

Texas Department of Transportation Stormwater Management Program



Municipal Separate Storm Sewer System (MS4) Permit Number WQ0005011000

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Texas Department of Transportation Municipal Separate Storm Sewer System Stormwater Management Program

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ACRONYMS

AE – Area Engineer
AOTS – Advanced Outfall Tracking System
AP&D – Advanced Planning and Development (referred to in Attachment H)
BMP – Best Management Practice
BPT – Best Practicable Control Technology
CDA – Comprehensive Development Agreement
CGP – Construction General Permit
CSN – Construction Site Notice
CWA - Clean Water Act
CZ – Contributing Zone
CZP - Contributing Zone Abatement Plan
DEQC – District Environmental Quality Control
DWR – (referred to in Attachment H)
EA – Environmental Assessment
EMS – Environmental Management System
ENV – TxDOT Environmental Affairs Division
EPIC – Environmental Permits, Issues and Commitments Sheet
FHWA – Federal Highway Administration
GI – Green Infrastructure
GPS – Global Positioning System
IDDE – Illicit Discharge Detection and Elimination
I-Plan- Implementation Plans
IWB – Impaired Water Body
LID – Low Impact Development
LPST – Leaking Petroleum Storage Tanks
MCM – Minimum Control Measures
MEP – Maximum Extent Practicable
MOU – Memorandum of Understanding
MS4 – Municipal Separate Storm Sewer System
NEPA – National Environmental Policy Act
NOC – Notice of Change
NOI – Notice of Intent

NOT – Notice of Termination
OCC – TxDOT Occupational Safety Division
O&M – Operation and Maintenance
PFC – Permeable Friction Course
POC – Pollutant of Concern
PS&E – Plans, Specifications and Estimates
PSA – Public Service Announcement
RAP – Reclaimed Asphalt Pavement
ROW – Right-of-Way
RP – Responsible Party
RZ – Recharge Zone
SPCC – Spill Prevention Control and Countermeasure
SWAT - Stormwater Advisory Team
SWMP – Stormwater Management Program
SWP3 – Stormwater Pollution Prevention Plan
TAC - Texas Administrative Code
TBD - To be determined
TCEQ – Texas Commission of Environmental Quality
TDA – Texas Department of Agriculture
TIP – Transportation Improvement Program
TMDL – Total Maximum Daily Load
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

INTRODUCTION

The Texas Department of Transportation (TxDOT) has developed this Stormwater Management Program (SWMP) in accordance with the requirements of the Texas Commission on Environmental Quality (TCEQ), Texas Pollutant Discharge Elimination System (TPDES) Municipal Separate Storm Sewer System (MS4) permit WQ0005011000. 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).

This document presents TxDOT's SWMP for TPDES Permit No. WQ0005011000 for the following 22 TxDOT districts:

District 1 – Paris	District 2 – Fort Worth	District 3 – Wichita Falls
District 4 – Amarillo	District 5 – Lubbock	District 6 - Odessa
District 7 – San Angelo	District 8 – Abilene	District 9 – Waco*
District 10 – Tyler	District 12 – Houston	District 13 – Yoakum
District 14 –Austin	District 15 – San Antonio	District16– Corpus Christi
District 17 – Bryan	District 18 – Dallas	District 19 – Atlanta
District 20 – Beaumont	District 21 – Pharr	District 22 – Laredo
District 24 – El Paso		

*A small portion of the Killeen UA extends into Lampasas in the Brownwood District. The Waco District will implement and report BMP activities for this part of the MS4.

It is the intent of TxDOT to develop and implement a comprehensive SWMP that establishes measurable goals, oversight, and enforcement, to comply with Permit No. WQ0005011000. As vital components to achieving and maintaining compliance, TxDOT has established the following:

- A Division of Environmental Affairs to oversee and coordinate all environmental policy and related issues, including water quality;
- A multi-disciplinary MS4 Stormwater Advisory Team (SWAT). The MS4-SWAT represents various divisions and districts within TxDOT who have been given the task of coordinating, reviewing, and developing guidelines and policies related to stormwater management, including the TPDES requirements;
- A "Memorandum of Understanding" (MOU) with TCEQ (see Attachment A). The MOU with TCEQ has been entered into with TxDOT outlining, among other things, a coordination procedure allowing for the TCEQ to review and comment on TxDOT's environmental assessments prepared for roadway projects early in the project development stages;
- An extensive research project with the University of Texas Center for Transportation Research. The research was performed to specifically study highway runoff and the effectiveness of certain control measures. This research showed grassy swales to be effective at reducing runoff volumes and pollutant concentrations;

- Environmental Management System (EMS). TxDOT's EMS program ensures compliance with environmental requirements related to road construction. Through the EMS program, TxDOT strives to increase environmental protection, reduce potential violations, improve relationships and interaction with regulatory agencies and the public, and minimize risk to project budgets and schedules that may result from potential environmental non-compliance. The EMS Team Leaders consist of knowledgeable and experienced personnel who work closely with District staff to ensure regulatory compliance; and,
- TxDOT's "Don't Mess with Texas" campaign and "Adopt-a-Highway" program. These programs educate the public on how to keep pollutants from our water, and provide opportunities for groups and/or individuals to participate in keeping our waters clean.

PURPOSE OF THE SWMP

This SWMP includes the statewide and district-specific pollution prevention measures, treatment or pollutant removal techniques, stormwater monitoring, use of legal authority, and other appropriate means to control the quality of stormwater discharged from the TxDOT MS4 to the Maximum Extent Practicable (MEP). These program requirements are presented as specified in TxDOT's TPDES Permit, while presenting supplemental information to further define TxDOT's program. The program incorporates measurable goals, whenever practicable, and includes controls necessary to effectively prohibit the discharge of non-stormwater into the MS4. The SWMP covers the term of the permit and is updated as necessary to ensure compliance.

This document is the required SWMP for areas of the state subject to TPDES MS4 regulations: the TxDOT right-of-way (ROW) within the urbanized areas established by the 2000 and 2010 U.S. EPA Phase II Urbanized Area maps, and TxDOT's MS4 located in Phase I areas based on the 1990 U.S. Bureau of Census - hereafter referred to as "TxDOT's regulated area". The SWMP includes 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. The Environmental Affairs Division will evaluate the need for revision of the SWMP at least annually. 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 TxDOT to submit a notice of change (NOC) to TCEQ.

1.0 MCM 1 - PUBLIC EDUCATION, OUTREACH, AND INVOLVEMENT

1.1 Permit Requirements

(a) Public Education and Outreach

- (1) *The permittee shall continue to develop, implement, and maintain a comprehensive stormwater education and outreach program to educate employees, contractors, and the traveling public of hazards associated with illegal discharges, improper disposal of waste, floatables, toxic materials, used oil, disposal and management of pesticides, herbicides and fertilizers and about the impact that stormwater discharges can have on local waterways, as well as the steps that the traveling public can take to reduce pollutants in stormwater.*

The permittee shall assess program elements that were described in the previous permits, 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 and all elements in newly regulated Phase II MS4 areas must be 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 trash and debris discharges from the MS4, promoting previous public campaigns used in the MS4, or increasing the numbers of illicit discharge reporting). The permittee shall document activities conducted and materials used to fulfill this control measure, if applicable. Documentation must be detailed enough to demonstrate the amount of resources used to address each group. This documentation must be included in the annual reports required in this permit;*
 - 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; and*
 - d. Determine cost effective and practical methods and procedures to meet the above goals and objectives.*
- (2) *Throughout the permit term, the permittee shall make the educational program available to convey the education message to the target audience(s) at least annually.*
- (3) *The permittee shall review and update as necessary, the statewide SWMP and MCM implementation procedures required by this permit. Any changes must be reflected in the statewide annual reports. Such written procedures must be maintained at the District's office and headquarters, as a separate documentation within the statewide SWMP and made available for inspection by the TCEQ.*

(b) *Public Involvement*

The permittee shall involve the public in the planning and implementation activities related to developing and implementing the SWMP. At minimum, the permittee shall comply with any state and local public notice requirements.

The permittee shall assess program elements that were described in previous permits, 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 and all elements in newly regulated Phase II MS4 areas must be fully implemented by the end of this permit term. At a minimum, the permittee shall:

- (1) If feasible, consider using public input (for example, the opportunity for public comment, or public meetings) in the implementation of the program;*
- (2) If feasible, create opportunities for citizens to participate in the implementation of control measures, such as stream clean-ups, storm drain stenciling, volunteer monitoring, and educational activities; and*
- (3) Ensure the public can easily find information about the statewide SWMP.*

1.2 Program Overview

Permit No. WQ0005011000 requires that TxDOT implement a public education program to distribute educational materials to its applicable communities or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff (see 40 CFR §122.34(b)(1)). Permit No. WQ0005011000 also requires a public involvement and participation program that, at a minimum, complies with state and local public notice requirements (see 40 CFR § 122.34(b)(2)).

