

Town of Smyrna Storm Water Management Plan

I. PURPOSE

Early in 2003, the Town of Smyrna 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 July 23, 2003, the Town of Smyrna was officially designated as a small MS4 in accordance with EPA regulations at 40 CFR 123.35(b).

II. REGULATORY REQUIREMENTS

The Phase II Stormwater Regulations, found at 40 CFR Part 122, require the Town of Smyrna 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 INVOLVEMENT/ PARTICIPATION
- ILLICIT DISCHARGE DETECTION AND ELIMINATION
- CONSTRUCTION SITE STORMWATER RUNOFF CONTROL
- PERMANENT STORMWATER MANAGEMENT
- POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

III. PUBLIC EDUCATION AND OUTREACH

PERMIT REQUIREMENTS

Permit Section 4.2.1 requires that the Town of Smyrna implement a public education and outreach program. The focus of the program shall be on impacts of stormwater discharges to water bodies and the steps that the public (along with commercial, industrial, or institutional entities) can take to reduce pollutants in the stormwater runoff.

COMPLIANCE MECHANISMS To comply with Section 4.2.1 of the General Permit, the Town of Smyrna will implement the following four Best Management Practices (BMPs):

1. Outreach events

Outreach efforts include stream bank cleanups, tree planting events, storm drain decal events, and Boat Day - WaterFests, all of which are coordinated and lead by the Storm Water Management (SWM) Program with assistance from the SRWA, Rotary Club, Street, Parks, Fire, and Police Departments, USACE (Army Corps of Engineers).

All events are documented through field activity reports that delineate the activity, number of participants, amount of debris collected, trees/bushes planted, or decals affixed, along with ample number photographs.

2. Create Environmental Educational Packets

Order and copy all applicable brochures addressing water quality then load them into large envelopes for distribution at all outreach events.

3. Project WET

Played a lead role in the creation of the contract between the Rutherford County MS4 programs and the Discovery Center. Review all documents that support this important contract.

Contribute funding for the purchasing of vital educational materials used in this contract and the Project WET teacher training workshops lead by the Discovery Center.

Serves as a peer-reviewer of the progress to be made by the contract and will serve as a guest speaker to teachers, principals, and students whenever needed

4. Stormwater Advisory Committee (SWAC)

The SWAC (Storm Water Advisory Committee) is comprised of seven Smyrna citizens who review and approve all ordinances, policies, events, and progress/annual reports related to the SWM Program. This organization was formed in the fall of 2003 and remains a vital ingredient in the success of Smyrna's storm water efforts. All meetings (mostly monthly) are filmed and broadcasted live and repeated on the Town's Ch 3 throughout the day.

IV. PUBLIC PARTICIPATION AND INVOLVEMENT

PERMIT REQUIREMENTS

Section 4.2.2 of the Permit requires that at a minimum, the Town shall implement a public involvement/participation program. Elements of the program may include participation in local stormwater management work groups, public notices of MS4 meetings and public hearings, recruiting education volunteers, and involving the public with program coordination, detection of illicit discharges and monitoring efforts.

COMPLIANCE MECHANISMS

To comply with Section 4.2.2 of the Permit, the Town of Smyrna will implement the following four BMPs:

1. Public Notice

The Town publishes all public notices and provides for a review and comment period prior to passing

any changes to the stormwater management ordinance.

2. Stormwater Advisory Committee

The Town holds quarterly SWAC meeting to discuss citizen comments, upcoming regulations, progress and activities of the stormwater department and to make decisions concerning stormwater program elements and implementation.

3. Watershed Cleanup

The Town partners with environmental / civic, and scout groups to host watershed cleanup events. The events target specific watersheds and will consist of trash and debris removal from the stormwater conveyance systems and tributaries.

4. Stormwater Hotline

The Town's maintains a telephone number and web address to be used for water quality and stormwater related complaints and issues.

V. ILLICIT DISCHARGE DETECTION AND ELIMINATION

PERMIT REQUIREMENTS

Section 4.2.3 of the Permit requires that the Town of Smyrna 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 of the Permit requires that the Town develop a storm sewer system map, showing the location of all outfalls (ie., points where the town storm sewer system discharges into waters of the state or conveyances owned or operated by another MS4).

Section 4.2.3 of the Permit requires that the Town effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into the storm sewer system and implement appropriate enforcement response plan.

Section 4.2.3 of the Permit requires that the Town develop and implement a plan to detect, identify and eliminate non-storm water discharges, including illegal disposal, to the stormwater system.

