
Central Texas Regional Mobility Authority Municipal Separate Storm Sewer System Storm Water Management Program

**General Permit to Discharge Under the
Texas Pollutant Discharge Elimination System
TPDES Permit No. TXR040000
Issued January 24, 2019**



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**Prepared for Central Texas Regional Mobility Authority
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CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

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Acronyms and Abbreviations

BMP	Best Management Practice
CEI	Construction Engineering and Inspection
CGP	Construction General Permit
CSN	Construction Site Notice
CTRMA	Central Texas Regional Mobility Authority
CZP	Contributing Zone Plan
EA	Environmental Assessment
HAZWOPER	Hazardous Material/Waste Operations and Emergency Response
HMMP	Hazardous Materials Management Plan
IDDE	Illicit Discharge Detection and Elimination
MCM	Minimum Control Measures
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
MSGP	Multi Sector General Permit
NEPA	National Environmental Policy Act
NOC	Notice of Change
O&M	Operation and Maintenance
PBMC	Performance-Based Maintenance Contract
PFC	Permeable Friction Course
ROW	Right-of-Way
RP	Responsible Party
SWMP	Stormwater Management Program
SWP3	Stormwater Pollution Prevention Plan
TCEQ	Texas Commission of Environmental Quality
TPDES	Texas Pollutant Discharge Elimination System
TSS	Total Suspended Solids
TxDOT	Texas Department of Transportation
UA	Urbanized Area
WPAP	Water Pollution Abatement Plan
WUS	Waters of the United States

I. Introduction

This Storm Water Management Program (SWMP) was developed to describe the Central Texas Regional Mobility Authority's (CTRMA) programs and procedures to reduce the discharge of pollutants from storm drainage systems within regulated portions of rights-of-way (ROW) owned by the CTRMA and to meet the requirements of the Texas Commission on Environmental Quality (TCEQ) Texas Pollutant Discharge Elimination System (TPDES) Small Municipal Separate Storm Sewer System (MS4) General Permit No. TXR040000, herein referred to as the "Permit." Under TXR040000, CTRMA is categorized as a Level 2 Small MS4. This category applies to non-traditional small MS4s, including transportation entities. The program focuses on the MS4 within the CTRMA owned ROW that are fully or partially located within an urbanized area (UA), as determined by the 2000 or 2010 Decennial Censuses by the U.S. Census Bureau.

The purpose of the SWMP is to describe the Minimum Control Measures (MCM) and Best Management Practices (BMPs) for implementation of specific programs, controls, and activities with the intent of reducing the potential discharge of pollutants from the MS4 that could reach Waters of the United States (WUS). As required by the Permit, the CTRMA will annually evaluate the need for revisions of the SWMP. Additional BMPs may be included, and equivalent BMPs substituted, based on these annual evaluations. Elimination of a BMP, without the inclusion of an equivalent BMP, requires CTRMA to submit a notice of change (NOC) to TCEQ.

This SWMP addresses MS4 storm water discharge quality related to roadway planning, design, construction, operation, and maintenance activities within the CTRMA regulated system (see Section II of the SWMP). In addition, this SWMP details the responsibilities within the CTRMA for implementing storm water management procedures and practices as well as training, public education and participation, program evaluation, and reporting activities. The program is designed to reduce the discharge of pollutants in storm water to the maximum extent practicable (MEP). The SWMP addresses discharges resulting from storm water (i.e., those discharges originating from precipitation events, including snowmelt). In addition, it addresses certain discharges that meet the definition of "non-storm water discharges," including illicit discharges, authorized non-storm water discharges, and emergency response activities.

A. Document Organization

This document is organized to describe the CTRMA's SWMP and to address the regulatory requirements set forth by the Permit. Sections I and II provide background on the purpose of the SWMP and general information about CTRMA and the MS4 system. Sections III through VIII describe the minimum control measures (MCMs) as required by the Permit. The MCM sections include the relevant TPDES permit language (depicted in italics) for each MCM. It describes and defines BMPs for each of the MCMs, measurable goals for each BMP, and an implementation schedule for all activities. Finally, Sections IX and X describe the evaluation and reporting procedures of the program and the schedule for program implementation.

II. CTRMA Regulated System

The CTRMA is an independent government agency created in 2002 to improve the transportation system in Williamson and Travis counties. The agency operates under Chapter 370, Regional Mobility Authorities, of the Texas Transportation Code, representing the Texas Legislature's vision to allow local communities greater flexibility in meeting their transportation needs. The CTRMA is governed by a Board of Directors comprised of seven local community volunteers who are responsible for setting policies, identifying priority projects and ensuring the agency is operated in an efficient and effective manner. The Governor appoints the Chairman, and the Commissioners Courts for both Travis and Williamson counties each appoint three members to serve on the Board. Board members are active members of the community who are appointed to serve two-year terms and are not compensated for their service.

The CTRMA currently operates toll roads open to traffic including 183A (Phases I & II), the MoPac Express Lane, 45SW, the 71 Toll Lane, and the 290 Toll Road (Phases I & II). Projects currently under construction that will be added to the CTRMA system include the 230/130 Flyovers Project and the 183 South project. The road system is expanding through the planning and design phases with the 183A Phase III, the 183 North Mobility, and the MoPac Express South projects. A map of the CTRMA system is included in Appendix A.

According to Part II, Section A.4 of the Permit, regulated portions of CTRMA include land that (1) is owned by CTRMA, (2) falls within the UA, and (3) functions as, or is integral to a transportation system with drainage conveyance.

Therefore, the following ROW's and facilities are considered regulated under the Permit: 183A (Phases I & II) and the maintenance yard for the 290 Toll road. If other roads and facilities are planned or if additional ROW is acquired meeting the requirements stated in Part II, Section A.4 of the Permit, this SWMP will be updated. Regulated roads and facilities included in this SWMP are described below.

A. Toll 183A

The 183A Toll is an 11.6-mile roadway extending from northwest Austin through Cedar Park and Leander in northwest Williamson County. The project, which consists of tolled lanes with non-tolled frontage roads at the north end, has significantly improved travel times and reduced traffic on adjacent roadways, including US 183. Phase I and Phase II were opened to traffic in 2007 and 2012, respectively. A map of the regulated portions of Toll 183A is included in Appendix A.

B. 290 E Maintenance Yard

The 290 Toll Road is a 6.2-mile toll road that includes three tolled lanes and three non-tolled general-purpose lanes in each direction from US 183 to east of Parmer Lane. 290 Toll upgraded the existing US 290 to a new expressway facility, effectively tripling capacity while preserving the non-tolled lanes. While TxDOT owns the ROW for the 290 Toll Road, CTRMA owns and operates the maintenance yard. The maintenance yard is approximately 10 acres and is located

south of the 290 Toll Road on Old Manor Road. The 290 E maintenance yard is used for storage of materials used in snow and ice removal (plows, deicing materials, etc.) and other general maintenance supplies (e.g., pylons, road signs, vehicles). The equipment and supplies at this maintenance yard are not restricted to the maintenance of the 290 Toll Road but may be utilized across CTRMA's toll road system. The maintenance yard property also includes two detention ponds.

C. Discharge Description

Discharges from 183A occur from the ROW that eventually reach TCEQ identified stream segments. The largest streams that cross the regulated portions of 183A are Brushy Creek (TCEQ Segment 1244A) to the north in Leander and South Brushy Creek (TCEQ Segment 1244D) to the south in Cedar Park. Both streams drain into the larger segment of Brushy Creek (TCEQ Segment 1244). Smaller creeks cross regulated portions of 183A and drain into Segments 1244A and 1244D including Block House Creek, Cottonwood Creek, Spanish Oak Creek, and two unnamed streams.

The 290 E maintenance yard indirectly discharges to Walnut Creek (TECQ Segment 1428B) through the 290 E storm sewer system to an unnamed tributary to Walnut Creek.

D. Total Maximum Daily Load Projects and Implementation Plans

According to the approved 2016 Texas Integrated Report of Surface Water Quality for Clean Water Act Sections 305(b) and 303(d) none of the water bodies receiving discharge from 183A are designated as impaired by TCEQ. Walnut Creek (TCEQ Segment 1428B) is listed as impaired for bacteria for segment 1428B_05 from MoPac/Loop 1 upstream to the Union Pacific Railroad tracks south of McNeil Drive. Segment 1428B_05 is located upstream of any discharges of stormwater from the 290 E maintenance yard.

CTRMA will check annually, in conjunction with preparation of the annual report, whether the permitted area has changed and whether an impaired water within its permitted area has been added to the latest EPA approved 303(d) list or the Texas Integrated Report of Surface Water Quality for Clean Water Act Sections 305(b) and 303(d), which lists the category 4 and 5 water bodies.

Within two years following the approval date of the new list(s) of impaired waters, CTRMA will comply with the requirements of Part II.D.4.(b) (with the exception of (b)(1)c) of the Permit, and shall identify any newly listed waters in the annual report and SWMP.

E. Endangered Species

A review of endangered species in the region found that endangered species occur in both Travis and Williamson Counties. These species exist in the Brazos River Basin and the Edwards Aquifer Recharge Zone. The species that are known to occur in these areas are:

Brazos River Basin, Travis and Williamson Counties

- Coffin Cave Mold Beetle (*Batrisodes texanus*)
- Tooth Cave Ground Beetle (*Rhadine Persephone*)
- Bee Creek Cave Harvestman (*Texella Reddelli*)
- Bone Cave Harvestman (*Texella reyesi*)
- Navasota ladies'-tresses (*Spiranthes parksii*)

Edwards Aquifer Recharge Zone, Travis County

- Barton Springs Salamander (*Eurycea sosorum*)

During the planning process for the development of 183A, a survey of threatened and endangered species was undertaken in coordination with the United States Fish and Wildlife Service (USFWS). Barton Springs Salamander and Navasota ladies'-tresses are not known to occur in the project area.

There is one prominent karst feature in the southern part of the project area (Big Oak Cave). Big Oak Cave is known to provide habitat for the Tooth Cave Ground Beetle. The other 3 karst species listed above (Coffin Cave Mold Beetle, Bee Creek Cave Harvestman, and Bone Cave Harvestman) were not found to occur in the project area. Through a Section 7 (Endangered Species Act) consultation with the USFWS, the following measures to minimize impacts to the Tooth Cave Ground Beetle were established:

- The establishment of a karst preserve including at least two caves known to contain the Tooth Cave Ground Beetle.
- Utilization of the best storm water quality treatment measures to provide for non-degradation of water quality in karst areas. These measures are to be maintained throughout construction and operation of 183A.
- Maintain the 183A right-of-way to avoid potential contaminants, including fertilizers, pesticides, and herbicides.
- No construction or land-clearing activities shall be allowed in areas identified as karst zones outside the ROW required for 183A.

CTRMA requires that contractors performing maintenance of the ROW avoid all disturbances to areas surrounding karst preserves, particularly Big Oak Cave. This includes a prohibition of maintenance activities in areas surrounding karst features.

III. Minimum Control Measures (MCM) – SWMP Components

The following MCMs are a requirement of the SWMP developed by the operator of a Level 2 small MS4. Sections IV through VII of the SWMP further describe these MCMs and the activities taken by CTRMA to meet these requirements.

- MCM 1, Public Education, Outreach, and Involvement
- MCM 2, Illicit Discharge Detection and Elimination
- MCM 3, Construction Site Stormwater Runoff Control
- MCM 4, Post Construction Stormwater Management in New Development and Redevelopment
- MCM 5, Pollution Prevention and Good Housekeeping

IV. MCM 1, Public Education, Outreach, and Involvement

A. Permit Requirements

(a) *Public Education and Outreach*

- (1.) *All permittees shall develop, implement, and maintain a comprehensive stormwater education and outreach program to educate public employees, businesses, and the general public of hazards associated with the illegal discharges and improper disposal of waste and about the impact that stormwater discharges can have on local waterways, as well as the steps that the public can take to reduce pollutants in stormwater.*

Existing permittees shall assess program elements that were described in the previous permit, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharge of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of this permit term. The program must, at a minimum:

- a. Define the goals and objectives of the program based on high priority community-wide issues (for example, reduction of nitrogen in discharges from the small MS4, promoting previous techniques used in the small MS4, or improving the quality of discharges to the Edwards Aquifer);*
- b. Identify the target audience(s);*
- c. Develop or utilize appropriate educational materials, such as printed materials, billboard and mass transit advertisements, signage at select locations, radio advertisements, television advertisements, and websites;*
- d. Determine cost effective and practical methods and procedures for distribution of materials.*