1.2.1 Public Education, Outreach, and Involvement

TxDOT has several programs, publications, and forums for educating and involving the public, TxDOT employees, and contractors on issues affecting stormwater quality. Elements of the program focus on general public programs (e.g., “Don’t Mess With Texas” campaign and “Adopt-a-Highway” program) and inter-agency education on environmental issues, such as proper handling and application of pesticides and fertilizers, proper handling of used oil and toxic materials, and improvement and awareness of construction and maintenance activities.

TxDOT has developed, implemented, and continues to maintain a comprehensive stormwater education and outreach program. The comprehensive program focuses on educating target audiences about the impacts that illegal discharges (i.e., third-party discharges into the TxDOT MS4 and illicit storm sewer connections) and improper disposal

of waste and litter can have on stormwater discharges. TxDOT also provides steps that target audiences can take to reduce pollutants in stormwater runoff.

There are no residences, businesses, or commercial and industrial facilities located within TxDOT's regulated area. For this MCM TxDOT will target users of our roadways.

TxDOT has determined that the following audiences are high-priority statewide targets:

- TxDOT employees;
- General traveling public; and,
- Construction site personnel.

TxDOT has implemented an educational BMP and participation/involvement BMP to target the above audiences. This includes:

(1) Educational BMP – To address improper disposal of waste, TxDOT continues to develop and promote the “Don’t Mess with Texas” campaign. The “Don’t Mess with Texas” campaign is a nationally recognized, award-winning public education/outreach program. Its message is very effective and highly recognizable statewide and the campaign itself has received considerable recognition, both nationally and internationally, as an excellent example of public education/outreach. TxDOT has begun the “Don’t Mess With Texas Water” campaign, developed under the Texas Legislature (82(r) HB 451) <http://www.legis.state.tx.us/tlodocs/82R/billtext/html/HB00451F.HTM>. This program is implemented through an MOU between TCEQ and TxDOT (Attachment A).

(2) Outreach and Involvement BMP – To encourage public participation/involvement in minimizing improper waste disposal, TxDOT will continue to develop and sponsor the “Adopt-a-Highway” program. Individuals and/or groups are encouraged to volunteer for litter collection activities at designated “Adopt-a-Highway” segments. During past permit terms, this program has proven to be highly successful in generating new volunteers and providing cleaner roadway segments. TxDOT provides “Adopt-a-Highway” groups with stormwater related educational materials and the equipment and supplies necessary to clean their adopted segments. In addition, TxDOT places roadway signs advertising the “Adopt-a-Highway” entity responsible for cleaning the subject segment. TxDOT maintains a list of current “Adopt-a-Highway” individuals/groups.

TxDOT utilizes public input (for example, the opportunity for public comment or public meetings) in the implementation of the MS4 program through the Transportation Improvement Program (TIP) or Statewide Transportation Improvement Program (STIP). If a public meeting is held, a citizen advisory committee is formed, or a similar public function is established to allow the public an opportunity to participate in transportation development and the associated SWMP implementation. TxDOT will comply with all applicable state and local public notice requirements for the activity.

TxDOT has created opportunities for citizens to participate in the implementation of control measures through the “Adopt-a-Highway” program.

TxDOT keeps a copy of the Statewide SWMP at the ENV Division in Austin and at each District office for the public to gain access. An electronic copy of the SWMP is posted on TxDOT's ENV website.

The educational, participation, and involvement BMP activities and materials utilized to fulfill this control measure will be documented. Records of these activities will be summarized in the annual reports and will describe the message of the educational campaign, the program's success summary (e.g., reduction of trash, miles of "Adopt-a-Highway" program), and the events or methods used to provide the information to the target audience. Included in each BMP is a description of the records that will be maintained and included in the annual reports.

1.3 Best Management Practices and Measurable Goals

1.3.1 Don't Mess with Texas Program

TxDOT will continue to develop and implement the "Don't Mess with Texas" campaign. TxDOT will utilize public service announcements (PSAs) to get the department's anti-littering message to the public. To promote airtime, TxDOT will distribute ready-to-use ads to local TV or radio stations.

The "Don't Mess with Texas" campaign increases public awareness that cigarette butts not only create litter but also contribute to wildfires by promoting its "Texas is Not Your Ashtray" message with statewide advertising that includes social media messaging, banner ads on websites, and outdoor billboards.

TxDOT programs such as "Don't Mess with Texas" are successful contributors to litter abatement. This program promotes, publicizes, and helps facilitate the public to be involved and to report to TxDOT the presence of improper disposal of materials along the highway and into the MS4 area.

TxDOT will report the assortment of advertisements and outreach efforts from the DMWT program, such as the number and cost of permit year advertisements aired on radio and television, outreach efforts through social media, banner ads, and outdoor billboards.

1.3.2 Adopt a Highway Program

TxDOT will typically assign local volunteer groups to pick up litter along a designated segment of highway as part of the "Adopt-a-Highway" program. Under this program, groups sign up to adopt a two mile length of highway and make sure that litter is periodically picked up from the ROW along the highway.

TxDOT will report the number of permit year volunteer groups and highway miles adopted, and provide an estimate of the volume of trash and debris collected and disposed of.

1.3.3 Texas Trash-Off Program

The “Texas Trash-Off” is an annual TxDOT event encouraging people across the state to join forces to clean up the millions of pieces of litter that accumulate on Texas roadways each year.

Trash-Off is the single largest one-day cleanup event in the state and is Texas’s signature event for the Great American Cleanup, the nation’s largest community improvement program. This BMP has, in the past, saved approximately \$3 million in pick-up costs throughout the state.

TxDOT will include in its annual report a copy of the latest Trash-Off Planner, the statewide number of volunteers participating, the roadway miles cleared of litter and debris, and the pounds of trash collected.

1.3.4 Texas Highways Magazine

Texas Highways magazine is published monthly by TxDOT’s Travel Information Division. Texas Highways, the official travel magazine of Texas, encourages proper use of TxDOT roads and presents ways to reduce littering while traveling state roadways. In addition to the published magazines, electronic magazines are sent monthly by email to electronic subscribers. This magazine reaches more than 300,000 subscribers and promotes environmental stewardship through highlighting Texas’ natural beauty.

TxDOT will report the number of permit year magazines distributed including, as available, the number of electronic copies distributed.

1.3.5 TxDOT’s Webpages

TxDOT’s webpage (<https://www.txdot.gov/>) has an environmental section with information on environmental resources and a link to the “Don’t Mess with Texas” litter prevention campaign webpage, (<http://www.dontmesswithtexas.org>). The website is designed to promote, publicize, and facilitate the public to be involved and to report to TxDOT the presence of improper disposal of materials by participating in the listed programs. The website also contains a section for reporting a litterer.

TxDOT’s Environmental Affairs webpage (<http://www.txdot.gov/inside-txdot/division/environmental.html>) has information on environmental resources and a link to the stormwater program at: <https://www.txdot.gov/inside-txdot/division/environmental/stormwater.html>. The website is designed to educate the public about impacts from illicit discharge and improper disposal of materials to stormwater. The website also contains information on actions to take to eliminate pollutants into water sources from stormwater runoff.

TxDOT will report the number of permit year views on each of the four websites listed above.

1.3.6 Education of Construction Site Personnel

TxDOT provides education for both TxDOT and contractor employees involved in road construction through mandated training based on job role. All employees involved in earth disturbing road construction activities will review environmental videos as defined in TxDOT Specification SP506-003 (See Attachment B) and the EMS Training Matrix (see Attachment B). Stormwater and EMS posters provide training to employees and the traveling public.

TxDOT requires a preconstruction meeting for projects that include the CGP NOI to review an environmental agenda. The review of the requirements provides awareness and ensures understanding of environmental needs and permit requirements for each project.

TxDOT will report the number of permit year TxDOT and contractor employees that received training. These numbers will be provided statewide, not only for the MS4 regulated area, since TxDOT and contractor employees may work in multiple locations both inside and outside the MS4 area.

1.3.7 Education of Herbicide Application Personnel

All TxDOT employees that work in TxDOT's regulated area, including maintenance yards, are trained in the proper use of materials that may impact stormwater quality. Training includes material handling and proper disposal for general tasks such as roadway repairs or vehicle maintenance. Specific activities such as pesticide application are performed by personnel certified to perform that activity safely.

TxDOT will report the number permit year employees that received herbicide application training.