Section 4.2.3 of the Permit requires that the Town inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

Section 4.2.3 of the Permit requires that the Town 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 of the Permit requires that the Town, by ordinance or other regulatory mechanism, prohibit contamination of stormwater runoff from hot spots (industrial and commercial properties, including restaurants, auto repair shops, auto supply shops, and large commercial parking areas).

COMPLIANCE MECHANISMS

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

1. Education

Letters of introduction and visits by staff are made to ensure the proprietor of any business understands the importance of the IDDE program.

2. Inspections

Inspections are performed every three months to ensure that no violation goes unaddressed for very long.

3. Notices of Violations

NOVs are issued requiring immediate cleanup and remediation. Fees have been assessed against proprietors when the Town of Smyrna has had to do cleanups that have a chance of impacting neighboring water bodies.

4. Certificates of Appreciation

When a proprietor goes beyond the required practices, on their own accord, to ensure no IDDE occurs, a certificate of appreciation, signed by the mayor of the Town of Smyrna, is awarded.

VI. CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

PERMIT REQUIREMENTS

Section 4.2.4 of the Permit requires that the Town of Smyrna develop, implement, and enforce a construction site stormwater runoff control program to address pollutants in stormwater 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 of the Permit requires the Town to develop an ordinance, or other regulatory mechanism, to require erosion prevention and sediment controls, as well as sanctions to ensure compliance.

Section 4.2.4 of the Permit requires the Town to develop requirements for construction site operators to implement appropriate erosion and sediment control best management practices.

Section 4.2.4 of the Permit requires that the Town develop requirements corresponding to the Tennessee Construction General Permit, effective May 24, 2011.

Section 4.2.4 the Permit requires the Town 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 of the Permit requires the Town to implement procedures for site plan review, which incorporate consideration of potential water quality impacts.

Section 4.2.4 of the Permit requires that the Town implement procedures for receipt and consideration of information submitted by the public.

Section 4.2.4 of the Permit requires that the Town implement procedures for site inspection and enforcement of control measures.

Section 4.2.4 of the Permit requires that the Town 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 of the Permit requires that the Town'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.

COMPLIANCE MECHANISMS

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

1. Education

The SWM Program mass mails TDEC EPSC changes in the form of a Fundamentals of Erosion Prevention - Sediment Control Measures guidance to all design engineers, developers, and contractors. The TDEC EPSC Handbook is also found as a link on the SWM Program website

2. Plan Reviews

TDEC Level I EPSC-approved staff reviews all plans twice before being sent to the planning commission for approval. The SWM Program Coordinator and Engineer of Record review the plans again prior to the pre-construction meeting. One of the four sets is given to the developer upon issuance of the grading permit, and must be kept on-site at all times.

3. EPSC inspections/ pre-construction meetings

All EPSC measures are inspected in accordance with the plans approved by the SWM Program Coordinator and Engineer of Record prior to the pre-construction meeting. These procedures must all be met before the grading permit can be issued by the Codes Department.

4. EPSC construction inspections – Notice of Violations

All construction sites are inspected monthly by the SWM Program staff once the grading permit is issued.

VII. POST CONSTRUCTION STORMWATER MANAGEMENT

PERMIT REQUIREMENTS

Section 4.2.5 of the Permit requires the Town to develop, implement, and enforce a program to address permanent (post-construction) 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 of the Permit requires that the Town develop and implement strategies which include a combination of structural and/or nonstructural BMPs appropriate for the community.

Section 4.2.5 of the Permit requires that the Town must develop and implement a set of requirements to establish, protect and maintain water quality buffer along all waters of the state in areas of new development and redevelopment.

Section 4.2.5 of the Permit requires the Town to develop and ordinance or other regulatory mechanism to address permanent runoff from new development and redevelopment projects to the extent allowable under State or local law.

COMPLIANCE MECHANISMS

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

1. Water Quality Buffer Zone - Enforcement

Continue to enforce the Water Quality Buffer Zone policy, adopted by the Smyrna Town Council in 2005, by posting it on the SWM Program website, informing prospective developers, and assessing all construction plans accordingly

2. Dry Detention Basin policy – Enforcement

Continue to enforce the Dry Detention Basin policy by contracting a professional engineer, an engineer of record, to ensure that all planned detention basins and devices adequately treat the first flush and detains runoff according to S. 4.2.5.2.1 of the newly issued MS4 permit through review and approval of storm water calculations prior to the construction project's pre-construction meeting as well as close inspection during its construction

3. Update Inventory/Inspections of Permanent Controls

Continue to enforce the Dry Detention Basin policy, adopted by the Smyrna Town Council in 2005, by keeping it posted on the SWM Program website, updating the existing detention basin and device inventory list, and annually inspecting ~168 basins and devices. A Letter of Advisement is issued for non-compliant basins and devices causing a second inspection. If the site is still non-compliant even after the second issued Letter of Advisement and inspection the documented violations are given to the public works director for further enforcement actions. Once remediated, basins or devices issued a Letter of Advisement are also re-inspected six months later to ensure compliance before returning to the annual inspection schedule.

