

## **6.0 MCM4: POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT**

### **6.1 OVERVIEW**

Post-construction stormwater management in new development and redevelopment focuses on the implementation of controls to maintain good water quality conditions after an area has been developed. New development can also have a significant effect on water quality because during the course of development, natural landscapes are often replaced by impermeable roads, parking lots, sidewalks and other paved surfaces that lead to increases in both the volume of stormwater runoff and the accompanying pollutants that reach local water bodies.

The MS4s are required 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 to the small MS4. The program must ensure that controls are in place to prevent or minimize water quality impacts.

### **6.2 FEDERAL REGULATORY REQUIREMENTS**

40 CFR 122.34 (b)(5) states that the MS4 must 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 your small MS4. A program must ensure that controls are in place that would prevent or minimize water quality impacts.

The MS4 operator must:

- Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for your community;
- Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State, Tribal or local law; and
- Ensure adequate long-term operation and maintenance of BMPs.

### **6.3 TPDES PHASE II PERMIT REQUIREMENTS**

#### **6.3.1 Post Construction Stormwater Management in New Development and Redevelopment**

To the extent allowable under state and local law, the MS4 operator must 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 of land, including projects less than one acre that are part of a larger common plan of development or sale that will result in disturbance of one or more acres, that discharge into the small MS4. The program must be established for private and

public development sites. The program must ensure that controls are in place that would prevent or minimize water quality impacts. The permittee shall:

- (a) Develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for the community;
- (b) Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and re-development projects to the extent allowable under state and local law; and
- (c) Ensure adequate long-term operation and maintenance of BMPs.

### **6.3.2 Additional Requirements for Level 4 small MS4s**

In addition to the requirements described in Parts III. B.4(b)(1)-(3) of the TXR040000 permit, permittees who operate Level 4 small MS4 shall meet the following requirements:

- (a) Inspections. Permittees who operate Level 4 small MS4s shall develop and implement an inspection program to ensure that all post construction stormwater control measures are operating correctly and are being maintained as required consistent with its applicable maintenance plan. For small MS4s with limited enforcement authority, this requirement applies to the structural controls owned and operated by the small MS4 or its contractors that perform these activities within the small MS4's regulated area.
- (b) Inspection Reports. The permittee shall document its inspection findings in an inspection report and make them available for review by the TCEQ.

## **6.4 DISCUSSION OF STORMWATER PROGRAMS**

### **6.4.1 Post-Construction Stormwater Management Development Code**

The City of Sugar Land will evaluate the City's Development Code in order to address stormwater runoff from new development and redevelopment activities that disturb greater than or equal to one acre of land, including those projects less than one acre that are part of a larger common plan of development or sale that will result in the disturbance of one or more acres of land. A development code specification relating to post-construction stormwater management enables the City to guide, regulate, and control the design and maintenance of construction activity throughout the community. As an element of the review and modification process, specific BMPs may be established for particular watersheds. The Development Code specifications facilitate the limitation of surface runoff volumes and the reduction of pollutants. In addition, developers utilize the City's Development Code specifications as a reference document in the development and management of community-wide projects.

**Measurable Goals:**

- Evaluate the existing City Development Code for potential updates and adopt any necessary modifications by December 2020.
- Document and maintain 100% of identified Development Code violations occurring each year from January 2021 through January 2024.

**Evaluation:**

- Adoption of post-construction stormwater management development codes.
- Report the number of Development Code violations occurring each year, and annually compare this data to assess Development Code effectiveness.

**6.4.2 Post-Construction Stormwater Management Ordinance**

Sugar Land will review its existing ordinance for post-construction stormwater in new development and redevelopment and evaluate the need for modifications. Should modifications be required, the City will present the modified ordinance for Council approval prior to implementation.

In reviewing this ordinance, the City must decide at what level stormwater management standards of redevelopment project will be held. Providing cost effective stormwater treatment at redevelopment sites is often difficult, and these projects may be given reduced criteria to meet or non-structural requirements to allow for site constraints.

**Measurable Goals:**

- Evaluate the existing City stormwater ordinance for potential updates and adopt any necessary modifications by December 2020.
- Conduct public review proceedings in accordance with state and local public notice requirements.
- Document and maintain 100% of identified Ordinance violations occurring each year from January 2021 through January 2024.

**Evaluation:**

- Adoption of modified stormwater ordinance.
- Document date of ordinance presentation to Council.
- Report the number of Ordinance violations occurring each year, and annually compare this data to assess Ordinance effectiveness.

**6.4.3 Post-Construction Development Review Procedures**

The City of Sugar Land Development Review Committee (DRC) meets on a weekly basis to review community plans of development. In order to reflect any potential changes to the post-

construction stormwater management development code and ordinance, the development review procedures will be evaluated and revised.

**Measurable Goals:**

- Review and update procedures for post-construction maintenance plan review by December 2021.
- Review 100% of post-construction maintenance plans submitted by December of each year (2019-2024).

**Evaluation:**

- Record modifications to procedures and document date of procedure review and update.
- Record the number of post-construction plans reviewed and compare with the number of plans submitted.

**6.4.4 Long-Term Operation and Maintenance Program**

The effectiveness of post-construction control measures depends upon the regular inspection and maintenance of stormwater control measures. The City of Sugar Land will develop an operation and maintenance program to integrate post-construction stormwater quality requirements into the plan review process. The City will review and revise the plan review process to require developers to submit plans and provisions for the long-term maintenance of any stormwater structural controls installed and implemented within their development.

Routine maintenance of stormwater structural controls assists in the identification and repair of problems associated with the system before the problems become serious. In order to ensure that proper operation and maintenance procedures are performed, the City will develop a process for regulating the stormwater structural controls installed throughout the community.

**Measurable Goals:**

- Review and update program procedures for long-term inspection and maintenance of structural controls by December 2021.

**Evaluation:**

- Record modifications to program procedures and document date of procedure review and update.

**6.4.5 Inspection Program**

The City will develop and implement an inspection program to ensure all post construction stormwater control measures are operating correctly and being maintained as required and consistent with its applicable maintenance plan. The City will identify, inventory, and inspect post-construction stormwater controls for the City and those privately owned within the City's

MS4 regulated area. The inspection results will be documented on an inspection form, which may include follow up and/or enforcement actions.

**Measurable Goals:**

- Develop inspection program procedures for post-construction structural controls by December 2021.
- Conduct inspections at 20% of all City-owned and privately-owned facilities by December of each year (2022-2024).

**Evaluation:**

- Record inspection program procedures and document date of procedure creation.
- Document the number of inspections conducted and compare to inventory.