- (2.) *Throughout the permit term, all permittees shall make the educational materials available to convey the program's message to the target audience(s) at least annually.*
 - (3.) *If the permittee has a public website, the permittee shall post its SWMP and the annual reports required under Part IV.B.2. or a summary of the annual report on the permittee's website. The SWMP must be posted no later than 30 days after the approval date, and the annual report no later than 30 days after the due date.*
 - (4.) *All permittees shall annually review and update the SWMP and MCM implementation procedures required by Part III.A.2., as necessary. Any changes must be reflected in the annual report. Such written procedures must be maintained, either on site or in the SWMP and made available for inspection by the TCEQ.*
 - (5.) *MS4 operators may partner with other MS4 operators to maximize the program and cost effectiveness of the required outreach.*
- (b) *Public Involvement*
- All permittees shall involve the public, and, at minimum, comply with any state and local public notice requirements in the planning and implementation activities related to developing and implementing the SWMP, except that correctional facilities are not required to implement this portion of the MCM.*
- Existing permittees shall assess program elements that were described in the previous permit, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharge of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of this permit term. At a minimum, all permittees shall:*
- (1.) *Consider using public input (for example, the opportunity for public comment, or public meetings) in the implementation of the program;*
 - (2.) *Create opportunities for citizens to participate in the implementation of control measures, such as stream clean-ups, storm drain stenciling, volunteer monitoring, volunteer "Adopt-A-Highway" programs, and educational activities;*
 - (3.) *Ensure the public can easily find information about the SWMP.*

B. **Target Audience**

There are no residences, businesses, or other commercial enterprises within CTRMA's regulated MS4 area (ROW). The primary audience targeted for education and outreach include:

- General traveling public utilizing the CTRMA toll road system
- CTRMA employees
- Contractors hired by CTRMA to perform work in the regulated area

C. Goals and Objectives

The goal of the CTRMA public education and outreach program is to educate the target audience regarding how their activities can affect the quality of storm water discharges from the CTRMA ROW. Specific objectives include:

- Promote awareness of requirements and responsibilities of the Permit to CTRMA employees
- Educate the general traveling public about how improper disposal of waste and litter can impact stormwater discharges
- Educate the target audience on the prevention, identification, and procedures for reporting potentially harmful discharges

1. Public Education and Outreach Best Management Practices and Measurable Goals

a) CTRMA Website (www.mobilityauthority.com)

CTRMA is in the process of upgrading its website to provide the target audience with information about stormwater management issues. Some specific things that will be available on the website include:

(1) SWMP – A copy of this SWMP will be available on the website within 30 days following approval from TCEQ. When updates to the SWMP are made, the most up-to-date version will be provided within 30 days. The SWMP will be reviewed annually and updated to account for changes in regulations, additional construction, revisions to activities, etc.

(2) Annual Reports – In addition to the inclusion of the SWMP, an Annual Report will be made available on the website. This annual report will include a summary of the following:

- Status of permit compliance
- Summary of information and data collected during the reporting period
- Activities taken to address illicit discharges (where applicable)
- Planning of activities for the following year
- Description of changes to the SWMP (where applicable)
- Description of construction activities in the MS4

(3) Contact information – The website will include a website link for reporting incidents related to water quality and for general inquiries.

b) Expressway News

The Expressway News is CTRMA's official newsletter. Employees and the general public can sign up to receive the Expressway News in electronic format on the CTRMA website. Approximately 3,000

people are currently subscribed and receive the published newsletter, with ongoing efforts to increase subscriptions and distribution. It is produced several times per year and provides regular updates on projects, programs, and initiatives undertaken by CTRMA. The CTRMA will include public education of stormwater management and other environmental issues in select issues of the newsletter. These issues will promote awareness of the impacts of improper waste disposal, stormwater runoff, and provide information on upcoming events and activities.

2. Public Involvement Best Management Practices and Measurable Goals

CTRMA promotes the input and involvement of the public through several avenues. The input of the public is vital to the success of the public education program and provides a feedback loop through which CTRMA can respond and make changes where needed. CTRMA's program complies with state and local public notice requirements. Public involvement in activities and efforts to improve water quality and promote awareness of environmental issues and best management practices are likewise key to the success of the program. CTRMA will partake in the following in the implementation of this program:

a) CTRMA board meetings

CTRMA holds at least six meetings of its board annually in which members of the public are provided an open forum to ask questions or express concerns. The CTRMA Board provides the public with the opportunity to submit questions or comments prior to or raise openly during each meeting. CTRMA will provide the number of public Board meetings in its annual report along with any questions or comments received related to water quality or the CTRMA SWMP.

b) Public meetings as part of the permitting process

Before CTRMA initiates the construction of a new project, the regulatory process includes public meetings. CTRMA will comply with all applicable federal, state and local public notice and involvement requirements and will hold public meetings and/or hearings as needed. CTRMA will report the number of public regulatory meetings in its annual report along with any questions or comments received related to water quality or the CTRMA SWMP.

c) Community partnerships and outreach events

CTRMA is committed to proactive community engagement through the sponsorship, participation, and coordination of events to promote environmental awareness within the community. One example of this work is CTRMA's partnership with TreeFolks. Through this partnership, CTRMA provides funding for event organization, helps coordinate volunteer participation, and participates directly in

promoting planting and the caring for of trees. These events are open to the public and feature the planting of native trees at local schools, parks, and other public places to help expand the urban forest canopy. This partnership has allowed for the installation of irrigation systems at schools, the mapping of urban trees, tree identification hikes, urban tree improvement projects, and more.

CTRMA has also participated in and provided financial assistance to the Keep Austin Beautiful Clean Sweep Program since 2016. This program coordinates volunteers to collect litter in Austin and surrounding communities. CTRMA will continue to be involved in similar programs. As new opportunities for public involvement are planned, information will be posted on CTRMA's website.

Table 1. MCM1 BMP activities, measurable goals, and implementation schedule

MCM1, PUBLIC EDUCATION, OUTREACH, AND INVOLVEMENT				
BMP	Activity	Measurable Goals	Schedule	Responsible Staff
CTRMA Website	Update website to include up-to-date SWMP, annual report, contact information, and provide information on CTRMA's SWMP and upcoming activities	Update website once each year	June 30, annually, each fiscal year	Marketing and Communications Manager
Expressway News	Produce at least one issue of the Expressway News dedicated to providing information on stormwater management and environmental issues	Develop one issue of Expressway News dedicated to stormwater management and environmental issues	June 30, 2023	Marketing and Communications Manager
CTRMA Board Meetings	Continue to provide opportunity for public questions and comments at a minimum of six board meetings	Hold at least 6 board meetings annually	June 30, annually, each fiscal year	Marketing and Communications Manager
Regulatory Public Meetings	Continue to provide opportunity for public questions and comments at public meetings as part of the regulatory process	Provide opportunity for public comments at 100% of regulatory meetings	June 30, annually, each fiscal year (as needed based on new construction and regulatory process)	Marketing and Communications Manager
Community Partnership and Outreach Events	Continue to partner with a local organization to support at least one public involvement event	One public involvement event	June 30, 2023	Marketing and Communications Manager

V. MCM 2, Illicit Discharge Detection and Elimination

A. Permit Requirements

(a) Program Development

- (1) *All permittees shall develop, implement, and enforce a program to detect, investigate, and eliminate illicit discharges into the small MS4. The program must include a plan to detect and address non-stormwater discharges, including illegal dumping to the MS4 system.*

Existing permittees must assess program elements that were described in the previous permit, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharge of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of this permit term. (See also Part III.A.1(c).

The Illicit Discharge Detection and Elimination (IDDE) program must include the following:

- a. An up-to-date MS4 map (see Part III.B.2.(c)(1));*
 - b. Methods for informing and training MS4 field staff (see Part III.B.2.(c)(2));*
 - c. Procedures for tracing the source of an illicit discharge (see Part III.B.2.(c)(5));*
 - d. Procedures for removing the source of the illicit discharge (see Part III.B.2.(c)(5));*
 - e. For Level 2, 3 and 4 small MS4s, if applicable, procedures to prevent and correct any leaking on-site sewage disposal systems that discharge into the small MS4;*
 - f. For Level 4 small MS4s, procedures for identifying priority areas within the small MS4 likely to have illicit discharges, and a list of all such areas identified in the small MS4 (see Part III.B.2.(e)(1));*
 - g. For Level 4 small MS4s, field screening to detect illicit discharges (see Part III.B.2.(e)(2)); and*
 - h. For Level 4 small MS4s, procedures to reduce the discharge of floatables in the MS4. (see Part III.B.2.(e)(3).)*
- (2) *For non-traditional small MS4s, if illicit connections or illicit discharges are observed related to another operator's MS4, the permittee shall notify the other MS4 operator within 48 hours of discovery. If notification to the other MS4 operator is not practicable, then the permittee shall notify the appropriate TCEQ Regional Office of the possible illicit connection or illicit discharge.*

- (3) *If another MS4 operator notifies the permittee of an illegal connection or illicit discharge to the small MS4, then the permittee shall follow the requirements specified in Part III.B.2.(c)(3).*
- (4) *All permittees shall annually review and update as necessary, the SWMP and MCM implementation procedures required by Part III.A.2. Any changes must be reflected in the annual report. Such written procedures must be maintained, either on site or in the SWMP and made available for inspection by the TCEQ.*
- (b) *Allowable Non-Stormwater Discharges*
Non-stormwater flows listed in Part II.C do not need to be considered by the permittee as an illicit discharge requiring elimination unless the permittee or the TCEQ identifies the flow as a significant source of pollutants to the small MS4.
- (c) *Requirements for all Permittees*
All permittees shall include the requirements described below in Parts III.B.2(c)(1)-(6)
 - (1) *MS4 mapping*
All permittees shall maintain an up-to-date MS4 map, which must be located on site and available for review by the TCEQ. The MS4 map must show at a minimum the following information:
 - a. *The location of all small MS4 outfalls that are operated by the permittee and that discharge into waters of the U.S;*
 - b. *The location and name of all surface waters receiving discharges from the small MS4 outfalls; and*
 - c. *Priority areas identified under Part III.B.2.(e)(1), if applicable.*
 - (2) *Education and Training*
All permittees shall implement a method for informing or training all the permittee's field staff that may come into contact with or otherwise observe an illicit discharge or illicit connection to the small MS4 as part of their normal job responsibilities. Training program materials and attendance lists must be maintained on site and made available for review by the TCEQ.
 - (3) *Public Reporting of Illicit Discharges and Spills*
All permittees shall publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from the small MS4. The permittee shall provide a central contact point to receive reports; for example by including a phone number for complaints and spill reporting.
 - (4) *All permittees shall develop and maintain on-site procedures for responding to illicit discharges and spills.*

- (5) *Source Investigation and Elimination*
- a. *Minimum Investigation Requirements – Upon becoming aware of an illicit discharge, all permittees shall conduct an investigation to identify and locate the source of such illicit discharge as soon as practicable.*
- (i) *All permittees shall prioritize the investigation of discharges based on their relative risk of pollution. For example, sanitary sewage may be considered a high priority discharge.*
- (ii) *All permittees shall report to the TCEQ immediately upon becoming aware of the occurrence of any illicit flows believed to be an immediate threat to human health or the environment.*
- (iii) *All permittees shall track all investigations and document, at a minimum, the date(s) the illicit discharge was observed; the results of the investigation; any follow-up of the investigation; and the date the investigation was closed.*
- b. *Identification and Investigation of the Source of the Illicit Discharge –All permittees shall investigate and document the source of illicit discharges where the permittees have jurisdiction to complete such an investigation. If the source of illicit discharge extends outside the permittee’s boundary, all permittees shall notify the adjacent permitted MS4 operator or the appropriate TCEQ Regional Office according to Part III.A.3.b.*
- c. *Corrective Action to Eliminate Illicit Discharge - If and when the source of the illicit discharge has been determined, all permittees shall immediately notify the responsible party of the problem, and shall require the responsible party to perform all necessary corrective actions to eliminate the illicit discharge.*
- (6) *Inspections –The permittee shall conduct inspections, in response to complaints, and shall conduct follow-up inspections to ensure that corrective measures have been implemented by the responsible party. The permittee shall develop written procedures describing the basis for conducting inspections in response to complaints and conducting follow-up inspections.*
- (d) *Additional Requirements for Level 3 and 4 small MS4s*
- In addition to the requirements described in Parts III.B.2(c)(1)-(6) above, permittees who operate Level 3 and 4 small MS4s shall meet the following requirements:*
- Source Investigation and Elimination*
- Permittees who operate Level 3 and 4 small MS4 shall upon being notified that the discharge has been eliminated, conduct a follow-up investigation or field screening, consistent with Part III.B.2.(e)(2), to verify that the discharge has been eliminated. The permittee shall document its follow-up investigation. The permittee may seek recovery and remediation costs from responsible parties consistent with Part III.A.3., and require compensation related costs. Resulting enforcement*

actions must follow the procedures for enforcement action in Part III.A.3. If the suspected source of the illicit discharge is authorized under an NPDES/TPDES permit or the discharge is listed as an authorized non-stormwater discharge, as described in Part III.C, no further action is required.

(e) Additional Requirements for Level 4 small MS4s

In addition to the requirements described in Parts III.B.2(c)-(d) above, permittees who operate Level 4 small MS4s shall meet the following requirements:

(1) Identification of Priority Areas

Permittees who operate Level 4 small MS4s shall identify priority areas likely to have illicit discharges and shall document the basis for the selection of each priority area and shall create a list of all priority areas identified. This priority area list must be available for review by the TCEQ.

(2) Dry Weather Field Screening

By the end of the permit term, permittees who operate Level 4 small MS4s shall develop and implement a written dry weather field screening program to assist in detecting and eliminating illicit discharges to the small MS4. Dry weather field screening must consist of (1) field observations; and (2) field screening according to item (2)c. below.