1.4 BMP Implementation Schedule, Activity, and Measurable Goals

Table 1.1

PUBLIC EDUCATION, OUTREACH, AND INVOLVEMENT				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
Annually/Aug	1.3.1-"Don't Mess with Texas" Program	Contact local TV and/or radio stations and provide them with TxDOT developed "Don't Mess With Texas" PSAs. Use social media, banner ads, and outdoor advertising.	The cost and number of TV or radio stations ads, social media cost and views, banner ads, outdoor events hosted with cost, and billboards with cost, .	DMWT ENV
Annually/Aug	1.3.2-"Adopt-a-Highway" Program	Remove litter and other solid waste from the TxDOT roadway and/or the adjacent TxDOT MS4 through "Adopt-a-Highway" events.	Report the number of volunteers, how many miles of MS4 were adopted, and volume of materials removed. Report Compass Code 525.	DMWT District ENV
Annually/Aug	1.3.3-"Texas Trash-Off" Program	Annual One Day cleanup event statewide.	Report the number of volunteers, events, roadway miles cleared, and the pounds of trash collected. Provide Trash-Off Planner.	Travel Information Division
Annually/Aug	1.3.4-"Texas Highways Magazine"	Litter prevention and proper use of TxDOT roadways.	The number of printed and electronic copies distributed.	Travel Information Division
Annually/Aug	1.3.5- TxDOT's Webpages	Update web pages with new information.	Number of views from these web pages.	DMWT ENV
Annually/Aug	1.3.6-Education of Construction Site Personnel	Training classes (see Attachment B - List of training classes) and/or Posters	Record number of participants as well as document number of posters when provided for the permit year.	District ENV
Annually/Aug	1.3.7-Education of Herbicide Application Personnel	Training classes (see Attachment B - List of training classes)	Record number of participants for the permit year.	District ENV

2.0 MCM 2 – ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

2.1 Permit Requirements

(a) Program Development

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

The permittee shall assess program elements that were described in previous permits, 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 and all elements in newly regulated Phase II MS4 areas must be fully implemented by the end of this permit term. See also Part III.A.1(g).

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

- a. Up-to-date MS4 area maps (See Part III.B.2(c));*
 - b. Methods for informing and training MS4 field staff (See Part III.B.2.(d));*
 - c. Procedures for tracing the source of an illicit discharge (See Part III. B.2.(g)(2);*
 - d. Procedures for removing the source of the illicit discharge (See Part III.B.2.(g)(3);*
 - e. Procedures for conducting inspections (See Part III.B.2.(h)); and*
 - f. Procedures to prevent and correct any leaking on-site sewage disposal systems that discharge into the MS4.*
- (2) 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 MS4, then the permittee shall follow the requirements specified in Part III.B.2.(e).*
 - (4) The permittee shall review and update as necessary, the statewide SWMP and MCM implementation procedures required by Part III.A.2. Any changes must be reflected in the statewide annual reports. Such written procedures must be maintained at the district office and 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 MS4s.

(c) *MS4 areas mapping*

The permittee shall maintain an up-to-date MS4 area 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:

- (1) The location of all MS4 outfalls that are operated by the permittee and that discharge into waters of the U.S.; and*
- (2) The location and name of all surface waters receiving discharges from all the MS4 outfalls.*

(d) *Education and Training*

The 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 MS4 as part of their normal job responsibilities. Training program documentation and attendance lists must be maintained at the permittee's headquarters and at the District's office and made available for review by the TCEQ.

(e) *Public Reporting of Illicit Discharges and Spills*

To the extent feasible, the permittee shall publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from the MS4. The permittee shall provide a central contact point to receive reports; for example, by including a sign on the highway or rest stop area with a telephone number for complaints and spill reporting.

- (f) *The permittee shall continue and improve as necessary existing programs which prevent, contain, and respond to spills that may discharge into the MS4. The spill response program may include a combination of spill response actions by the permittee (and/or another public or private entity), and legal requirements for private entities within the jurisdiction of the permittee. The permittee shall maintain illicit discharge and spill response procedures on site or in the SWMP.*

(g) *Source Investigation and Elimination*

- (1) Minimum Investigation Requirements – Upon becoming aware of an illicit discharge, the permittee shall conduct an investigation to identify and locate the source of such illicit discharge as soon as practicable.*
 - a. The permittee shall prioritize the investigation of discharges based on their relative risk of pollution. For example, sanitary sewage may be considered a high priority discharge. Similarly, priority areas, likely to have illicit discharges, should be considered a high priority for investigation. (See item B.2.(i)(4) below).*

- b. The permittee 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.*
 - c. The permittee 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.*
- (2) Identification and Investigation of the Source of the Illicit Discharge – The permittee shall investigate and document the source of illicit discharges where the permittee has jurisdiction to complete such an investigation. If the source of illicit discharge extends outside the permittee's boundary, the permittee shall notify the adjacent permitted MS4 operators or the TCEQ Program Support Section according to Part III.A.3.b.*
- (3) Corrective Action to Eliminate Illicit Discharge - If and when the source of the illicit discharge has been determined, the permittee shall immediately notify the responsible party of the problem, and shall require, to the MEP, the responsible party to perform all necessary corrective actions to eliminate the illicit discharge. If it is not feasible for the permittee to enforce the incident, the permittee shall notify an adjacent MS4 operator with enforcement authority or TCEQ Program Support Section according to Part III.A.3.*

(h) Inspections

The permittee shall conduct inspections, as determined appropriate, in response to complaints, and shall conduct follow-up inspections as needed to ensure that corrective measures have been implemented by the responsible party.

(i) Additional Requirements for Previous Phase I Permitted Areas

In addition to all the requirements described above, the permittee shall meet the following requirements in areas that previously were permitted under a Phase I permit.

- (1) Overflows and Infiltration – The permittee shall implement controls, where necessary and feasible, to address dry weather and wet weather overflows from sanitary sewers into the MS4s. The permittee shall limit the seepage from municipal sanitary sewers into the MS4s to the MEP.*
- (2) List of discharges - The permittee shall maintain, and update as necessary, a list of discharges to the MS4 that have been issued an NPDES or a TPDES permit. The list shall include the name, location and permit number of the discharger.*
- (3) Hazardous Waste and Used Motor Vehicle Fluids*
 - a. The permittee shall prohibit the discharge or disposal of used motor vehicle fluids, hazardous wastes, and the intentional disposal of collected quantities of grass clippings, leaf litter, and animal wastes into the MS4s.*
 - b. The permittee shall ensure the implementation of programs to collect used motor vehicle fluids (including, at a minimum, oil and antifreeze) and*

hazardous waste materials (including paint, solvents, pesticides, herbicides, and other hazardous materials) for recycling, reuse, or proper disposal. Such programs must be readily available to the permittee's contractors and to the permittee's employees and shall be publicized and promoted on a regular basis.

(4) Identification of Priority Areas – The permittee 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 list must be available for review by the TCEQ.

(5) Alternate Stormwater Assessment Program for Previous Phase I Permitted Areas

1) Alternate Dry Weather Screening Program – The permittee shall continue to screen and detect the presence of illicit connections and improper discharges from adjacent MS4s and illegal third parties discharges to the permittee's MS4. All areas that were permitted under the Phase I MS4 program (See Part II.A) must continue to be screened as specified in the statewide SWMP at least once during the permit term.

2) Alternate Wet Weather Program – In previous Phase I permitted areas where the permittee was responsible for outfall or watershed monitoring under the Wet Weather Characterization program, the permittee shall continue to evaluate the watershed using existing stormwater characterization data collected by reliable sources such as TCEQ, local river authorities, partnerships, and/or other local efforts as appropriate. The analysis and interpretation of this data shall be submitted to TCEQ in the year 4 annual report. Previous Phase I areas under this requirement include: TxDOT Beaumont (WQ0004644000), City of San Antonio (WQ0004284000), TxDOT Austin (WQ0004645000), City of Houston (WQ0004685000), TxDOT Houston District (Pasadena) (WQ0004520000), City of Fort Worth (WQ0004350000), City of Arlington (WQ0004635000), and City of Dallas (WQ0004521000).

(j) Additional Requirements for Previous TxDOT – Austin District Phase I Permit (WQ0004645000)

In addition to all the requirements described above, the permittee shall meet the following requirements in specific areas that previously were permitted under the TxDOT Austin-District Phase I permit.

Spill Prevention and Response – the permittee shall continue to implement and improve, as necessary, programs that prevent, contain, and respond to spills that may discharge into the MS4. When cleanup of a ROW spill is necessary to prevent loss of life, personal injury, or severe property damage, the permittee shall ensure the parties responsible for the spill take all reasonable steps to minimize or prevent any adverse effects to human health or the environment. The spill response programs may include a combination of spill response actions by the permittee (and/or another public entity), and legal requirements for private entities within the jurisdiction of the permittee.