4. Revise Ordinance and Codes to reflect changes in MS4 and the General NPDES Construction Permit.

Revise all appropriate codes and policies to allow for the development of green infrastructure technologies as applied towards runoff reduction. Research and become knowledgeable of suitable green infrastructure technologies; modify existing codes and policies to allow for the use of these technologies then discuss these technologies with potential developers and design engineers in an effort to promote their use in as many future construction projects as possible.

VIII. POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

PERMIT REQUIREMENTS

Section 4.2.6 of the Permit requires that the Town 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 of the Permit requires that the Town 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 Town has completed SWPPP for the all Town operated facilities. The Town will utilize the following BMPs to comply with the Permit requirements for Pollution Prevention / Good Housekeeping for Municipal Operations:

1. Parks Department/Golf Course

Strict adherence to environmentally safe pesticide/fertilizer application rates, frequency, and distance from stream is required, leaving waterbodies are unharmed. EPSC is always used when building

2. Street Department

Ensure Fabric is used beneath rock in repairs. EPSC is always used during land disturbance

3. Wastewater Treatment Plant

Semi-annual storm water inspections of six storm drain outlets, 34 curb storm drains, field gates, and tiles beneath roadways located throughout the facility. Cleanups are performed immediately when deemed necessary, after semi-annual inspections and when observed by staff.

Preventative measures, via standard operating procedures, are also used. These include immediately notify supervisors of any spills then run lab tests on collected samples if deemed necessary. Do not store barrels or containers close to storm drains. Don't park trucks near storm drains. Continual litter cleanup. Slow vac-truck dumping rate at headworks to avoid overflows. Annual EPSC classes held.

4. Water Treatment Plant

Ensure All chemicals are stored inside buildings with containment. Bulk chemicals at the raw water intake are stored inside a concrete and steel reinforced building, because it is remote and surrounded by Corps property used for moderate hunting activity. Training is required through certification programs

Goals and Milestones for each BMP are outlined in the Town of Smyrna's Notice of Intent (NOI) Application. A summary of all activities performed and achievements recorded is documented in the department's quarterly reports presented to the SWAC at each public meeting. A annual version is compiled and sent to TDEC with the required annual report. All activities are managed by the Town of Smyrna's Stormwater Department (Greg Upham coordinator), under the supervision of the Director of Public Works (David King).

IX. SITE INSPECTION PROGRAMS

The Town of Smyrna stormwater department conducts several type of inspections related to stormwater activities including: active construction sites, permanent stormwater controls (detention basins), and facilities with outdoor oil and grease receptacles.

A Master list of all Oil and Grease facilities located within the Town limits is compiled and updated each year. Currently the list contains 165 facilities. Inspections are made to each facility on a quarterly basis to determine if there is any potential for pollutants entering the stormwater runoff at the facility. Inspections are documented on the Oil and Grease Master List. If a facility has maintenance issues that need to be addressed a letter is sent to the owner to correct the item and a follow-up inspection is made.

A Master list of all permanent stormwater controls located within the Town limits is compiled and updated monthly as each construction site project is closed out. Currently the list contains 176 facilities. Detention basin inspections are made to each facility on an annual basis to determine if there is any potential for pollutants (primarily sediment) entering the stormwater runoff at the facility. Inspections are documented on a standard inspection form and a copy is filed with each development. A master list is updated with current inspection records and dates for follow-up inspections. If a facility has maintenance issues that need to be addressed a letter is sent to the owner to correct the item and a follow-up inspection is made.

All active construction sites are monitored and inspected as they progress through the construction process. Monthly inspections are recorded on a standard inspection form and filed with each development. If a facility has maintenance issues that need to be addressed a letter is sent to the owner to correct the item and a follow-up inspection is made.

REFERENCE DOCUMENTS:

Town of Smyrna Phase II Stormwater Permit Notice of Intent (NOI)

Town of Smyrna Municipal Pollution Prevention Plan (MPPP) and Good Housekeeping Reports for all Municipal Facilities:

Inspection Forms – Construction Inspection
Oil/Grease Facilities
Permanent Controls (Detention Basins)