If dry weather field screening is necessary, at a minimum, the permittee shall:

- a. Conduct dry weather field screening in priority areas as identified by the permittee in Part III.B.2(e)(1). By the end of the permit term, all of those priority areas, although not necessarily all individual outfalls must be screened.*
- b. Field observation requirements – The permittee shall develop written procedures for observing flows from outfalls when there has been at least 72 hours of dry weather. The written procedures must include the basis used to determine which outfalls will be observed. The permittee shall record visual observations such as odor, color, clarity, floatables, deposits, or stains.*
- c. Field screening requirements – The permittee shall develop written procedures to determine which dry weather flows will be screened, based on results of field observations or complaint from the public or the permittee's trained field staff. At a minimum, when visual observations indicate a potential problem such as discolored flows, foam, surface sheen, and other similar indicators of contamination, the permittee shall conduct a field screening analysis for selected indicator pollutants. The basis for selecting the indicator pollutants must be described in the written procedures. Screening methodology may be modified based on experience gained during the actual field screening activities. The permittee shall document the method used.*

(3) *Reduction of Floatables*

The permittee shall implement a program to reduce the discharge of floatables (for example, litter and other human-generated solid refuse) in the MS4. The MS4 shall include source controls at a minimum and structural controls and other appropriate controls where necessary.

The permittee shall maintain two locations where floatable material can be removed before the stormwater is discharged to or from the MS4. Floatable material shall be collected at the frequency necessary for maintenance of the removal devices, but not less than twice per year. The amount of material collected shall be estimated by weight, volume, or by other practical means. Results shall be included in the annual report.

B. Program Overview and Development

CTRMA will implement the program described below to prevent, identify, and respond to illicit discharges and spills occurring in the regulated MS4 area. No leaking on-site sewage disposal systems exist on any CTRMA facilities included under this permit. This program will include improved and expanded measures and BMP's to reduce illicit discharges, including a map of the MS4 area, procedures for detecting, tracing, and eliminating illicit discharges, and staff training protocols. CTRMA will fully develop and implement this illicit discharge, detection, and elimination (IDDE) program within the timeline of the general permit.

C. Best Management Practices and Measurable Goals

1. Program Development and Updates

CTRMA will review and update as necessary, the SWMP and MCM implementation procedures required by the Permit. Any changes will be reflected in the annual reports.

2. Allowable Non-Storm Water Discharges

Part II, Section C of the Permit provides guidance on discharges not related to stormwater that are allowable in the MS4. These discharges are not considered to be significant contributors of pollutants and are thus exempt from this permit. CTRMA will update the list of Allowable Non-Stormwater Discharges as necessary. If changes are made to the list, those changes will be included in the current reporting year annual report and an updated SWMP. Allowable non-storm water discharges include:

- (1) Water line flushing (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life);
- (2) Runoff or return flow from landscape irrigation, lawn irrigation, and other irrigation utilizing potable water, groundwater, or surface water sources;
- (3) Discharges from potable water sources that do not violate Texas

- Surface Water Quality Standards;
- (4) Diverted stream flows;
 - (5) Rising ground waters and springs;
 - (6) Uncontaminated ground water infiltration;
 - (7) Uncontaminated pumped ground water;
 - (8) Foundation and footing drains;
 - (9) Air conditioning condensation;
 - (10) Water from crawl space pumps;
 - (11) Individual residential vehicle washing;
 - (12) Flows from wetlands and riparian habitats;
 - (13) Dechlorinated swimming pool discharges that do not violate Texas Surface Water Quality Standards;
 - (14) Street wash water excluding street sweeper waste water;
 - (15) Discharges or flows from emergency fire fighting activities (fire fighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, and similar activities);
 - (16) Other allowable non-stormwater discharges listed in 40 CFR § 122.26(d)(2)(iv)(B)(1);
 - (17) Non-stormwater discharges that are specifically listed in the TPDES Multi Sector General Permit (MSGP) TXR050000 or the TPDES Construction General Permit (CGP) TXR150000;
 - (18) Discharges that are authorized by a TPDES or NPDES permit or that are not required to be permitted; and
 - (19) Other similar occasional incidental non-stormwater discharges such as spray park water, unless the TCEQ develops permits or regulations addressing these discharges.

3. MS4 Mapping

CTRMA is developing a GIS-based asset management database with current information on drainage and structural inventories for CTRMA roadways. CTRMA will utilize this information to develop a map of the regulated area identifying CTRMA facilities, stormwater outfall areas, and water bodies receiving discharges and containing the elements required under the Permit. The MS4 map will be updated based on changes to the regulated area or the construction of new facilities or assets on an ongoing basis. Updated maps will be included in the annual report to TCEQ. The current MS4 map is included in Appendix A.

4. Education and Training

CTRMA staff do not perform field operations. Rather, CTRMA utilizes contractors for the design, construction, and maintenance of all CTRMA facilities. CTRMA requires all contractors performing field work to have certifications and training for the positions they occupy in the field.

CTRMA has staff that perform audits of contract compliance. These audits are in the form of regular field investigations of random portions of the CTRMA ROW. The individuals who conduct these audits assess the performance of the contractor and note deficiencies in work performed. These staff will be required to participate in the training program annually. These staff will receive training to aid in the identification and response to discharges seen while conducting these field investigations. This training will include online instruction videos such as those found at:

<https://www.youtube.com/channel/UCoVdW1VxrjqeFPyR375WXNw>

CTRMA will report the number of personnel receiving this training in the annual report.

5. Public Reporting of Illicit Discharges

As users of the CTRMA roadway system, the public may identify illicit discharges before CTRMA personnel are aware. As such, public reporting is essential to a functioning SWMP. CTRMA encourages public reporting of illicit dumping, discharges, or illegal activities through the CTRMA website which will provide a link for reporting such occurrences.

CTRMA will report the number of calls and complaint forms received during the reporting year in the annual report. Response to public reporting will be included in the annual report as well.

6. Spill Prevention and Response

The CTRMA follows strict protocols to provide rapid response and to minimize spill impacts. These protocols are outlined in CTRMA's Hazardous Materials Management Plan (HMMP). This HMMP provides detailed information on responsible parties, required notifications, and mitigation and spill response procedures for various types of spills. Through its performance-based maintenance program, CTRMA retains a team to implement the HMMP. The HMMP provides specific information on the following:

- Notification of CTRMA, TCEQ, and other responsible city, county, or state agencies
- Identification and notification of responsible party (RP)
- Hazardous materials emergency response for the release of all waste products, including:
 - Petroleum products

- Unknown substances
- Environmentally sensitive areas
- Bio-hazardous waste
- Remediation and contaminant removal

In addition to these response protocols, the CTRMA requires all construction and maintenance contractors prepare a HMMP detailing spill response procedures. This HMMP also contains provisions requiring that on-site personnel handling hazardous materials be certified through Hazardous Material/Waste Operations and Emergency Response (HAZWOPER) training.

The CTRMA maintains records of all spills and illegal discharges. CTRMA will report the quantity of spills responded to during the reporting year in the annual report. The report will also include, if available, the RP, the volume of the spill, and associated cost of the response.

7. Source Investigation and Elimination

CTRMA will visually observe the MS4 regulated area during daily operations to identify the presence of illicit discharges and/or illicit connections, typically originating from third-party dischargers. Upon becoming aware of an illicit discharge, CTRMA will investigate to identify and locate the source of such illicit discharge as soon as practicable. Although generally not necessary due to the small regulated area and low volume of identified discharges, in the event that multiple discharges are reported CTRMA will prioritize the investigation of discharges based on their relative risk of pollution.

CTRMA will report to the TCEQ immediately upon becoming aware of the occurrence of any illicit flows believed to be an immediate threat to human health or the environment.

CTRMA will track all investigations and document, at a minimum, the date(s) the illicit discharge was observed; the results of the investigation; any follow-up of the investigation; and the date the investigation was closed.

CTRMA will investigate and document the source of illicit discharges up to the edge of ROW within CTRMA's jurisdiction to complete such an investigation. CTRMA does not have the legal authority to enforce state environmental laws against third parties. If the source of illicit discharge extends outside CTRMA's ROW, CTRMA will notify the adjacent permitted MS4 operator or the appropriate TCEQ Regional Office.

CTRMA requires the elimination of illicit discharges and improper disposal practices within the regulated area as expeditiously as possible. The process will be as follows:

- If the RP is identified, CTRMA will notify the RP within 2 working days that a proposed plan of action must be submitted to CTRMA within two weeks.
- In the interim, CTRMA will require the operator of the illicit discharge to take reasonable and prudent measures to minimize the discharge of pollutants to the MS4.
- Where elimination of an illicit discharge within 30 days is not possible, CTRMA will request an expeditious schedule for removal of the discharge.
- If the RP can't be contacted or is unresponsive, CTRMA will refer the case to the TCEQ for further action and/or enforcement.

Illicit discharges and disposal that originate from an adjacent MS4 will be addressed by notifying the appropriate local MS4 permittee within a reasonable time. If CTRMA does not agree with the corrective measure(s) and/or the time schedule, CTRMA will refer the case to the TCEQ for further action and/or enforcement.

8. Illegal Dumping

Illegal dumping in the MS4 regulated area is initially treated in the same way as illicit discharges. If the observed dumping contains materials that could be contaminants, the Source Investigation and Elimination procedures above are followed. Procedures for the removal of illegal dumping follow those detailed in MCM 5, item E “Disposal of Waste Material” included on page 45 of this SWMP. All material dumped within the MS4 regulated area will be removed in accordance with 30 TAC Chapters 330 or 335, as applicable.

9. Inspections

Upon the detection or notification of an illegal discharge, spill, or dumping, the CTRMA will perform an inspection within CTRMA ROW to determine the nature of the incident and the RP. Because CTRMA does not have regulatory authority, it relies on TCEQ and law enforcement to enforce laws regarding illegal dumping or discharges.

CTRMA will report the number of inspections performed during the reporting year in the annual report. The report will also include, if available, the RP if found, the cost if available, and who the incident was turned over to for enforcement.

Table 2. MCM2 BMP activities, measurable goals, and implementation schedule

MCM2, ILLICIT DISCHARGE DETECTION AND ELIMINATION				
BMP	Activity	Measurable Goals	Schedule	Responsible Staff
Update IDDE Program and SWMP	Review and update SWMP and procedures for implementing IDDE program	Update SWMP once annually	June 30, annually, each fiscal year	Director of Engineering
Update List of Allowable Non-Storm Water Discharges	Review TCEQ list of allowable non-stormwater discharges, update SWMP	Update SWMP once annually	June 30, annually, each fiscal year	Director of Engineering
MS4 Mapping	Review regulated areas for changes to MS4 and update map	Update MS4 map once annually	June 30, annually, each fiscal year	Senior Project Manager, Asset Management
Education and Training	Require CTRMA staff who conduct investigations of contractor performance to receive training for illicit discharge identification and response	100% of field staff to receive training annually	June 30, 2022, and annually, each fiscal year thereafter	Roadway & Facility Maintenance Manager
Public Reporting of Illicit Discharges	Utilize CTRMA stormwater website to allow users to provide reports	Respond to 100% of calls or e-mails received	June 30, annually, each fiscal year	Marketing and Communications Manager
Spill Prevention and Response	Minimize and respond to spills by following CTRMA's HMMP protocols	Respond to 100% of spills and maintain records of response	June 30, annually, each fiscal year	Roadway & Facility Maintenance Manager
Source Investigation and Elimination	Observe, report, eliminate, and document illicit discharges and illegal dumping during routine maintenance activities	Respond to and report on 100% of known illicit discharges	June 30, annually, each fiscal year	Roadway & Facility Maintenance Manager

Inspections	Inspect illegal discharges, spills, or dumping and notify TCEQ for potential enforcement actions	Inspect 100% of known spills, discharges, or illegal dumping	June 30, annually, each fiscal year	Roadway & Facility Maintenance Manager
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VI. MCM 3, Construction Site Stormwater Runoff Control

A. Permit Requirements

(a) Requirements and Control Measures

- (1) *All permittees shall develop, implement, and enforce a program requiring operators of small and large construction activities, as defined in Part I of this general permit, to select, install, implement, and maintain stormwater control measures that prevent illicit discharges to the MEP. The program must include the development and implementation of an ordinance or other regulatory mechanism, as well as sanctions to ensure compliance to the extent allowable under state, federal, and local law, to require erosion and sediment control.*

Existing permittees shall assess program elements that were described in the previous permit, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharge of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of this permit term.

If TCEQ waives requirements for stormwater discharges associated with small construction from a specific site(s), the permittee is not required to enforce the program to reduce pollutant discharges from such site(s).

(b) Requirements for all Permittees

All permittees shall include the requirements described below in Parts III.B.3(b)(1)-(7)

- (1) *All permittees shall annually review and update as necessary, the SWMP and MCM implementation procedures required by Part III.A.2. Any changes must be included in the annual report. Such written procedures must be maintained on site or in the SWMP and made available for inspection by the TCEQ.*
- (2) *All permittees shall require that construction site operators implement appropriate erosion and sediment control BMPs. The permittee's construction program must ensure the following minimum requirements are effectively implemented for all small and large construction activities discharging to its small MS4.*
 - a. *Erosion and Sediment Controls - Design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants.*
 - b. *Soil Stabilization - Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization must be completed as soon as practicable, but no more than 14 calendar days after the*

initiation of soil stabilization measures. In arid, semiarid, and drought-stricken areas, where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures must be employed.