The permittee shall address spills that originate from an adjacent MS4 by notifying the appropriate local MS4 entity within a reasonable time. If the permittee does not agree with the corrective measure(s) or the time schedule proposed by the adjacent MS4, the permittee shall refer the case to the TCEQ for further action and or enforcement.

During emergency spill response, the permittee shall provide support to the lead agency – Department of Public Safety, TCEQ, or local official during the containment and cleanup.

(1) The permittee shall continue to coordinate with the U.S. Fish & Wildlife Service to determine areas of concern for endangered karst invertebrates, submit a discussion of which, if any, existing and needed structures have been identified as potential projects to prevent spills from entering the aquifer, and report any coordination of projects identified with the U.S. Fish & Wildlife Service in the annual report.

If requested by the local jurisdiction, the permittee shall install hazardous material route signs on hazardous material routes that, by the local jurisdiction's Fire Chief and/or Local Emergency Planning Committee, are defined and established within the specific areas that previously were permitted under the TxDOT Austin-District Phase I permit area. The posting of hazardous material route signs shall be done according to the permittee's highway sign policies within the required areas of the permittee's ROW.

2.2 Program Overview

TxDOT is required to develop, implement, and enforce a program to detect and eliminate illicit discharges into the MS4 (see 40 CFR §122.34(b)(3)). Through its IDDE MCM TxDOT is required to respond to complaints about illicit discharges or spills and to actively seek out illicit discharges and behaviors that could result in illicit discharges such as illegal connection to its MS4, improper disposal of wastes, or dumping of trash, oil, and/or other chemicals. Permit No. WQ0005011000 requires TxDOT to have an up-to-date MS4 map. Previously permitted Phase I areas are required to identify areas with a high risk for illicit discharges, and these areas will be prioritized for more frequent investigations. The CWA § 402(p)(3)(B)(ii), requires that TxDOT "effectively prohibit non-stormwater discharges into the storm sewers." Permit No. WQ0005011000 provides implementation of this requirement, in part by requiring the development of procedures to investigate and eliminate illicit discharges, and methods for informing or training TxDOT staff and contractors who may come into contact or observe illicit discharges, on the identification and proper procedures for reporting illicit discharges. Permit No. WQ0005011000 requires TxDOT to develop and implement a dry weather screening program in its previously permitted Phase I areas.

2.2.1 Program Development

- a) TxDOT will continue to develop, implement and enforce a program to detect, investigate, and eliminate illicit discharges into the MS4. The program includes a plan to detect and address non-stormwater discharges, including illegal dumping to the MS4 system.

TxDOT will assess IDDE program elements that were described in previous permits, 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 and all elements in newly regulated Phase II MS4 areas will be fully implemented by the end of this permit term.

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

- 1) Up-to-date MS4 area maps;
 - 2) Methods for informing and training MS4 field staff;
 - 3) Procedures for tracing the source of an illicit discharge;
 - 4) Procedures for removing the source of the illicit discharge;
 - 5) Procedures for conducting inspections; and,
 - 6) Procedures to prevent and correct any leaking on-site sewage disposal systems that discharge into the MS4.
- b) If illicit connections or illicit discharges are observed related to another operator's MS4, TxDOT will notify the other MS4 operator within 48 hours of discovery. If notification to the other MS4 operator is not practicable, then TxDOT will notify the appropriate TCEQ regional office (see Attachment C) of the possible illicit connection or illicit discharge.
- c) If another MS4 operator notifies TxDOT of an illegal connection or illicit discharge to the MS4, then TxDOT will follow the requirements specified in Section 2.3.8.
- d) TxDOT will review and update as necessary the SWMP and MCM implementation procedures required by Part III.A.2 of Permit No. WQ0005011000. Any changes will be reflected in the annual reports. Written procedures will be maintained at the district offices, in the SWMP, and made available for inspection by the TCEQ.

2.2.2 Allowable Non-Stormwater Discharges

This SWMP identifies categories of non-stormwater discharges that are not prohibited from being discharged into the MS4 in Attachment D, along with any necessary controls, as applicable.

2.2.3 MS4 Areas Mapping

TxDOT is required to develop and maintain a map of its MS4 which includes outfalls to WUS. An outfall is defined as a point source at the point where the TxDOT MS4 discharges to WUS and does not include open conveyances connecting two separate storm sewers (internal outfalls), or pipes, tunnels, or other conveyances that connect segments of the same stream or other waters of the U.S. and are used to convey waters of the U.S. For the purpose of this permit, sheet flow leaving the TxDOT MS4 without engineered channelization is not considered an outfall. Point sources such as curb cuts, traffic or right-of-way barriers with drainage slots that drain into open culverts, open swales or an adjacent property, or otherwise not actually discharging into waters of the U.S. are not considered an outfall.

TxDOT updates its map of outfalls to ensure that new outfalls are mapped during the permit term utilizing the Advanced Outfall Tracking System (AOTS) that maps and tracks the outfall locations with associated screening data and outfall classifications.

The AOTS utilizes a Global Positioning System (GPS) to collect outfall spatial and non-spatial data that includes the following:

- The location in latitude and longitude of MS4 outfalls that are operated by TxDOT and that discharge into WUS;
- The location and name of all surface waters receiving discharges from TxDOT MS4 outfalls as well as the impairment classification of each surface water;
- The outfall physical properties and the surrounding areas (including debris, staining, flow, color, etc.); and,
- The analytical results for potential or suspect illicit discharge outfalls.

2.2.4 Education and Training

TxDOT does not have MS4-specific field staff. Field staff consists of multi-disciplinary personnel assigned by the district engineer, and responsibilities range from maintenance to engineering. Staff perform several tasks (for example, construction inspection, emergency response, and environmental processes) during normal job responsibilities.

Personnel who perform MS4 operations are provided with training that contains information on identifying illicit discharge, preventing, and reducing potential stormwater pollution from the TxDOT MS4. Attachment B lists the applicable training classes; the list presented in Attachment B may change due to updates, new training module development, and/or removal of outdated materials.

2.2.5 Public Reporting of Illicit Discharges and Spills

Educating the public and training TxDOT personnel provides a proactive approach to the stormwater program. TxDOT is committed to establishing a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from the MS4 and has recently begun the *"Don't Mess With Texas Water"* program:

- The program was developed under Texas Legislature (82(r) HB 451) <http://www.legis.state.tx.us/tlodocs/82R/billtext/html/HB00451F.HTM>;
- The “Don’t Mess With Texas Water” program consists of billboards placed in sensitive watershed areas that will include a phone number for reporting illicit dumping activities; and,
- The program has been implemented through an MOU between TCEQ and TxDOT.

TxDOT also maintains a stormwater web page for reporting spills and illegal dumping, and can be found at <http://www.txdot.gov/contact-us/form.html?id=swp-email>.

2.2.6 Spill Prevention and Response

TxDOT has implemented and improved, as necessary, programs that prevent, contain, and respond to spills that may discharge into the MS4. When cleanup of a ROW spill is necessary, TxDOT will ensure the parties responsible for the spill take all reasonable steps to minimize or prevent adverse effects to human health or the environment. The spill response programs include a combination of spill response actions by TxDOT (and/or another public or private entity), and legal requirements for private entities within the jurisdiction of TxDOT.

TxDOT's role in emergency spill response is to provide support to the lead agency—Department of Public Safety (DPS), TCEQ, or local official during the containment and cleanup. For more information about TxDOT's hazardous material cleanup policy, refer to TxDOT's *Occupational Safety Manual*, Chapter 5, Section 6.

Most spills are a result of a traffic incident, and usually, TxDOT is called to the scene by law enforcement. Safety of TxDOT personnel and the motoring public is priority. Department personnel are specifically prohibited from handling, cleaning up or otherwise coming in contact with toxic or hazardous materials at accident scenes or abandonment sites on the department's ROW. Vehicle fluid cleanup of less than 25 gallons is the only exception to handling or cleaning up hazardous materials at accident scenes or abandonment sites.

The plan below outlines the responsibilities of each agency involved in an emergency spill response. They are also included in TxDOT's Maintenance Operations Manual.

Agency	Responsibilities
TxDOT staff*	<ul style="list-style-type: none"> • Restricts public access • Provides traffic control at the site until relieved by DPS or other on-site coordinator • Report all pertinent information to supervisor • Supervisor reports information to district hazardous material coordinator • District engineer/hazardous materials coordinator notifies appropriate governmental agencies, such as TCEQ, DPS, and the local fire department
DPS	<ul style="list-style-type: none"> • Performs the on-site coordination of transportation emergencies for all unincorporated areas
Local official	<ul style="list-style-type: none"> • Performs on-site coordination of transportation emergencies for all incorporated areas
TCEQ	<ul style="list-style-type: none"> • Acts as lead state agency for spill response

*Note: TxDOT personnel will not intentionally handle, clean up, or otherwise come in contact with toxic or hazardous materials at accident sites.

