction activity. An inspection form will be developed and used to document construction site inspections.

3. Contractor Training and Certification

The City will host training classes for contractors and will encourage contractors to attend State certification training. The City may choose to accept attendance at a State certification course in lieu of payment of a civil penalty. The City may also choose to reduce stormwater application fees for certified contractors.

4. Erosion Control Plan Review

In addition to the stormwater drainage plan, the City will require that the NOI submitted to the State and the Stormwater Pollution Prevention Plan (SWPPP) be submitted as part of the permit application. The SWPPP will be reviewed along with the drainage plan to assure that adequate erosion and sedimentation control measures are planned on the front end of the development.

5. Staff Training

The Director of Public Works, and others as he may designate, will attend the two required State training classes.

VII. POST-CONSTRUCTION STORMWATER MANAGEMENT

PERMIT REQUIREMENTS

Section 4.2.5.1.1 of the Permit requires the City to develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts.

Section 4.2.5.1.2 of the Permit requires that the City develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for the community.

Section 4.2.5.1.3 of the Permit requires that the City must develop and implement a set of requirements to protect and maintain riparian buffers in areas of new development and redevelopment.

Section 4.2.5.1.4 of the Permit requires the City to develop and ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law.

Section 4.2.5.1.5 of the Permit requires that the City ensure adequate long-term operation and maintenance of Post-Construction BMPs.

COMPLIANCE MECHANISMS

The City will utilize the following BMPs to comply with the Permit requirements for Post-Construction Runoff Controls:

1. Stormwater Management Ordinance

The City will develop a stormwater management ordinance that will allow the City to obtain ownership and responsibility for post-construction runoff controls or to enter into Agreements for the maintenance and repair of post-construction runoff facilities by the owners of the property on which the facility is located.

2. Inspection Program

The City will develop a procedure and schedule for regular inspections of all post-construction runoff facilities, regardless of ownership. The program will include provisions for timely maintenance and repair, as needed, for all City owned facilities and notification of owner for all privately owned facilities.

3. Public Education Program

Brochures and educational materials will be used to educate the public on the importance and necessity of the existence and proper maintenance of post-construction runoff facilities.

4. Stormwater Hotline

A stormwater hotline will be utilized as a means for the public to notify the Department of Public Works of any post-construction facilities that are not functioning properly or that are in need of repair.

5. Streamside Buffers

Streamside buffer requirements will be developed and initiated as part of the

stormwater management ordinance. The procedures should be initiated in year two of the permit period.

VIII. POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

PERMIT REQUIREMENTS

Section 4.2.6.1.1 of the Permit requires that the City develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing runoff from municipal operations.

Section 4.2.6.1.2 of the Permit requires that the City use training materials that are available from EPA, the State, or other organizations to provide employee training to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance.

COMPLIANCE MECHANISMS

The City will utilize the following BMPs to comply with the Permit requirements for Pollution Prevention / Good Housekeeping for Municipal Operations:

1. Increased Street and Parking Lot Sweeping

The Public Works Department will develop and implement a program for identifying priority areas and setting schedules that will result in an increase in frequency and area over the levels of sweeping being performed prior to the Permit coverage.

2. Employee Training

The Public Works Department will develop and implement an employee training program to teach proper chemical usage and disposal practices. The training will be repeated at intervals sufficient to assure that employees retain the information. A schedule will be developed and adhered to by the Director of Public Works.