The permittee shall develop written procedures that describes initiating and completing stabilization measures for construction sites.

c. BMPs – Design, install, implement, and maintain effective BMPs to minimize the discharge of pollutants to the small MS4. At a minimum, such BMPs must be designed, installed, implemented and maintained to:

(i) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters;

(ii) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater; and

(iii) Minimize the discharge of pollutants from spills and leaks.

d. As an alternative to (a) through (c) above, all permittees shall ensure that all small and large construction activities discharging to the small MS4 have developed and implemented a stormwater pollution prevention plan (SWP3) in accordance with the TPDES CGP TXR150000. In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures must be employed and described in the written procedure required in item (2)b. above. As an alternative, vegetative stabilization measures may be implemented as soon as practicable.

(3) Prohibited Discharges - The following discharges are prohibited:

a. Wastewater from washout of concrete and wastewater from water well drilling operations, unless managed by an appropriate control;

b. Wastewater from washout and cleanout of stucco, paint, from release oils, and other construction materials;

c. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;

d. Soaps or solvents used in vehicle and equipment washing; and

e. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed by appropriate BMPs.

(4) Construction Plan Review Procedures

To the extent allowable by state, federal, and local law, all permittees shall maintain and implement site plan review procedures that describe which

plans will be reviewed as well as when an operator may begin construction. For those permittees without legal authority to enforce site plan reviews, this requirement is limited to those sites operated by the permittee and its contractors and located within the permittee's regulated area. The site plan procedures must meet the following minimum requirements:

- a. The site plan review procedures must incorporate consideration of potential water quality impacts.*
- b. The permittee may not approve any plans unless the plans contain appropriate site specific construction site control measures that, at a minimum, meet the requirements described in Part III.B.3.(a) or in the TPDES CGP, TXR150000.*

The permittee may require and accept a plan, such as a SWP3, that has been developed pursuant to the TPDES CGP, TXR150000.

(5) Construction Site Inspections and Enforcement

To the extent allowable by state, federal, and local law, all permittees shall implement procedures for inspecting large and small construction projects. Permittees without legal authority to inspect construction sites shall at a minimum conduct inspection of sites operated by the permittee or its contractors and that are located in the permittee's regulated area.

- a. The permittee shall conduct inspections based on the evaluation of factors that are a threat to water quality, such as: soil erosion potential; site slope; project size and type; sensitivity of receiving waterbodies; proximity to receiving waterbodies; non-stormwater discharges; and past record of non-compliance by the operators of the construction site.*
- b. Inspections must occur during the active construction phase.*
 - (i) All permittees shall develop and implement updated written procedures outlining the inspection and enforcement requirements. These procedures must be maintained on-site or in the SWMP and be made available to TCEQ.*
 - (ii) Inspections of construction sites must, at a minimum:*
 - 1. Determine whether the site has appropriate coverage under the TPDES CGP, TXR150000. If no coverage exists, notify the permittee of the need for permit coverage;*
 - 2. Conduct a site inspection to determine if control measures have been selected, installed, implemented, and maintained according to the small MS4's requirements;*
 - 3. Assess compliance with the permittee's ordinances and other regulations; and*
 - 4. Provide a written or electronic inspection report.*

(c) Based on site inspection findings, all permittees shall take all necessary follow-up actions (for example, follow-up-inspections or enforcement) to ensure compliance with permit requirements and the SWMP. These follow-up and enforcement actions must be tracked and maintained for review by the TCEQ.

For non-traditional small MS4s with no enforcement powers, the permittee shall notify the adjacent MS4 operator with enforcement authority or the appropriate TCEQ Regional Office according to Part III.A.3(b).

(6) Information submitted by the Public

All permittees shall develop, implement, and maintain procedures for receipt and consideration of information submitted by the public.

(7) MS4 Staff Training

All permittees shall ensure that all staff whose primary job duties are related to implementing the construction stormwater program (including permitting, plan review, construction site inspections, and enforcement) are informed or trained to conduct these activities. The training may be conducted by the permittee or by outside trainers.

(c) Additional Requirements for Level 3 and 4 small MS4s

In addition to the requirements described in Parts III.B.3(b)(1)-(7) above, permittees who operate Level 3 and 4 small MS4s shall meet the following requirements:

Construction Site Inventory

Permittees who operate Level 3 and 4 small MS4s shall maintain an inventory of all permitted active public and private construction sites, that result in a total land disturbance of one or more acres or that result in a total land disturbance of less than one acre if part of a larger common plan or development or sale. Notification to the small MS4 must be made by submittal of a copy of an NOI or a small construction site notice, as applicable. The permittee shall make this inventory available to the TCEQ upon request.

B. Construction Site Stormwater Runoff Control Program

CTRMA's construction stormwater program reduces the discharge of pollutants into the MS4 from construction sites and provides enforcement for both small and large construction sites. The program includes:

- Requirements for design, development, and implementation of appropriate control measures to reduce pollutants discharged into the MS4 from construction sites;
- Construction plan review process;
- Inspection of construction sites and enforcement of contract and CGP provisions pertaining to construction site stormwater runoff; and,

- Appropriate education and training measures for construction site operators.

CTRMA utilizes construction contractors for all project construction. CTRMA retains the right to reject or accept work that does not conform with plans, specifications, regulatory requirements, etc. The construction contractor is required to correct nonconforming work at the expense of the contractor. If the contractor fails to correct nonconforming work, or fails to provide an acceptable schedule for correction, CTRMA may (i) impose liquidated damages until the correction is made or an acceptable schedule is provided, (ii) issue a stop work order until the correction is made or an acceptable schedule is provided, or (iii) remedy the nonconforming work by other means and deduct the cost from any moneys due the construction contractor.

This control program is centered around the requirement that all construction activities be implemented in accordance with TPDES Construction General Permit TXR150000. The CTRMA will continue to monitor permit requirements for updates to ensure that all construction activities adhere to the TXR150000 permit and all other applicable permits. In addition to this, this SWMP will be updated to reflect any changes in permit requirements or procedures required during construction. These changes will also be detailed in the annual report produced by the CTRMA.

C. Construction General Permit TXR150000 Compliance

CTRMA ensures that all small and large construction activities discharging to its MS4 have developed and implemented a SWP3 in accordance with the TPDES CGP TXR150000. CTRMA project plans include a Stormwater Pollution Prevention Plan (SWP3) that defines BMPs to control sedimentation and erosion. CTRMA reviews and approves the SWP3 on its construction projects.

CTRMA will ensure that construction sites within its MS4 design, install, implement, and maintain effective BMPs to minimize the discharge of pollutants to the CTRMA MS4.

Project construction plans, specifications, and estimates are reviewed and approved by CTRMA before the project moves forward prior to construction. Approval from the CTRMA must be received, during the design phase of the project, prior to beginning construction activities.

At CTRMA's CGP permitted construction sites a Construction Site Notice (CSN) is posted. These notices are posted in a location accessible to the public and contain a phone number for the public to submit information regarding the site. Comments received from the public will be considered by CTRMA Engineering.

Some routine maintenance activities completed by CTRMA do not require authorization under the CGP including activities performed to maintain the original line and grade; hydraulic capacity and original purpose of a ditch, channel, or other similar stormwater conveyance; asphalt overlays of existing roads; shoulder blading to restore the shoulder to its original condition; and pavement "reworking" operations if they stay within the limits of the original

pavement and do not expose the base or sub-grade. If the sub-grade is exposed or if previously undisturbed land is disturbed (for example, clearing for staging areas or temporary haul roads), coverage under the CGP could be required.

D. Prohibited Discharges

CTRMA prohibits the following non-stormwater discharges following Part III.G.5 of the CGP:

1. Wastewater from washout of concrete, unless managed by an appropriate control;
2. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
4. Soaps or solvents used in vehicle and equipment washing; and
5. Toxic or hazardous substances from a spill or other release.

Should a prohibited discharge occur during construction, response procedures described in Section V, Illicit Discharge Detection and Elimination of the SWMP, will be followed. Should TCEQ update the list of prohibited discharges, CTRMA will revise this SWMP accordingly and update the requirements of all construction activities.

E. Construction Plan Review Procedures

CTRMA requires that the construction contractor prepare and submit a construction site plan that includes a SWP3 to CTRMA for review and acceptance. Once approved by CTRMA, the contractor is required to submit a NOI to TCEQ for coverage under the Construction General Permit for stormwater discharges from construction sites. The contractor is responsible for the implementation of all provisions of the approved SWP3.

The contractor must prepare a plan for the installation of temporary water pollution control measures to prevent avoidable water pollution during construction activities. All temporary and permanent measures included in the SWP3 must be accepted and approved by CTRMA and adheres to TPDES CGP, TXR150000.

Prior to the initiation of construction, the contractor must participate in a pre-construction conference with CTRMA to review the contractor's SWP3 and discuss stormwater management and water quality for the project site. This pre-construction conference is mandatory for all construction projects. The agenda for this pre-construction conference will contain items specific to environmental regulations which the contractor must adhere to.

In this meeting, CTRMA will review the appropriate environmental regulations and make certain they are addressed in the contractor's construction plan. The contractor is responsible for ensuring that all employees have adequate training.

The meeting minutes of these pre-construction meetings are kept by CTRMA and are available for review upon request. The CTRMA will issue a notice to proceed for construction only upon approval of the contractor's construction site plan and SWP3.

F. Construction Site Inspections and Enforcement

CTRMA controls activities occurring within the ROW, but there is little, if any, authority to regulate discharges occurring off the ROW and flowing into drainage systems operated by the State or by municipalities. CTRMA contracts with others for the construction and the maintenance of the roadway systems. As such, contracting is the primary control for enforcement.

CTRMA construction projects that disturb one or more acres of land will comply with the CGP and with CTRMA construction engineering and inspection (CEI) or performance-based maintenance contract (PBMC) requirements. In addition to the construction plans and specifications, CTRMA contracts require contractors to follow TxDOT manuals, standards, specifications, special specifications, and special provisions, policies and procedures. TxDOT Standard Specifications include items for temporary erosion, sedimentation, and environmental controls.

CTRMA provides on-site inspectors for all construction projects to verify compliance and take enforcement action as necessary to ensure compliance. These inspectors are knowledgeable of the construction site, the construction plans, specifications, and the SWP3 requirements. Inspections are performed weekly and are recorded on standardized forms. The forms used for environmental compliance inspections of construction projects were developed by CTRMA to expand upon those used by TxDOT. These inspection reports are retained by CTRMA. CTRMA will include the number of inspection reports obtained during the permit year in the annual report.

CTRMA works with the contractor on necessary corrective action, maintenance, or need for additional controls as a result of the inspection. The enforcement and escalation procedures are provided in the construction contract and are described in Section VI.B of the SWMP.

G. Information Submitted by the Public

The CTRMA website will include contact information for public input. CTRMA will maintain a list of public inputs received and will include the number of complaints/comments in the annual report.

H. Training

CTRMA will implement a training program to ensure personnel performing site inspections have information on the regulatory requirements that govern SWP3 development, as well as principles of erosion, sediment control, and storm water. These staff will be required to participate in the training program annually. The training that field staff will participate in is the TxDOT course (ENV433) called Storm Water Environmental Requirements During Construction or an equivalent training. A link to the training can be found here:

<https://www.youtube.com/watch?v=DuErgDp7izg&list=PLyLWQADRroOVttVZ109KkP0S60PZ1qho8&index=4>

The specific courses may change due to updates, new training module development, and/or removal of outdated materials.

Prior to initiation of construction, the contractor will meet with CTRMA in a pre-construction meeting to discuss stormwater issues for the construction site. CTRMA will ensure contractors are aware of practices and policies identified in this section, as well as emphasize the need for compliance. CTRMA includes special provisions for requirements of an Environmental Protection Training Program in construction contracts. Contract language stipulates that all staff working on project construction, including subcontractors, shall participate in this training program. Documentation of participation in this program must be maintained by the contractor.