Spill Response Preparation

As per TxDOT's Maintenance Operations Manual, TxDOT maintenance office supervisors are responsible for:

- Ensuring state vehicles have a copy of the USDOT Emergency Response Guidebook;
- Maintaining updated emergency notification list, including telephone numbers for DPS, local law enforcement, fire department, district hazardous materials coordinator, and the TCEQ; and,
- Instructing employees to remain clear of accident areas contaminated with known or suspected toxic or hazardous materials.

TxDOT's Emergency Response Standard Operating Procedure No. 15-04, which requires, among other things, that the ROW and MS4 be fully restored to its pre-existing condition. This normally includes repairing the infrastructure, replacing removed soil with clean acceptable fill, re-establishing the drainage system, and re-sodding the impacted area. In periods of dry weather, the contractor may be required to water the sod up to five weeks in order to establish the root system.

2.2.7 Source Investigation and Elimination

Data collected during several permit terms supports the conclusion that the majority of illicit discharges to TxDOT's MS4 come from adjacent third-party MS4s. Given this information, TxDOT can better protect the quality of its MS4 by providing increased inspection of third-party outfalls within our ROW. Thus, TxDOT's program to locate and eliminate illicit discharges and improper disposal to the MS4 will focus on third-party

outfalls. The program includes visual inspection (visual screening) to locate portions of the MS4 with suspected illicit discharges and improper disposal, along with the results of field test kits and laboratory analytical verification when warranted.

Outfalls with the potential to contribute high levels of pollutants to the MS4 (based on previous screening results, complaints, land use of others' adjacent MS4, physical evidence, or other factors) and in accordance with the procedures specified in Section 2.3.7 of this SWMP are screened. Follow-up activities to eliminate illicit discharges and improper disposal may be prioritized based on the magnitude and nature of the suspected discharge, sensitivity of the receiving water, or other relevant factors.

TxDOT requires the elimination of illicit discharges and improper disposal practices within the regulated area as expeditiously as possible. If the responsible party (RP) is identified, TxDOT will notify the RP that a proposed plan of action must be submitted to TxDOT within a reasonable amount of time depending on the situation (usually two weeks). In the interim, TxDOT requires 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, TxDOT will request an expeditious schedule for removal of the discharge.

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 TxDOT does not agree with the corrective measure(s) and/or the time schedule, TxDOT will refer the case to the TCEQ for further action and/or enforcement.

2.2.8 Inspections

TxDOT does not have the legal authority to enforce state environmental laws against third parties. TxDOT will rely completely on the TCEQ or the local municipal government for law enforcement. Upon detection of a potential illicit connection, dumping, other illegal activity, or accident spills, TxDOT will investigate on-site and within the state ROW and then report the problem as appropriate.

2.2.9 Additional Requirements for Previous Phase I Permitted Areas

In addition to all the requirements described above, TxDOT will meet the following requirements in areas that previously were permitted under a Phase I permit.

- a) Overflows and Infiltration – TxDOT will implement controls, where necessary and feasible, to address dry weather and wet weather overflows from sanitary sewers into the MS4s. TxDOT will limit the seepage from municipal sanitary sewers into the MS4s to the MEP.
- b) List of discharges - TxDOT will maintain, and update as necessary, a list of discharges to the MS4 that have been issued an NPDES or a TPDES permit. The list will include the name, location and permit number of the discharger.

- c) Hazardous Waste and Used Motor Vehicle Fluids
 - 1) TxDOT prohibits the discharge or disposal of used motor vehicle fluids, hazardous wastes, and the intentional disposal of collected quantities of grass clippings, leaf litter, and animal wastes into the MS4s.
 - 2) TxDOT will ensure the implementation of programs to collect used motor vehicle fluids (including, at a minimum, oil and antifreeze) and hazardous waste materials (including paint, solvents, pesticides, herbicides, and other hazardous materials) for recycling, reuse, or proper disposal. Such programs will be readily available to the permittee's contractors and to the permittee's employees and will be publicized and promoted on a regular basis.
- d) Identification of Priority Areas – TxDOT will identify priority areas likely to have illicit discharges, document the basis for the selection of each priority area, and will create a list of all priority areas identified. This priority list will be available for review by the TCEQ.
- e) Alternate Stormwater Assessment Program for Previous Phase I Permitted Areas
 - 1) Alternate Dry Weather Screening Program – TxDOT will continue to screen and detect the presence of illicit connections and improper discharges from adjacent MS4s and illegal third parties discharges to the permittee's MS4. All areas that were permitted under the Phase I MS4 program (See Part II.A of Permit No. WQ0005011000) will continue to be screened as specified in the statewide SWMP at least once during the permit term.
 - 2) Alternate Wet Weather Program – In previous Phase I permitted areas where TxDOT was responsible for outfall or watershed monitoring under the Wet Weather Characterization program, TxDOT will continue to evaluate the watershed using existing stormwater characterization data collected by reliable sources such as TCEQ, local river authorities, partnerships, and/or other local efforts as appropriate. The analysis and interpretation of this data will be submitted to TCEQ in the year 4 annual report. Previous Phase I areas under this requirement include: TxDOT Beaumont (WQ0004644000), City of San Antonio (WQ0004284000), TxDOT Austin (WQ0004645000), City of Houston (WQ0004685000), TxDOT Houston District (Pasadena) (WQ0004520000), City of Fort Worth (WQ0004350000), City of Arlington (WQ0004635000), and City of Dallas (WQ0004521000).

2.2.10 Additional Requirements for Previous TxDOT – Austin District Phase I Permit (WQ0004645000)

In addition to all the requirements described above, TxDOT Austin District will meet the following requirements in specific areas that previously were permitted under the TxDOT Austin-District Phase I permit.

Spill Prevention and Response – the TxDOT Austin District will continue to implement and improve, as necessary, programs that prevent, contain, and respond to spills that may discharge into the MS4. When cleanup of a ROW spill is necessary, the TxDOT Austin District will ensure the parties responsible for the spill take all reasonable steps to minimize or prevent any adverse effects to human health or the environment. The spill response programs may include a combination of spill response actions by the TxDOT (and/or another public entity), and legal requirements for private entities within the jurisdiction of TxDOT.

The TxDOT Austin District will address spills that originate from an adjacent MS4 by notifying the appropriate local MS4 entity within a reasonable time. If the TxDOT Austin District does not agree with the corrective measure(s) or the time schedule proposed by the adjacent MS4, the TxDOT Austin District will refer the case to the TCEQ for further action and or enforcement.

During emergency spill response, the TxDOT Austin District will provide support to the lead agency – Department of Public Safety, TCEQ, or local official during the containment and cleanup.

- a) The TxDOT Austin District will continue to coordinate with the U.S. Fish & Wildlife Service to determine areas of concern for endangered karst invertebrates, submit a discussion of which, if any, existing and needed structures have been identified as potential projects to prevent spills from entering the aquifer, and report any coordination of projects identified with the U.S. Fish & Wildlife Service in the annual report.
- b) If requested by the local jurisdiction, the TxDOT Austin District will install hazardous material route signs on hazardous material routes that, by the local jurisdiction's Fire Chief and/or Local Emergency Planning Committee, are defined and established within the specific areas that previously were permitted under the TxDOT Austin-District Phase I permit area. The posting of hazardous material route signs will be done according to the TxDOT's highway sign policies within the required areas of the permittee's ROW.

2.3 Best Management Practices and Measurable Goals

TxDOT has implemented a program to locate and eliminate illicit discharges and improper disposals to the MS4. This program includes visual inspection/screening to locate portions of the MS4 with suspected illicit discharges and improper disposals, along with the results of field test kits and laboratory analytical verification when warranted. Screening points will be selected with an emphasis on those areas that may be contributing high levels of pollutants to the MS4 based on previous screening results, complaints, others' adjacent

MS4 land use, physical evidence, or other factors, and in accordance with the procedures specified in the SWMP.

2.3.1 Program Development

TxDOT will review and update as necessary, the SWMP and MCM implementation procedures required by Part III.A.2 of Permit No. WQ0005011000. Any changes will be reflected in the annual reports. Any updated written procedures to the SWMP will be forwarded to and maintained at the district offices.

2.3.2 Allowable Non-Stormwater Discharges

TxDOT will update its list of Allowable Non-Stormwater Discharges (see Attachment D), as necessary. If changes are made to the list, those changes will be included in the current reporting year annual report.