Table 3. MCM3 BMP activities, measurable goals, and implementation schedule

MCM3, CONSTRUCTION SITE STORMWATER RUNOFF CONTROL				
BMP	Activity	Measurable Goals	Schedule	Responsible Staff
Update Program and SWMP	Review and update SWMP and procedures for implementing construction stormwater runoff control program	Update SWMP once annually	June 30, annually, each fiscal year	Director of Engineering
TXR150000 Permit Compliance	Continue to require all construction activities to be in accordance with TXR150000	Require 100% compliance; maintain records of compliance	June 30, annually, each fiscal year	Director of Engineering
TXR150000 Permit Compliance	Develop procedures for review, inspection, and tracking of construction activities requiring coverage under TXR150000 under PBMC.	Procedures implemented for 100% of construction sites	June 30, 2022	Director of Engineering
TXR150000 Permit Compliance	Develop procedures for review, inspection, and tracking of construction activities of third-party utilities.	Procedures implemented for 100% of construction sites	June 30, 2022	Director of Engineering
Prohibited Discharges	Continue to prohibit illicit discharges specified in TXR150000	Update SWMP with prohibited discharges in TXR150000 once annually (if list of specified prohibited discharges changes)	June 30, annually, each fiscal year	Director of Engineering
Construction Plan Review	Review SWP3 elements during the design phase	Require 100% of applicable construction plans to include SWP3	June 30, annually, each fiscal year	Director of Engineering
Construction Plan Review	Require the review of the SWP3 requirements at the pre-construction meeting	Require documentation of SWP3 review for 100% of applicable construction plans	June 30, annually, each fiscal year	Director of Engineering
Construction Site Inspection	Inspect and document inspection of construction sites for adherence to SWP3	Inspect 100% of applicable construction projects for SWP3 adherence	June 30, annually, each fiscal year	Director of Engineering

MCM3, CONSTRUCTION SITE STORMWATER RUNOFF CONTROL				
BMP	Activity	Measurable Goals	Schedule	Responsible Staff
Construction Site Enforcement	Enforce contract requirements for construction sites regarding adherence to SWP3	Enforce 100% of SWP3 provisions	June 30, annually, each fiscal year	Director of Engineering
Training	Require all inspectors to receive appropriate training	100% of field staff to receive training annually	June 30, 2022, and annually, each fiscal year thereafter	Director of Engineering
Information Submitted by Public	Include contact information for public on CTRMA website	Create public submission link on website	June 30, 2021	Marketing and Communications Manager

VII. MCM 4, Post Construction Stormwater Management in New Development and Redevelopment

A. Permit Requirements

(a) Post-Construction Stormwater Management Program

- (1) *All permittees shall develop, implement, and enforce a program, to the extent allowable under state, federal, and local law, to control stormwater discharges from new development and redeveloped sites that discharge into the small MS4 that disturb one acre or more, including projects that disturb less than one acre that are part of a larger common plan of development or sale. The program must be established for private and public development sites. The program may utilize an offsite mitigation and payment in lieu of components to address this requirement.*

Existing permittees shall assess program elements that were described in the previous permit and modify as necessary to continue reducing the discharge of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of the permit term.

- (2) *All permittees shall use, to the extent allowable under state, federal, and local law and local development standards, an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects. The permittees shall establish, implement, and enforce a requirement that owners or operators of new development and redeveloped sites design, install, implement, and maintain a combination of structural and non-structural BMPs appropriate for the community and that protects water quality. If the construction of permanent structures is not feasible due to space limitations, health and safety concerns, cost effectiveness, or highway construction codes, the permittee may propose an alternative approach to TCEQ. Newly regulated permittees shall have the program element fully implemented by the end of the permit term.*

(b) Requirements for all Permittees

All permittees shall include the requirements described below in Parts III.B.4.(b)(1)-(3)

- (1) *All permittees shall annually review and update as necessary, the SWMP and MCM implementation procedures required by Part III.A.2. Any changes must be included in the annual report. Such written procedures must be maintained either on site or in the SWMP and made available for inspection by TCEQ.*
- (2) *All permittees shall document and maintain records of enforcement actions and make them available for review by the TCEQ.*
- (3) *Long-Term Maintenance of Post-Construction Stormwater Control Measures*

All permittees shall, to the extent allowable under state, federal, and local law, ensure the long-term operation and maintenance of structural

stormwater control measures installed through one or both of the following approaches:

- a. Maintenance performed by the permittee. (See Part III.B.5)*
- b. Maintenance performed by the owner or operator of a new development or redeveloped site under a maintenance plan. The maintenance plan must be filed in the real property records of the county in which the property is located. The permittee shall require the owner or operator of any new development or redeveloped site to develop and implement a maintenance plan addressing maintenance requirements for any structural control measures installed on site. The permittee shall require operation and maintenance performed is documented and retained on site, such as at the offices of the owner or operator, and made available for review by the small MS4.*

(c) Additional Requirements for Level 4 small MS4s

In addition to the requirements described in Parts III.B.5(b)(1)-(3), permittees who operate Level 4 small MS4s shall meet the following requirements:

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.

Inspection Reports - The permittee shall document its inspection findings in an inspection report and make them available for review by the TCEQ.

B. Post-Construction Stormwater Management Program

For CTRMA, the development of new roadways represents new development; redevelopment refers to the replacement, repair, or reconstruction of roadways or other facilities. CTRMA will continue to implement a program to control stormwater discharges from sites undergoing new development or redevelopment. This program will apply to all development and redevelopment activities of one acre or greater. Activities that disturb less than one acre but are part of a larger development or redevelopment plan will also be included under this program. CTRMA has a well-defined planning process in place for the development of transportation projects that follows state and federal requirements. The transportation planning process incorporates water quality and stormwater management in the early decision-making phases on a project. Stormwater issues are one of the many taken into consideration during the identification of potential alternatives available to meet a project's needs. Later in the transportation planning process, CTRMA follows the environmental review process outlined by the National Environmental Policy Act of 1969 (NEPA). CTRMA's environmental review process follows strict requirements for public involvement,

impact assessment, and agency coordination. The environmental assessment (EA) process includes the assessment, discussion, and evaluation of water quality, existing conditions, its potential impacts, and applicable mitigation measures.

By following TxDOT guidelines, CTRMA project planning and design minimize water quality impact through:

- New development – limiting increases in erosion and the discharge of pollutants in stormwater as a result of development; and
- Redevelopment – reducing erosion and the discharge of pollutants in stormwater.

For typical construction projects, CTRMA’s post-construction plan design efforts incorporate stormwater volume reduction/control, velocity dissipation, pollutant reduction, and erosion control practices into the design. CTRMA utilizes vegetated ROWs which enable infiltration and evapotranspiration of stormwater runoff from the CTRMA roadway based on moderate retention and velocity dissipation. The velocity of stormwater discharge is reduced, thus limiting erosion, stream channel degradation, and pollutant discharge. CTRMA ROW and new ROW with earthen surfaces are vegetated or re-vegetated according to the specifications included in TxDOT’s Roadside Vegetation Management Manual. New ROW refers to either (a) ROW acquired and held by CTRMA for the construction of new roadways or (b) the transfer of ROW ownership to CTRMA from another entity.

Projects are also designed with adequate drainage in mind using TxDOT’s Hydraulic Design Manual. Procedures outlined in this manual include engineering design criteria including discharge estimates, structure requirements, constraints for the hydraulic design or analysis of highway drainage and receiving facilities, erosion control, pollution prevention plans, and issues related to managing the quantity and quality of runoff.

Identification and Selection of Structural Controls

The hydraulics and necessary structural controls for stormwater runoff are identified by CTRMA during the design phase for construction or redevelopment projects located within the regulated area. CTRMA will refer to TxDOT manuals and guidance documents that are relied upon both during the design phase of these projects and during the maintenance activities that follow completion of the projects. CTRMA will continue to use the most up-to-date TxDOT Roadside Vegetation Manual and the Hydraulic Design Manual which will be accessed through the TxDOT website.

CTRMA may also utilize non-structural BMP strategies including street sweeping, litter collection, and “No Mow” areas.

As regulations change or new development/redevelopment occur, the SWMP will be updated. These updates will also be reflected in the annual report.

C. Post-Construction Stormwater Control Measures Enforcement

CTRMA lacks regulatory authority to prohibit or to control post-construction discharges of stormwater from areas of new development and redevelopment located outside of the ROW through ordinance. New development and redevelopment projects within the ROW are under CTRMA control and are regulated through contract agreement during design and construction. CTRMA policy requires all new development and re-development projects to include permanent controls appropriate for the project and for local water bodies. Permanent controls may be structural or non-structural in nature. Because highway projects are linear and ROW is often limited, non-structural controls are frequently necessary and are considered adequate if the construction of permanent structures is not feasible due to space limitations, health and safety concerns, cost effectiveness, or highway construction codes.

CTRMA has established, implements, and enforces a requirement for its contractors (by contract) and its own departments to design, install, implement, and maintain a combination of structural and non-structural BMPs appropriate for the community and that protects water quality.

D. Long-Term Maintenance of Post-Construction Stormwater Control Measures

CTRMA regularly employs structural controls to reduce erosion and discharge of pollutants from its roadway system. These control measures are developed during the planning and design phases of projects. The structural control measures used in CTRMA projects are designed based on detailed calculations of drainage patterns and quantities. Structural controls implemented by CTRMA may include the following:

- Retention/irrigation ponds
- Extended detention (wet/dry basins)
- Vegetative filter strips
- Vegetated swales
- Constructed wetlands
- Sedimentation ponds/traps
- Infiltration ponds
- Catch basins
- Grated inlets
- Outfall velocity dissipation controls

The design and maintenance of structural controls by CTRMA follow manuals and guidance documents developed and utilized by TxDOT. CTRMA uses performance-based maintenance contracts to implement maintenance activities. CTRMA staff are responsible for the oversight of work performed by PBMC contractors. CTRMA will maintain all long-term post-construction stormwater control measures. CTRMA controls will not be located on private property and

CTRMA will maintain the responsibility and accountability for the operation and maintenance of any controls utilized. CTRMA is required to inspect, where applicable, post-construction controls to ensure that control measures are operating correctly and are being maintained. Maintenance of permanent controls includes mowing, repair of erosion features, pond sediment removal, etc. Maintenance and inspection activities are described further in **MCM 5, Pollution Prevention and Good Housekeeping for Municipal Operations**.

E. Discharges to the Edwards Aquifer Recharge Zone

Stormwater and non-stormwater discharges that occur within the Edwards Aquifer Recharge Zone or in the area defined as the Contributing Zone are also regulated by 30 TAC Chapter 213 (Edwards Aquifer Rule). The requirements of the Edwards Aquifer Rule are in addition to the requirements of the Permit. Portions of CTRMA's MS4 permitted area exist within the Contributing Zone. No portion of the CTRMA MS4 permitted area exists within the Recharge Zone. The southernmost portion of 183A is within the Recharge Zone but the ROW is owned by TxDOT.

CTRMA will record any additional TCEQ-approved WPAPs received after the SWMP submittal in the annual report for each respective permit year. For discharges originating from the small MS4 permitted area and located on or within ten stream miles upstream of the Edwards Aquifer recharge zone, CTRMA will submit a copy of the MS4 NOI to the appropriate TCEQ Regional Office with each WPAP application.

1. Water Pollution Abatement/Contributing Zone Plans

Permittees producing discharges regulated by the Edwards Aquifer Rule must develop either a Water Pollution Abatement Plan (WPAP) or a Contributing Zone Plan (CZP) for TCEQ approval. Both plans were developed by CTRMA for 183A. The WPAP is only applicable to the portion of 183A owned by TxDOT and not included in the MS4 area. The MS4 area is located within the Contributing Zone and as such, the CZP is applicable.

Within the MS4 area, CTRMA has implemented several permanent BMP's to address water quality. These include a combination of swale, engineered vegetative filter strips, extended detention ponds, and full sedimentation and filtration ponds.

Table 4. MCM4 BMP activities, measurable goals, and implementation schedule

MCM4, POST CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT				
BMP	Activity	Measurable Goals	Schedule	Responsible Staff
Post Construction Enforcement	Regulate incidents and MS4 water quality issues related to areas of new development and redevelopment that cause erosion or similar water quality issues.	Enforce MS4 regulations on 100% of incidents	June 30, annually, each fiscal year	Director of Engineering
SWMP Update	Review SWMP and update to accommodate regulatory changes of new development and redevelopment	Update SWMP once annually	June 30, annually, each fiscal year	Director of Engineering
Record Retention	Retain records of enforcement actions for a minimum of 3 years	Retain 100% of enforcement records for a minimum of 3 years	June 30, annually, each fiscal year	Director of Engineering
Long-term Maintenance of Structural Controls	Routinely inspect and maintain structural control measures to ensure proper functioning	Inspect 25% of structural controls annually	June 30, annually, each fiscal year	Roadway & Facility Maintenance Manager

VIII. MCM 5, Pollution Prevention and Good Housekeeping for Municipal Operations

A. Permit Requirements

(a) Program development

All permittees shall develop and implement an operation and maintenance program, including an employee training component that has the ultimate goal of preventing or reducing pollutant runoff from municipal activities and municipally owned areas including but not limited to park and open space maintenance; street, road, or highway maintenance; fleet and building maintenance; stormwater system maintenance; new construction and land disturbances; municipal parking lots; vehicle and equipment maintenance and storage yards; waste transfer stations; and salt/sand storage locations.

Existing permittees shall assess program elements that were described in the previous permit, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharges of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of this permit term. (See also Part III.A.1.(c))

(b) Requirements for all Permittees

All permittees shall include the requirements described below in Parts III.B.5.(1)-(6) in the program:

(1) Permittee-owned Facilities and Control Inventory

All permittees shall develop and maintain an inventory of facilities and stormwater controls that it owns and operates within the regulated area of the small MS4. The inventory must include all applicable permit numbers, registration numbers, and authorizations for each facility or controls. The inventory must be available for review by TCEQ and must include, but is not limited, to the following, as applicable:

- a. Composting facilities;*
- b. Equipment storage and maintenance facilities;*
- c. Fuel storage facilities;*
- d. Hazardous waste disposal facilities;*
- e. Hazardous waste handling and transfer facilities;*
- f. Incinerators;*
- g. Landfills;*
- h. Materials storage yards;*
- i. Pesticide storage facilities;*
- j. Buildings, including schools, libraries, police stations, fire stations, and office buildings;*

- k. *Parking lots;*
- l. *Golf courses;*
- m. *Swimming pools;*
- n. *Public works yards;*
- o. *Recycling facilities;*
- p. *Salt storage facilities;*
- q. *Solid waste handling and transfer facilities;*
- r. *Street repair and maintenance sites;*
- s. *Vehicle storage and maintenance yards; and*
- t. *Structural stormwater controls.*

(2) *Training and Education*

All permittees shall inform or train appropriate employees involved in implementing pollution prevention and good housekeeping practices. All permittees shall maintain a training attendance list for inspection by TCEQ when requested.

(3) *Disposal of Waste Material - Waste materials removed from the small MS4 must be disposed of in accordance with 30 TAC Chapters 330 or 335, as applicable.*

(4) *Contractor Requirements and Oversight*

a. *Any contractors hired by the permittee to perform maintenance activities on permittee-owned facilities must be contractually required to comply with all of the stormwater control measures, good housekeeping practices, and facility-specific stormwater management operating procedures described in Parts III B.5.(b)(2)-(6).*

b. *All permittees shall provide oversight of contractor activities to ensure that contractors are using appropriate control measures and SOPs. Oversight procedures must be maintained on-site and made available for inspection by TCEQ.*

(5) *Municipal Operation and Maintenance Activities*

a. *Assessment of permittee-owned operations*

All permittees shall evaluate operation and maintenance (O&M) activities for their potential to discharge pollutants in stormwater, including but not limited to:

- (i) *Road and parking lot maintenance, including such areas as pothole repair, pavement marking, sealing, and re-paving;*
- (ii) *Bridge maintenance, including such areas as re-chipping, grinding, and saw cutting;*

- (iii) *Cold weather operations, including plowing, sanding, and application of deicing and anti-icing compounds and maintenance of snow disposal areas; and*
 - (iv) *Right-of-way maintenance, including mowing, herbicide and pesticide application, and planting vegetation.*
- b. *All permittees shall identify pollutants of concern that could be discharged from the above O&M activities (for example, metals; chlorides; hydrocarbons such as benzene, toluene, ethyl benzene, and xylenes; sediment; and trash).*
 - c. *All permittees shall develop and implement a set of pollution prevention measures that will reduce the discharge of pollutants in stormwater from the above activities. These pollution prevention measures may include the following examples:*
 - (i) *Replacing materials and chemicals with more environmentally benign materials or methods;*
 - (ii) *Changing operations to minimize the exposure or mobilization of pollutants to prevent them from entering surface waters; and*
 - (iii) *Placing barriers around or conducting runoff away from deicing chemical storage areas to prevent discharge into surface waters.*
 - d. *Inspection of pollution prevention measures - All pollution prevention measures implemented at permittee-owned facilities must be visually inspected to ensure they are working properly. The permittee shall develop written procedures that describes frequency of inspections and how they will be conducted. A log of inspections must be maintained and made available for review by the TCEQ upon request.*
- (6) *Structural Control Maintenance*

If BMPs include structural controls, maintenance of the controls must be performed by the permittee and consistent with maintaining the effectiveness of the BMP. The permittee shall develop written procedures that define the frequency of inspections and how they will be conducted.
- (c) *Additional Requirements for Level 3 and 4 small MS4s:*

In addition to the requirements described in Parts.B.5.(b)(1)-(6) above, permittees who operate Level 3 or 4 small MS4s shall meet the following requirements:
 - (1) *Storm Sewer System Operation and Maintenance*
 - a. *Permittees who operate Level 3 or 4 small MS4s shall develop and implement an O&M program to reduce to the maximum extent practicable the collection of pollutants in catch basins and other surface drainage structures.*

b. *Permittees who operate Level 3 or 4 small MS4s shall develop a list of potential problem areas. The permittees shall identify and prioritize problem areas for increased inspection (for example, areas with recurrent illegal dumping).*

(2) *Operation and Maintenance Program to Reduce Discharges of Pollutants from Roads*

Permittees who operate Level 3 or 4 small MS4s shall implement an O&M program that includes at least one of the following: a street sweeping and cleaning program, or an equivalent BMP such as an inlet protection program, which must include an implementation schedule and a waste disposal procedure. The basis for the decision must be included in the SWMP. If a street sweeping and cleaning program is implemented, the permittee shall evaluate the following permittee-owned and operated areas for the program: streets, road segments, and public parking lots including, but not limited to, high traffic zones, commercial and industrial districts, sport and event venues, and plazas, as well as areas that consistently accumulate high volumes of trash, debris, and other stormwater pollutants.

a. *Permittees who operate Level 3 or 4 small MS4s shall develop a list of potential problem areas. The permittees shall identify and prioritize problem areas for increased inspection (for example, areas with recurrent illegal dumping).*

b. *For areas where street sweeping is technically infeasible (for example, streets without curbs), the permittee shall focus implementation of other trash and litter control procedures, or provide inlet protection measures to minimize pollutant discharges to storm drains and creeks.*

c. *Sweeper Waste Material Disposal – If utilizing street sweepers, the permittee shall develop a procedure to dewater and dispose of street sweeper waste material and shall ensure that water and material will not reenter the small MS4.*

(3) *Mapping of Facilities*

Permittees who operate Level 3 or 4 small MS4s shall, on a map of the area regulated under this general permit, identify where the permittee-owned and operated facilities and stormwater controls are located.

(4) *Facility Assessment*

Permittees who operate Level 3 or 4 small MS4s shall perform the following facility assessment in the regulated portion of the small MS4 operated by the permittee:

a. *Assessment of Facilities' Pollutant Discharge Potential - The permittee shall review the facilities identified in Part III.B.5.(b) once per permit term for their potential to discharge pollutants into stormwater.*

- b. *Identification of high priority facilities - Based on the Part III.B.5.(c)(4)a. assessment, the permittee shall identify as high priority those facilities that have a high potential to generate stormwater pollutants and shall document this in a list of these facilities. Among the factors that must be considered in giving a facility a high priority ranking are the amount of urban pollutants stored at the site, the identification of improperly stored materials, activities that must not be performed outside (for example, changing automotive fluids, vehicle washing), proximity to waterbodies, proximity to sensitive aquifer recharge features, poor housekeeping practices, and discharge of pollutant(s) of concern to impaired water(s). High priority facilities must include, at a minimum, the permittee's maintenance yards, hazardous waste facilities, fuel storage locations, and any other facilities at which chemicals or other materials have a high potential to be discharged in stormwater.*
- c. *Documentation of Assessment Results - The permittee shall document the results of the assessments and maintain copies of all site evaluation checklists used to conduct the assessments. The documentation must include the results of the permittee's initial assessment, and any identified deficiencies and corrective actions taken.*

(5) *Development of Facility Specific SOPs*

Permittees who operate Level 3 or 4 small MS4s shall develop facility specific stormwater management SOPs. The permittee may utilize existing plans or documents that may contain the following required information:

- a. *For each high priority facility identified in Part III.B.5.(c)(4)b., the permittee shall develop a SOP that identifies BMPs to be installed, implemented, and maintained to minimize the discharge of pollutants in stormwater from each facility.*
- b. *A hard or electronic copy of the facility-specific stormwater management SOP (or equivalent existing plan or document) must be maintained and be available for review by the TCEQ. The SOP must be kept on site when possible and must be kept up to date.*

(6) *Stormwater Controls for High Priority Facilities*

Permittees who operate Level 3 or 4 small MS4s shall implement the following stormwater controls at all high priority facilities identified in Part III.B.5.(c)(4)b. A description of BMPs developed to comply with this requirement must be included in each facility specific SOP:

- a. *General good housekeeping – Material with a potential to contribute to stormwater pollution must be sheltered from exposure to stormwater.*
- b. *De-icing and anti-icing material storage – The permittee shall ensure, to the MEP, that stormwater runoff from storage piles of salt and other de-icing and anti-icing materials is not discharged; or shall ensure that any*

discharges from the piles are authorized under a separate discharge permit.

- c. Fueling operations and vehicle maintenance – The permittee shall develop SOPs (or equivalent existing plans or documents) that address spill prevention and spill control at permittee-owned and operated vehicle fueling, vehicle maintenance, and bulk fuel delivery facilities.*
- d. Equipment and vehicle washing – The permittee shall develop SOPs that address equipment and vehicle washing activities at permittee-owned and operated facilities. The discharge of equipment and vehicle wash water to the small MS4 or directly to receiving waters from permittee-owned facilities is not authorized under this general permit. To ensure that wastewater is not discharged under this general permit, the permittee’s SOP may include installing a vehicle wash reclaim system, capturing and hauling the wastewater for proper disposal, connecting to sanitary sewer (where applicable and approved by local authorities), ceasing the washing activity, or applying for and obtaining a separate TPDES permit.*

(7) Inspections

Permittees who operate Level 3 or 4 small Ms4s shall develop and implement an inspection program, which at a minimum must include periodic inspections of high priority permittee-owned facilities. The results of the inspections and observations must be documented and available for review by the TCEQ.

(d) Additional Requirements for Level 4 small MS4s:

In addition to all the requirements described in Parts III.B.5(b) and III.B.5.(c) above, permittees who operate Level 4 small MS4s shall meet the following requirements:

(1) Pesticide, Herbicide, and Fertilizer Application and Management

- a. Landscape maintenance – The permittee shall evaluate the materials used and activities performed on public spaces owned and operated by the permittee such as parks, schools, golf courses, easements, public rights of way, and other open spaces for pollution prevention opportunities. Maintenance activities for the turf landscaped portions of these areas may include mowing, fertilization, pesticide application, and irrigation. Typical pollutants include sediment, nutrients, hydrocarbons, pesticides, herbicides, and organic debris.*
- b. The permittee shall implement the following practices to minimize landscaping-related pollutant generation with regard to public spaces owned and operated by the permittee:*
 - (i) Educational activities, permits, certifications, and other measures for the permittee’s applicators and distributors.*
 - (ii) Pest management measures that encourage non-chemical solutions where feasible. Examples may include:*

- (a) Use of native plants or xeriscaping;*
- (b) Keeping clippings and leaves out the small MS4 and the street by encouraging mulching, composting, or landfilling;*
- (c) Limiting application of pesticides and fertilizers if precipitation is forecasted within 24 hours, or as specified in label instructions;*
- (d) Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing motorist safety.*

- c. The permittee shall develop schedules for chemical application in public spaces owned and operated by the permittee that minimize the discharge of pollutants from the application due to irrigation and expected precipitation.*
- d. The permittee shall ensure collection and proper disposal of the permittee's unused pesticides, herbicides, and fertilizers.*

(2) Evaluation of Flood Control Projects

The permittee shall assess the impacts of the receiving water(s) for all flood control projects. New flood control structures must be designed, constructed, and maintained to provide erosion prevention and pollutant removal from stormwater. The retrofitting of existing structural flood control devices to provide additional pollutant removal from stormwater shall be implemented to the maximum extent practicable.

B. Program Development

CTRMA facilities are operated and maintained by contractors through performance-based maintenance contracts. These contracts require that those personnel performing operation and maintenance activities adhere to all applicable regulations and receive all necessary training. CTRMA will ensure that the requirements included in operations and maintenance contracts and all activities performed by CTRMA staff comply with the requirements of TXR040000. This program will be fully implemented by the end of this permit term.

C. Facility Inventory

TCEQ General permit TXR040000 provides a comprehensive list of the types of facilities that must be inventoried within the MS4 area. CTRMA utilizes performance-based maintenance contractors for all operations and maintenance activities. As such, facilities and inventory regulated by TCEQ are limited in the MS4 area. CTRMA does not own or operate facilities subject to the TCEQ Industrial Stormwater Multi-Sector General Permit (MSGP). The facilities owned and operated by CTRMA within the MS4 area are limited to:

- Salt and deicing storage facilities;
- Vehicle and equipment storage facilities; and

- Structural stormwater controls.

During the term of this permit, CTRMA will develop and maintain an inventory of facilities and stormwater controls that it owns and operates within the regulated area of the small MS4. Should the types of facilities or inventories change, the SWMP will be updated to reflect these revisions. These changes will also be reported in the annual report.

D. Training and Education

CTRMA staff do not perform field operations. Rather, CTRMA utilizes PBMC contractors for all CTRMA facility maintenance. CTRMA requires all contractors performing field work to have certifications and training for the positions they occupy in the field. The trainings and certifications required of PMBC contract employees follow those of TxDOT. CTRMA will review the PBMC training requirements during this permit term to ensure the appropriate training is provided.

CTRMA has staff that perform audits of contract compliance. These audits are in the form of regular field investigations of random portions of the CTRMA ROW. The individuals who conduct these audits assess the performance of the contractor and note deficiencies in work performed. These staff will be required to participate in the training program annually. Online videos will be used for the training such as the video found at:

<https://www.youtube.com/channel/UCoVdW1VxrjqeFPyR375WXNw>

This training program is intended for field personnel and includes items such as good housekeeping practices, the identification of illicit discharges, procedures for reporting, among others. CTRMA will report the number of personnel receiving this training each year in the annual report.