2.3.3 MS4 Areas Mapping

An information management system for data, the AOTS, was developed to compile a storm sewer outfall map that contains the elements required under the MS4 permit. AOTS is a web-based tool with a central storage database that maintains TxDOT field-collected and desktop related outfall and crossing point data. The AOTS allows for storage of data associated with field inspections, follow-up investigations, and third-party notifications. The stored outfall and crossing point GIS map, together with the corresponding attributes and inspection data is available via an Internet website. The website is broken down into a Map Viewer and Data Manager. Overall, the website provides dynamic mapping capabilities and near real-time tracking information related to TxDOT outfalls across the entire state of Texas.

The AOTS map will be updated with new and relocated outfalls on an annual or on-going basis. Updated maps will be included in the annual report to TCEQ.

TxDOT will include on the AOTS map the location and name of all surface waters receiving discharges from all the MS4 outfalls and include this in the annual report.

TxDOT maps, updates, and completes the MS4 mapping using the schedule detailed in Table 2.1 of Section 2.4 below. TxDOT will focus its screening efforts on the following:

- Issues identified during the initial screening/mapping process are followed up on an individual basis;
- Routine inspection and maintenance of ditches, outfalls, and other roadway appurtenances include an IDDE check, and noted issues will be followed up on an individual basis;
- Spills and complaints will be followed up on an individual basis; and,
- TxDOT will map the location and name of all surface waters receiving discharges from their MS4 outfalls.

2.3.4 Education and Training

Specific emphases on educating and training TxDOT personnel are important and integral aspects of the program. Many pollution problems can be avoided by having an informed population willing to participate in improving stormwater quality. TxDOT will utilize the following existing programs to meet our education and training requirements:

- Training classes to facilitate the proper management and disposal of used oil and potentially hazardous materials;
- Appropriate educational and training guidelines for TxDOT planners, highway designers, construction and maintenance personnel; and,
- Mandated EMS classes for construction and maintenance personnel and managers.

TxDOT will report the number of permit year TxDOT staff and contractor employees that received training in the annual report.

2.3.5 Public Reporting of Illicit Discharges and Spills

TxDOT will utilize the *"Don't Mess With Texas Water"* reporting system and the TxDOT Stormwater Webpage complaint page for receiving reports related to illicit discharges and spills.

TxDOT will report the number 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.

2.3.6 Spill Prevention and Response

TxDOT will respond to complaints of spills and unauthorized discharges that occur within TxDOT's regulated area. TxDOT contracts with professional HAZMAT service teams to respond to a spill in the event the RP is not willing or able to respond to the spill in a timely manner. The TxDOT Hazmat service team is contractually required to be on site within ninety (90) minutes after being informed about an incident. TxDOT tracks the number of spills occurring within the ROW, the amount of material disposed of in a properly classified landfill, and the cost of disposal and cleanup. Collisions of automobiles might result in small spills of organic liquids, but those are unlikely to have an impact on water bodies. Spills from a freight transport or fuel delivery truck, such as liquid or solid cargo, could pose a temporary adverse impact on a water body, and TxDOT responds expeditiously to accidents that result in spills of liquid or solid cargo.

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

TxDOT 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.

2.3.7 Source Investigation and Elimination

TxDOT will visually observe the MS4 regulated area during daily operations in order to identify the presence of illicit discharges and/or illicit connections, typically originating from third-party dischargers. If illicit discharges or illicit connections are identified, TxDOT has a procedure to perform the illicit discharge/connection inspection, field data collection and tracking system that will apply to observed discharges or illicit connections. Field procedures for screening are illustrated in Figure 2.1 and contained in TxDOT ENV ITEM 303 *MS4 Dry Weather Screening* (Performed only in previously permitted Phase I areas, see section 2.3.9 below), *Outfall Mapping and Illicit Discharge Detection & Elimination (IDDE) Program*, (see Attachment E). Field procedures for mapping are contained in TxDOT ENV ITEM 340 *Global Positioning System (GPS) Data Collection and Processing Procedures for MS4 Outfall Mapping*, Attachment F.

In addition to utilizing the available resources listed above, TxDOT will perform Site-Specific Monitoring when conditions warrant. Site-Specific Monitoring will occur through increased IDDE inspections and will follow specific TxDOT protocols. Existing TxDOT protocols utilize specific procedures, such as flow diagrams and associated reference tables, for IDDE inspection personnel to use in the field. Current flow diagrams and reference tables for IDDE inspections are presented with Figure 2.1 at the end of this section.

2.3.8 Inspections

In the event that a possible illicit discharge is identified, TxDOT will investigate the flow upstream to the extent of TxDOT property. TxDOT will report flows originating off state ROW to the appropriate RP or the adjacent MS4 operator within 48 hours of discharge confirmation for further action. In the event the flow appears to create a hazard or contain toxic or noxious substances, TxDOT will report the flow to the TCEQ. TxDOT has an "Interagency Cooperation Contract" between TCEQ and TxDOT that is intended to mitigate potential pollutant discharges to surface waters and to environmentally sensitive areas.

Process:

1. Notify adjacent landowner upon detection to mitigate illicit discharge and/or illicit connection;
2. If adjacent landowner does not cooperate, notify the adjacent MS4 operator within the time period established above; and/or
3. Notify TCEQ if the adjacent MS4 operator does not respond in a timely manner.

Attachment C includes TCEQ regional offices to contact should TCEQ notification be required.

TxDOT 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.

2.3.9 Additional Requirements for Previous Phase I Permitted Areas

Overflows and Infiltration – TxDOT utilizes a utility permit process with intent to regulate the location, design and methods for installation and adjustment of sanitary sewer and other utility lines on state-controlled highways.

TxDOT will report the number of utility permits issued during the reporting year in the annual report.

List of Dischargers – TxDOT will update its list of dischargers, as necessary. If changes are made to the list, those changes will be included in the current reporting year annual report.

Hazardous Waste and Used Motor Vehicle Fluids - TxDOT will indicate how it promoted, on a regular basis, the collection of hazardous waste and used motor oil to contractors and TxDOT employees during the reporting year in the annual report.

Identification of Priority Areas - TxDOT will create and update its list of Priority Areas, as necessary. If changes are made to the list, those changes will be included in the current reporting year annual report.

Dry Weather Screening Program – TxDOT will continue to screen and detect the presence of illicit connections and improper discharges from adjacent MS4s and illegal third-party discharges to the MS4. All areas that were permitted under the Phase I MS4 program will continue to be screened as specified in Section 2.2.1 at least once during the permit term. Each District that had a previously issued Phase I permit is required to continue performing dry weather inspections on outfalls within the previously permitted Phase I areas. Dry weather screening of outfalls is not required in the Phase II designated areas. Dry weather screening will typically be performed by contractors.

TxDOT will report the number dry weather inspections performed during the reporting year in the annual report.

Wet Weather Program – In previous Phase I permitted areas where TxDOT was responsible for outfall or watershed monitoring under the Wet Weather Characterization program, TxDOT will continue to evaluate the watershed using existing stormwater characterization data collected by reliable sources such as TCEQ, local river authorities, partnerships, and/or other local efforts as appropriate. Previous Phase I areas under this requirement include: TxDOT Beaumont (WQ0004644000), City of San Antonio (WQ0004284000), TxDOT Austin (WQ0004645000), City of Houston (WQ0004685000), TxDOT Houston District (Pasadena) (WQ0004520000), City of Fort Worth (WQ0004350000), City of Arlington (WQ0004635000), and City of Dallas (WQ0004521000).

TxDOT will include the Wet Weather Analysis in the year four annual report.

2.3.10 Additional Requirements for Previous TxDOT – Austin District Phase I Permit (WQ0004645000)

Spill Prevention and Response – TxDOT will continue to implement and improve, as necessary, programs that prevent, contain, and respond to spills that may discharge into the MS4. When cleanup of a ROW spill is necessary to prevent loss of life, personal injury, or severe property damage, TxDOT will ensure the parties responsible for the spill take all reasonable steps to minimize or prevent any adverse effects to human health or the environment, as specified in Section 2.3.6 above.

TxDOT will address spills that originate from an adjacent MS4 by notifying the appropriate local MS4 entity within a reasonable time, typically 48 hours. If TxDOT does not agree with the corrective measure(s) or the time schedule proposed by the adjacent MS4, the permittee will refer the case to TCEQ for further action and/or enforcement.

During emergency spill response, TxDOT will provide support to the lead agency, the Department of Public Safety, TCEQ, or other local official during the containment and cleanup.

Spill response in the Austin District is included in the annual report from Section 2.3.6 above.