E. Disposal of Waste Material

All waste material removed from CTRMA's MS4 area will continue to be removed in accordance with 30 TAC Chapters 330 or 335, as applicable. CTRMA utilizes PBMC contractors for all waste removal. PBMC contractors are required to prepare a Hazardous Materials Management Plan (HMMP) for the safe handling, storage, treatment and/or disposal of hazardous materials, whether encountered at or brought onto the project site by the Contractor, encountered or brought onto the Project site by a third party, or otherwise. At CTRMA facilities, a recycling program exists. All CTRMA vehicles are maintained offsite.

1. Street sweeping

PBMC contractors are required to perform cleaning and sweeping of CTRMA roads and must take measures to ensure debris from sweeping operations is promptly removed and does not clog drainage inlets. Material collected must be disposed of within the same day of collection within an approved landfill and in accordance with all applicable federal, state and local regulations.

2. Litter and debris removal

PBMC contractors are required to keep CTRMA's ROW in a neat condition and virtually free of litter and debris. All litter/waste pickup and disposal must be performed in accordance with federal, state, and local regulations. All collected waste must be removed and disposed on the day of collection. Litter removal must be coordinated with mowing operations.

3. Cold weather material disposal

CTRMA uses PBMC contractors for snow and ice control. These contractors are responsible for cleanup of the MS4 area following a winter weather event. This includes, but is not limited to, sweeping of snow and ice control material and removal of associated storage bags. While the PBMC contractor is responsible for the application of deicing materials, CTRMA provides a purchase order for material acquisition. CTRMA uses Meltdown®, a deicing product. Meltdown® is among the least harmful of common deicers to vegetation and groundwater according to independent studies conducted by the U.S. Department of Agriculture (<https://envirotechservices.com/deicing-anti-icing/liquid-deicing-products/meltdown-liquid/>).

4. Structural control wastes

CTRMA utilizes structural controls for stormwater runoff, including water quality ponds and vegetative buffers. All litter and waste material that has collected in structural control areas must be removed and disposed of. Litter located within the water quality and detention facilities is defined as trash, wastepaper, garbage or other items that have been washed into the facility and described as, but not limited to, scrap metal, paper, wood, plastic, glass products, bottle caps, ring-pull tabs, cigarette butts, feces, and animal remains.

All sediment removed from water quality ponds must be stored on site with the proper erosion and sedimentation controls. Any soils contaminated during maintenance activities shall be transported from the site and properly disposed of offsite.

F. Contractor Requirements and Oversight

All maintenance on the CTRMA roadway system is performed by PBMC contractors. The specifications included in these contracts requires strict adherence to all federal, state, and local regulations for stormwater management, water quality, and environmental concerns.

CTRMA has designated maintenance staff to ensure contract and regulatory compliance. These staff perform audits in the form of field investigations of contractor maintenance activities. These audits occur on 0.1-mile sections consisting of 10% of the roadway length. Audits are recorded on standard inspection checklist sheets and occur at varying frequencies based on the

maintenance activities being performed. These procedures and the inspection forms are maintained by CTRMA for review.

When a utility requires construction to occur within CTRMA's ROW, CTRMA requires the utility to submit a permit application prior to commencing work. CTRMA requires that prior to the initiation of construction, the utility owner or representative must convene a pre-construction meeting. The utility owner must identify any potential environmental resources that may be impacted by construction. If a permit is issued, the permit holder is required to restore the ground to its prior state and revegetate all disturbed areas with like vegetation.

G. Municipal Operation and Maintenance Activities

PBMC contractors perform all maintenance of the CTRMA roadway system and ROW. CTRMA requires PBMC contractors to perform maintenance in a manner that minimizes the discharge of pollutants. All maintenance activities are required to be performed in accordance with the latest version of applicable TxDOT manuals and guidelines. This includes all roadway and pavement maintenance, bridge maintenance, cold weather operations, and ROW maintenance, including vegetation management. All maintenance operations are subject to inspections for contract and environmental regulation compliance. These inspections are in the form of audits or field investigation as described in this SWMP in Section VIII.F, Contractor Requirements and Oversight. CTRMA will list all maintenance activities in the annual report.

H. Assessment of Permittee-Owned Operations

CTRMA operates and maintains roadways in a manner to minimize the discharge of pollutants from road repair, equipment yards, and material storage/maintenance facilities to the MEP. During the permit period, CTRMA will assess the pollution potential of common maintenance activities and if necessary, develop and implement a set of pollution prevention measures that will reduce the discharge of pollutants in stormwater from these activities. BMPs and programs described throughout this SWMP have the primary goal of minimizing pollutants from roadways and maintenance activities. In addition, CTRMA implements the following BMPs to minimize pollutant discharge:

1. Road and parking lot maintenance including pothole repair, pavement marking, sealing, and re-paving.

CTRMA contractors may engage in earth-disturbing operations during maintenance of roadways. PBMC contractor typical activities do not require earth-disturbing operations. Should these types of projects be required, the PBMC requires the use of controls to limit erosion and sedimentation. Most highway maintenance sites experience little erosion since the work does not disturb the soil.

For pavement repair work, the PBMC requires pavement samples to be collected and sent to a laboratory prior to the initiation of work. This

requirement helps assess the appropriate pavement treatment required and can reduce the amount of sealing and re-paving required.

2. Bridge maintenance including re-chipping, grinding, and saw cutting
Bridge paint removal and application projects are conducted by CTRMA contractors. PBMC requirements ensure potentially hazardous materials do not adversely affect the environment from these activities. CTRMA classifies lead-based paint as a hazardous material and as such, a HAZMAT plan would be applicable and required. CTRMA infrastructure and facilities have all been constructed after 2005, so the likelihood of encountering lead-based paint or other hazardous materials is minimal.
3. Cold weather operations, including plowing, sanding, and application of deicing and anti-icing compounds and maintenance of snow disposal areas
PBMC contractors are responsible for the application of deicing materials. CTRMA coordinates the purchase of materials and utilizes deicing materials that are least harmful to the environment, such as Meltdown®. CTRMA will report on materials used in deicing activities in its annual report. Deicing materials when in storage are covered by tarps.
4. ROW maintenance, including mowing, herbicide and pesticide application, and planting vegetation
CTRMA implements controls to reduce the discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers, applied by CTRMA contractors.
CTRMA requires management of roadside vegetation to follow the Roadside Vegetation Management Manual. The manual includes vegetation management such as propagation and control of vegetation that is accomplished by physical means of hand-pulling, hoeing, plowing, cultivating, trimming, and mowing. Chemical methods include the application of approved herbicides to control specific vegetation problems. The manual describes proper selection of herbicides, application rates, and various factors that contribute to proper usage. CTRMA requires contractors applying herbicides to be licensed by the state. The plan calls for strict coordination between mowing and herbicide operations.

I. CTRMA Pollution Prevention Measures

CTRMA has identified pollutants of concern that could be discharged from the above O&M activities. Potential pollutants are as follows:

- Metals, specifically lead, copper, and chlorides;
- Hydrocarbons, specifically oil and grease;
- Sediment;
- Trash;
- Herbicides & pesticides; and

- Deicing chemicals

CTRMA has developed and implements a set of pollution prevention measures that will reduce the discharge of pollutants in stormwater from the following activities:

- Using environmentally friendly chemicals such as Meltdown®, a deicing product. Meltdown® is among the least harmful of common deicers to vegetation and groundwater according to independent studies conducted by the U.S. Department of Agriculture (<https://envirotechservices.com/deicing-anti-icing/liquid-deicing-products/meltdown-liquid/>). Replacing materials and chemicals with more environmentally benign materials or methods. In addition, CTRMA covers deicing salt/rock storage areas to prevent discharge into surface waters.
- Changing operations to minimize the exposure or mobilization of pollutants to prevent them from entering surface waters. CTRMA has incorporated, where applicable, a permeable friction course (PFC) surface treatment into roadway construction - the latest controls for stormwater quality since 2004. A PFC reduces splash and spray from vehicular traffic, minimizing the pollutant wash-off and reducing potential pollutant transport. TxDOT, through research and testing, determined that PFC has proven to reduce a certain percentage of pollutants before they reach surface waters. TxDOT studies have indicated a concentration reduction of the following parameters of concern: 88 percent reduction of Total Suspended Solids (TSS); 63 percent reduction of Total Phosphorus; 57 percent reduction of Total copper; 88 percent reduction of Total lead; 84 percent reduction of Total zinc; and, 40 percent reduction of dissolved zinc.

J. Structural Control Maintenance

The maintenance of structural controls to reduce the release of pollutants was briefly described in this SWMP in Section VII.D, Long-Term Maintenance of Post-Construction Stormwater Control Measures. Structural controls are incorporated into CTRMA projects during the planning and development process. The structural controls that may be used by CTRMA include:

- Retention/irrigation ponds
- Extended detention (wet/dry basins)
- Vegetative filter strips
- Vegetated swales
- Constructed wetlands
- Sedimentation ponds/traps
- Infiltration ponds
- Catch basins

- Grated inlets
- Outfall velocity dissipation controls

Within the MS4 area, the most frequently used BMP's are water quality ponds and vegetated strips. These BMP's are inspected at various intervals to ensure effective performance in maintaining water quality.

1. Water quality ponds

Inspection of water quality ponds occur at different intervals based on the characteristics being inspected. These inspections occur after 1" of rainfall, monthly, quarterly, semiannually, annually, and bianually. The inspections record information on the pond conditions including the following requirements:

- Sediment is not excessively accumulated
- Pond drainage is not impeded
- Structural damage is not present
- Cracks, voids, and undermining of BMP is repaired
- Cracks and joints are free of vegetation
- Erosion problems inside or downstream of BMP are not repaired and replanted
- Ponds are free of litter and debris
- Vegetation is not diseased or dead
- Nuisances such as insects, weeds, odors, algae, etc. are not present

2. Vegetative strips and swales

Vegetative filter strips and swales are an important part of water quality improvement in this MS4 area. Inspections of these features also occur at various intervals to ensure that the following requirements are met:

- Vegetation is not damaged or eroded
- Access roads are kept clear
- Sites contain no debris or litter
- Standing water is not present (except where it occurs by design)
- Vegetation is not diseased or dead
- Nuisances such as insects, weeds, odors, algae, etc. are not present

Inspections are recorded on standardized formats and are retained for review by TCEQ upon request. The number of BMP inspections will be reported in the annual report.

Table 5. MCM5 BMP activities, measurable goals, and implementation schedule

MCM5, POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS				
BMP	Activity	Measurable Goals	Schedule	Responsible Staff
Facility Inventory	Develop inventory of CTRMA facilities and stormwater controls	Inventory 100% of facilities & controls	June 30, 2022	Senior Project Manager, Asset Management
Facility Inventory	Maintain inventory of CTRMA facilities and stormwater controls	Update inventory once annually	June 30, 2023 and annually, each fiscal year thereafter	Senior Project Manager, Asset Management
Training and Education	Implement training program for individuals conducting field investigations of maintenance activities	100% of field staff to receive training annually	June 30, 2022, and annually, each fiscal year thereafter	Roadway & Facility Maintenance Manager
Disposal of Waste Material	Require maintenance contractors to dispose of waste materials threatening water quality	Remove 100% of identified waste materials	June 30, annually, each fiscal year	Roadway & Facility Maintenance Manager
Contractor Oversight	Inspect and document inspection of maintenance activities	Conduct one inspection of maintenance contract activities	June 30, 2023	Roadway & Facility Maintenance Manager
Roadway O&M	Mowing and vegetation management for street, road, or highway maintenance	Maintain 75% of vegetation	June 30, annually, each fiscal year	Roadway & Facility Maintenance Manager
Roadway O&M	Storm sewer system and drainage ditch cleaning	Maintain 75% of drainage ditches and storm sewer system	June 30, annually, each fiscal year	Roadway & Facility Maintenance Manager
Roadway O&M	Seeding and vegetation control	Maintain 75% of vegetation	June 30, annually, each fiscal year	Roadway & Facility Maintenance Manager

MCM5, POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS				
BMP	Activity	Measurable Goals	Schedule	Responsible Staff
Roadway O&M	Deicing	100% of deicing materials must be approved	June 30, annually, each fiscal year	Roadway & Facility Maintenance Manager
Structural Control Maintenance	Inspect and maintain structural BMP's to minimize pollutant release	Inspect 25% of structural BMP's annually	June 30, annually, each fiscal year	Roadway & Facility Maintenance Manager
Structural Control Maintenance	Implement procedures for disposal of dredged spoil and accumulated sediment from structural controls and dispose of sediment into either upland locations or landfills	Dispose of 100% of removed spoil and sediment in approved locations	June 30, annually, each fiscal year	Roadway & Facility Maintenance Manager

IX. Evaluation and Reporting

A. Evaluation of Program

This section describes how CTRMA evaluates its SWMP and its sufficiency for reducing pollutants within the MS4 area. CTRMA will regularly review the BMP's and activities included in this SWMP and will continue to conduct inspections of its facilities to ensure compliance.

B. Annual Reporting Requirements

Per the requirements of the Permit, CTRMA will produce an annual report within 90 days of the end of each reporting year. This report will detail the previous permit year. The report will include the status of compliance with permit conditions, information related to stormwater management activities undertaken, a plan for the next reporting year, and proposed updates to the SWMP. The report will be submitted to TCEQ and will be made available for review on CTRMA's website.

C. SWMP Revision Procedures

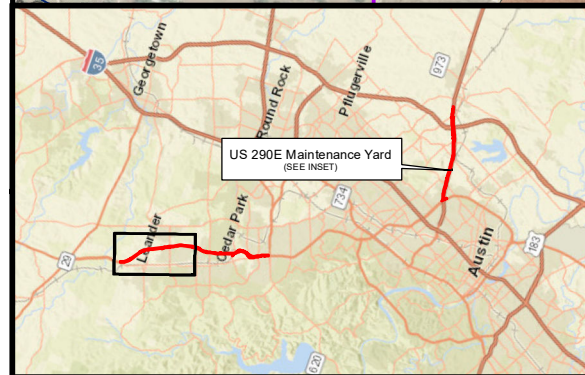
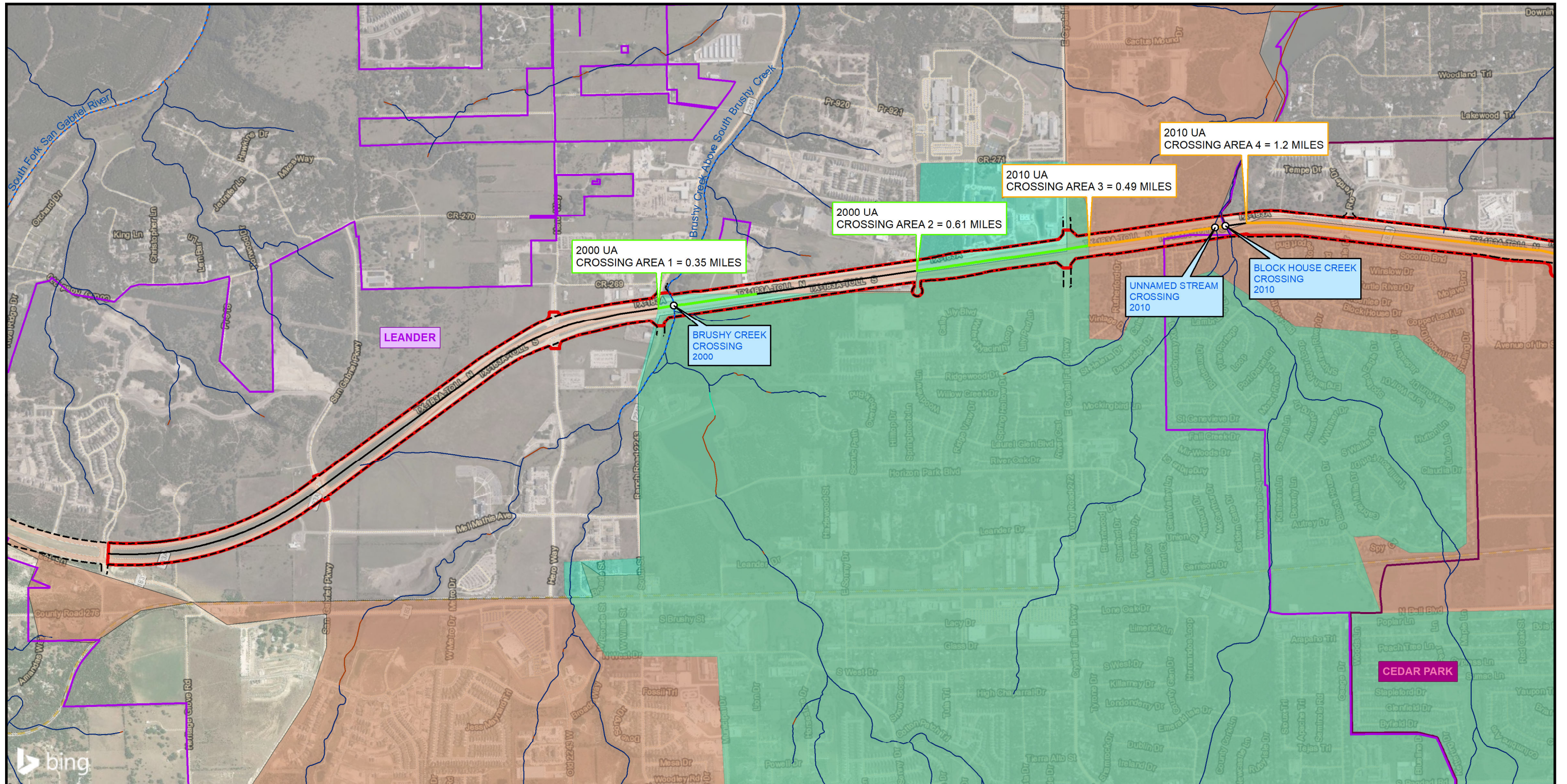
CTRMA will comply with conditions of the Permit and revise the SWMP as necessary. This includes revisions to account for changes to the MS4 area, new construction, regulatory changes, changes to BMPs, and any additional required updates. Reviews for necessary updates will occur annually at a minimum. An up-to-date copy of the approved SWMP will be made available for review on CTRMA's website.

X. Schedule of Implementation

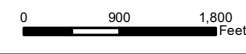
All aspects of this SWMP will be implemented by the end of the permit term.

Appendix A

SWMP Maps



Datum: NAD 1983
 Projection: State Plane
 Texas Central
 Units: Feet
 Imagery: Bing Imagery



- Water Body Crossing
- 183A Centerline Within 2000 Urban Area
- 183A Centerline Within 2010 Urban Area
- 183A Centerline
- - - ROW
- - - - TCEQ Segment (2014)

- ▭ CTRMA LOM
- ▭ Leander
- ▭ Austin
- ▭ Cedar Park
- ▭ 2010 Urban Areas
- ▭ 2000 Urban Areas

- NHD**
- Connector
 - Canal/Ditch
 - Pipeline
 - Stream/River
 - Artificial Path

Toll 183A Phase I and II
 Urbanized Areas Pertaining to
 MS4 Regulation
 Sheet 1 of 2

Prepared By: Atkins/WHIT6392
 Date: Jul 18, 2019

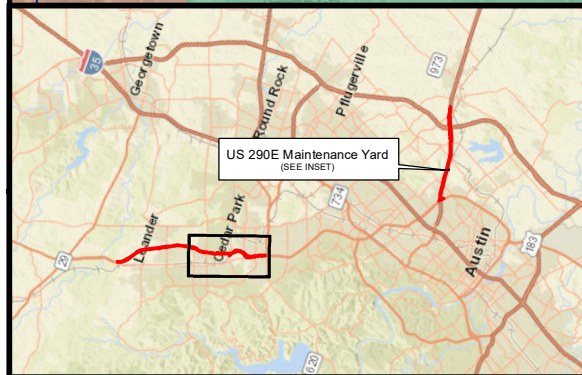
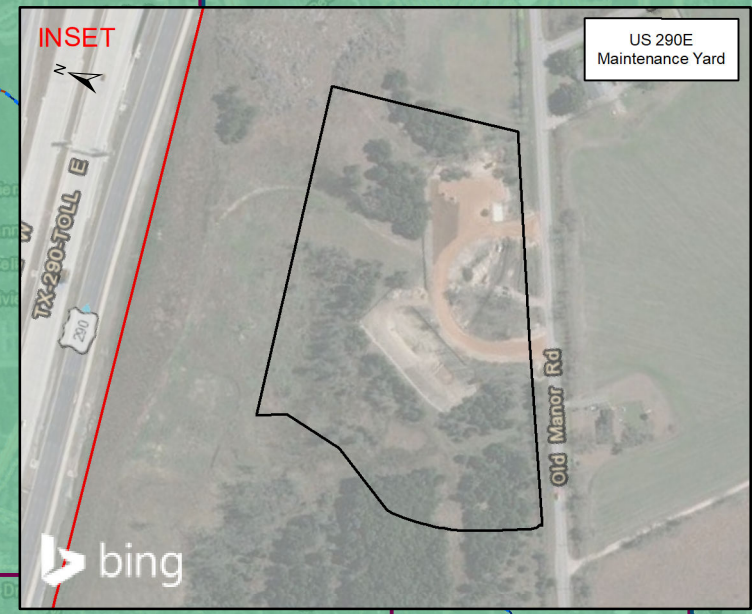
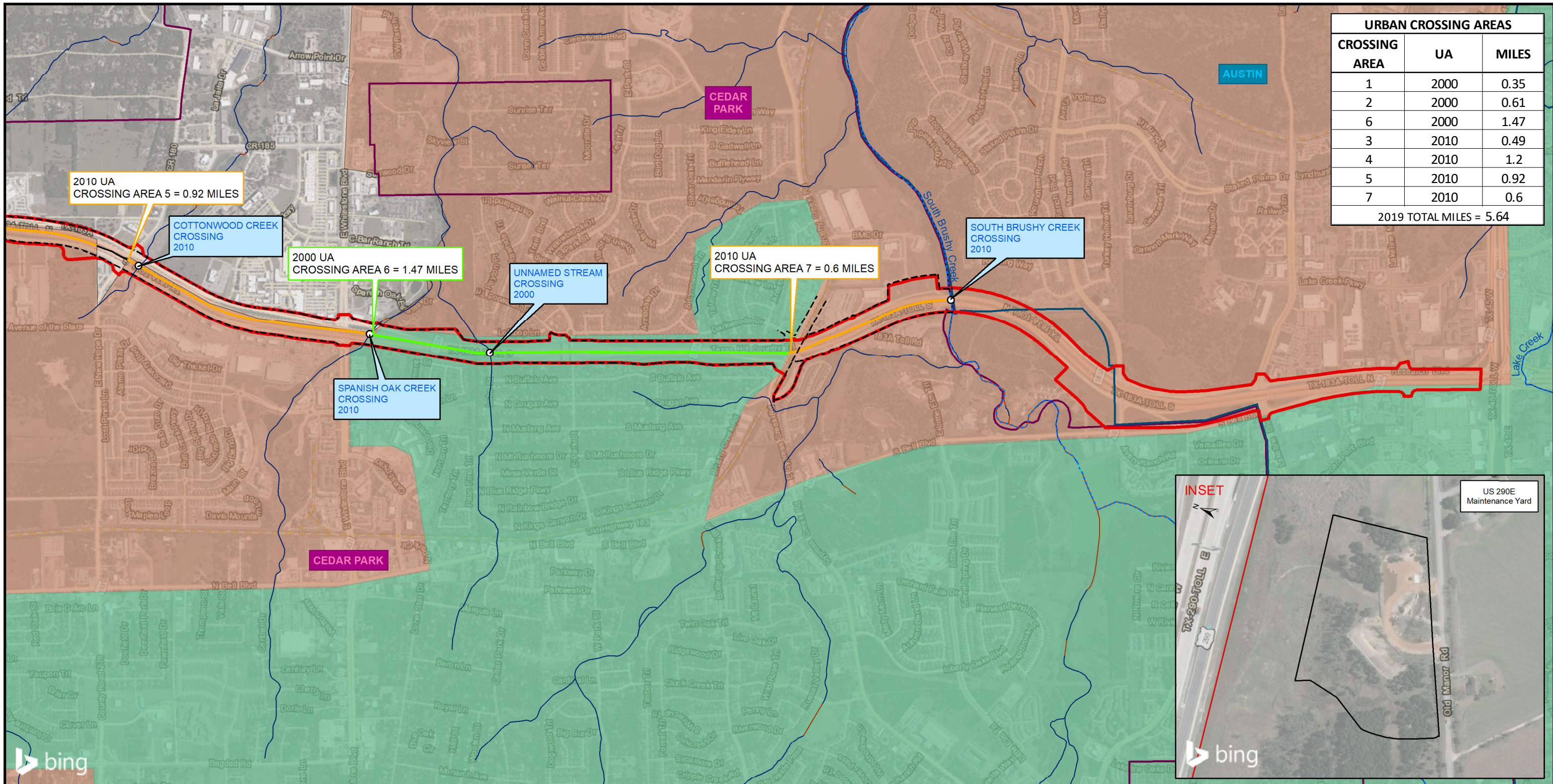
ATKINS
Member of the SNC-Lavalin Group

Scale: 1" = 1,800 feet

Date: Jul 18, 2019

Microsoft Corporation, Earthstar Geographics LLC, GeoEye, Harris Corporation, NASA, and DigitalGlobe. Bing Maps Aerial. 2013. 1:5,000 generated by Atkins, using ArcMap. < http://www.bing.com/maps> (18 July 2019)

URBAN CROSSING AREAS		
CROSSING AREA	UA	MILES
1	2000	0.35
2	2000	0.61
6	2000	1.47
3	2010	0.49
4	2010	1.2
5	2010	0.92
7	2010	0.6
2019 TOTAL MILES = 5.64		



Datum: NAD 1983
Projection: State Plane
Texas Central
Units: Feet
Imagery: Bing Imagery

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Toll 183A Phase I and II
Urbanized Areas Pertaining to
MS4 Regulation
Sheet 2 of 2

Prepared By: Atkins/WHIT6392

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