Agency coordination - TxDOT will continue to coordinate with the U.S. Fish & Wildlife Service to determine areas of concern for endangered karst invertebrates, submit a discussion of which, if any, existing and needed structures have been identified as potential projects to prevent spills from entering the Edwards Aquifer, and report any coordination of projects identified with the U.S. Fish & Wildlife Service in the annual report.

If requested by the local jurisdiction, TxDOT will install hazardous material route signs on hazardous material routes that, by the local jurisdiction's Fire Chief and/or Local Emergency Planning Committee, are defined and established within the specific areas that previously were permitted under the TxDOT Austin-District Phase I permit area. The posting of hazardous material route signs will be done according to TxDOT's highway sign policies within the required areas of the ROW within the TxDOT MS4. Again, this activity will only be performed in the Austin District.

TxDOT will report any agency coordination conducted during the reporting year in the annual report.

2.4 BMP Implementation Schedule, Activity, and Measurable Goals

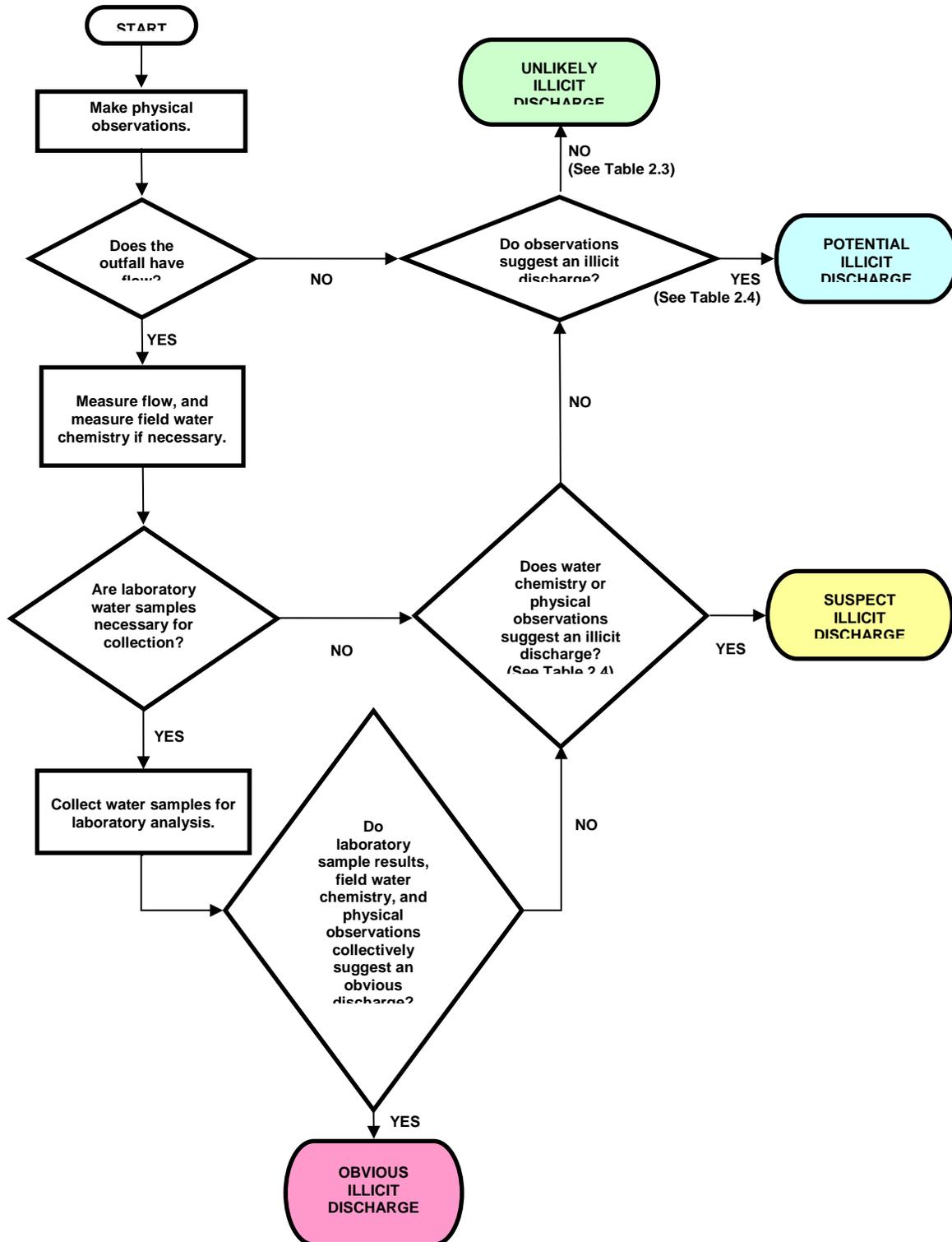
Table 2.1

ILLCIT DISCHARGE DETECTION AND ELIMINATION (IDDE)				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
Annually/Aug	2.3.1-Update SWMP and MCM Implementation	Review and update, as necessary, the SWMP and MCM implementation procedures.	Provide updated SWMP.	ENV
Annually/Aug	2.3.2-Update List of Allowable Non-Stormwater Discharges	Review and update, as necessary, the List of Allowable Non-Stormwater Discharges.	Provide updated List in SWMP.	ENV
Annually/Aug	2.3.3-MS4 Areas Mapping	Update MS4 maps to include 20 percent of new mapped outfalls, relocated outfalls, and deleted outfalls. Identify the location and name of all surface waters receiving discharges from TxDOT outfalls; perform 20 percent per year.	Provide updated map displaying surface waters receiving discharges.	ENV
Annually/Aug	2.3.4-Education and Training	Require TxDOT staff to attend training classes listed in Attachment B as applicable.	Record the number of participants for each training class. Records will be maintained at each District and ENV for TCEQ review.	District ENV
Annually/Aug	2.3.5-Public Reporting of Illicit Discharges and Spills	Utilize the "Don't Mess With Texas Water" reporting system and the TxDOT Stormwater Webpage complaint page for receiving reports.	Report the number calls and complaint forms received	ENV
Annually/Aug	2.3.6-Spill Prevention and Response	Respond to complaints of spills and un-authorized discharges that occur within TxDOT's regulated area.	Report the quantity of spills responded to. Compass Function Codes 520, 830.	District
Annually/Aug	2.3.7-Source Investigation and Elimination	Observe the TxDOT MS4 during daily operations to detect illicit discharges and/or illicit connections during daily operations.	Provide a list of illicit discharges/illicit connections detected. Summarize and report all follow-up actions resulting from screening to include identified RP and cost.	District ENV

ILLCIT DISCHARGE DETECTION AND ELIMINATION (IDDE)				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
Annually/Aug	2.3.8-IDDE Inspections	Investigate illicit flow upstream to the extent of TxDOT property. TxDOT will report flows originating off state ROW to the appropriate RP or the adjacent MS4 operator within 48 hours of discharge confirmation for further action.	Reported with 2.3.7..	District ENV
THE FOLLOWING BMPs WILL BE PERFORMED ONLY IN PREVIOUSLY PERMITTED PHASE I AREAS				
Annually/Aug	2.3.9.a - Overflows and Infiltration	Utilizes the TxDOT utility permit process to regulate the location, design and methods for installation and adjustment of sanitary sewer and other utility lines.	Report the number utility permits issued.	District ENV
Annually/Aug	2.3.9.b-List of Dischargers	Update list of dischargers, as necessary.	Changes will be included in the current reporting year annual report.	ENV
Annually/Aug	2.3.9.c- Hazardous Waste and Used Motor Vehicle Fluids	Indicate how TxDOT promoted, on a regular basis, the collection of hazardous waste and used motor oil to contractors and TxDOT employees.	Report the number of promotions, the type of promotion and the intended audience in the annual report.	ENV District
Annually/Aug	2.3.9.d- Identification of Priority Areas	Update list of priority areas, as necessary.	If changes are made, include in annual report.	ENV
Annually/Aug	2.3.9.e-Dry Weather Screening Program	Screen 20 percent of the previously permitted Phase I areas and detect the presence of illicit connections and improper discharges from adjacent MS4s and illegal third parties discharges to the MS4.	Report the number dry weather inspections performed.	ENV District
Year 4/Aug	2.3.9.f-Wet Weather Program	Evaluate the listed watersheds using existing stormwater characterization data collected by reliable sources such as TCEQ, local river authorities, partnerships, and/or other local efforts as appropriate, along with any viable TxDOT field data collected.	Include the Wet Weather Analysis in the fourth reporting year annual report.	ENV

ILLCIT DISCHARGE DETECTION AND ELIMINATION (IDDE)				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
ADDITIONAL REQUIREMENTS FOR PREVIOUS TxDOT – AUSTIN DISTRICT PHASE I PERMIT (WQ0004645000) ONLY				
Annually/Aug	2.3.10.a-Spill Prevention and Response	Continue to implement and improve, as necessary, programs that prevent, contain, and respond to spills that may discharge into the MS4.	Spill response in the Austin District is already included in the annual report from Section 2.3.6 above. Compass Function Codes 520, 830.	District
Annually/Aug	2.3.10.b-Agency coordination	Coordinate with the U.S. Fish & Wildlife Service to determine areas of concern for endangered karst invertebrates.	Report any agency coordination conducted during the reporting year in the annual report.	District ENV

**Figure 2.1 - Texas Department of Transportation (TxDOT)
Outfall Field Inspection Work Flow Diagram and Classification Scheme**



Following the flow chart above, when TxDOT field inspection personnel encounter a potential illicit discharge, whether it is in dry weather or wet weather conditions or it is from an established outfall or discharging into the MS4, they begin by assessing the physical parameters presented in Tables 2.2, 2.3, 2.4, and 2.5 below. The following activities may be performed by "TxDOT Qualified Personnel" and/or contractor.

In addition, when it is not evident that the flow/discharge is an acceptable non-stormwater discharge as defined by the permit and this SWMP, a field water chemistry sample is collected and screened using an approved stormwater test kit such as a Lamotte Stormwater Field Laboratory Analysis Kit. If levels of the established potential pollutants exceed the levels in Table 2.3 below, field inspection personnel are required to obtain a water sample, using proper chain-of-custody and preservation procedures, for laboratory analysis at a NELAC accredited laboratory.

Laboratory water chemistry analysis is performed on the following parameters:

- Ammonia_Nitrogen
- Detergent (surfactants)
- E.Coli
- Coliforms, fecal
- pH
- Copper, Total
- Phenols
- Oil and Grease
- Total Petroleum Hydrocarbon

The results of the IDDE field and laboratory chemistry analysis will be tabulated and presented in a database/spreadsheet format for comparison with other available monitoring databases, and a comprehensive database will be provided in the TxDOT MS4 Statewide Year four annual report.

TxDOT will investigate the potential source of and mitigate the detected pollutant(s) to the extent practicable.

TxDOT reports the number of source investigations performed and eliminated during the reporting year in Section 2.3.8.

Table 2.2

Logic Scheme to Negatively Answer "Do Observations Suggest an Illicit Discharge?" Leading to a Classification of "Unlikely Illicit Discharge."

PHYSICAL PARAMETERS	Observation	For Dry Weather	For Wet Weather
	Presence of Foam	No or Null	No or Null
	Color of Stain	Clear, Blue, Green, Gray, Black, Other, None or Null	Clear, Blue, Green, Gray, Black, Other, None or Null
	Turbidity	Clear, Cloudy, or Null	Clear, Cloudy, or Null
	Presence of Floatables	None, Plastics, Paper, or Null	None, Plastics, Paper, or Null
	Vegetative Conditions	None, Other, or Null	None, Other, or Null
	Presence of Deposits	None, Sediment, or Null	None, Sediment, or Null
	Odor	None, Other, or Null	None, Other, or Null

Table 2.3

Table 2 – Logic Scheme to Affirmatively Answer "Do Observations Suggest an Illicit Discharge?" Leading to a Classification of "Potential Illicit Discharge."

PHYSICAL PARAMETERS	Observation	For Dry Weather	For Wet Weather		
	Presence of Foam	Yes	Yes		
	Color of Stain	Yellow, Red, Orange, Blue, Purple, or White	Yellow, Red, Orange, Blue, Purple, or White		
	Turbidity	Cloudy or Opaque	Opaque		
	Presence of Floatables	Sewage, Petroleum Sheen, Paint, or Suds	Sewage, Petroleum Sheen, Paint, or Suds		
	Vegetative Conditions	Poor Growth or Overgrowth	Poor Growth or Overgrowth		
	Presence of Deposits	Oil, Paint, or Others	Oil, Paint, or Others		
	Odor	Sewage, Sulfide, Rancid, or Petroleum	Sewage, Sulfide, Rancid, or Petroleum		
OR					
FIELD WATER CHEMISTRY	Parameter	Results	Units	Results	Units
	Ammonia Nitrogen	> 2.0	ppm	> 2.0	ppm
	Chloride, Total	> 2.0	ppm	> 2.0	ppm
	Detergent (Surfactant)	> 5.0	ppm	> 5.0	ppm
	pH	< 6.0 or > 9.0	Standard Units	< 6.0 or > 9.0	Standard Units
	Copper, Total	> 0.5	ppm	> 1.0	ppm
	Phenols	> 0.3	ppm	> 0.6	ppm

Table 2.4

Logic Scheme to Affirmatively Answer "Does Field Water Chemistry and Observations Suggest an Illicit Discharge?" Leading to a Classification of "Suspect Illicit Discharge."

	Observation	For Dry Weather	For Wet Weather		
PHYSICAL PARAMETERS	Presence of Foam	Yes	Yes		
	Color of Stain	Yellow, Red, Orange, Blue, Purple, or White	Yellow, Red, Orange, Blue, Purple, or White		
	Turbidity	Cloudy or Opaque	Opaque		
	Presence of Floatables	Sewage, Petroleum Sheen, Paint or Suds	Sewage, Petroleum Sheen, Paint or Suds		
	Vegetative Conditions	Poor Growth Over Flourishing	Poor Growth Over Flourishing		
	Presence of Deposits	Oil, Paint or Other	Oil, Paint or Other		
	Odor	Sewage, Sulfide, Rancid, or Petroleum	Sewage, Sulfide, Rancid, or Petroleum		
AND					
FIELD WATER CHEMISTRY	Parameter	Results	Units	Results	Units
	Ammonia_Nitrogen	>2.0	ppm	>2.0	ppm
	Chlorine, total	>2.0	ppm	>2.0	ppm
	Detergent	>5.0	ppm	>5.0	ppm
	pH	<6.0 or >9.0	Standard Units	<6.0 or >9.0	su
	Copper, total	>0.5	ppm	>1.0	ppm
	Phenols	>0.3	ppm	>0.6	ppm

Table 2.5

Logic Scheme to Affirmatively Answer "Do Laboratory Sample Results, Field Water Chemistry, and Observations Suggest an Illicit Discharge?" Leading to a Classification of "Obvious Illicit Discharge."

	Scenario	Sewage	Car Wash	Construction	Commercial Areas	Fuel Spill					
PHYSICAL PARAMETERS	Observation	Dry or Wet Weather	Dry Weather Only	Dry Weather Only	Dry Weather Only	Dry or Wet Weather					
	Presence of Foam	NU	Yes	NU	NU	NU					
	Color of Stain	NU	Yellow Blue, Black, Green, Orange, Red, Gray, Purple, White or Other	Yellow Blue, Black, Green, Orange, Red, Gray, Purple, White or Other	Yellow, Blue, Black, Green, Orange, Red, Gray, Purple, White, or Other	Yellow, Green, Red, Gray, Orange, Purple, or Other					
	Turbidity	Opaque or Cloudy	Cloudy or Opaque	Cloudy or Opaque	NU	NU					
	Presence of Floatables	Sewage	Suds	NU	NU	Petroleum Sheen					
	Vegetative	NU	NU	NU	NU	NU					
	Presence of Deposits	NU	NU	NU	NU	Oily					
	Odor	Sewage, Sulfide or Rancid	NU	NU	NU	Petroleum					
	AND/OR										
FIELD WATER CHEMISTRY	Parameter	Results	Units	Results	Units	Results	Units	Results	Units	Results	Units
	Ammonia_Nitrogen	6	ppm	NU	ppm	NU	ppm	6	ppm	NU	ppm
	Chlorine, total	NU	ppm	NU	ppm	NU	ppm	NU	ppm	NU	ppm
	Detergent	NU	ppm	10	ppm	NU	ppm	10	ppm	NU	ppm
	pH	NU	su	>6.0 or <9.0	su	>5.9 or >9.1	su	NU	su	NU	su
	Copper, total	NU	ppm	NU	ppm	2.6	ppm	NU	ppm	NU	ppm
	Phenols	NU	ppm	NU	ppm	3.4	ppm	NU	ppm	3.4	ppm

Table 2.5 Cont.

AND/OR											
	Parameter	Results	U n i t s								
LAB WATER CHEMISTRY	Ammonia_Nitrogen	3	p p m	NU	p p m	NU	p p m	3	p p m	NU	p p m
	Detergent	NU	p p m	5	p p m	NU	p p m	5	p p m	NU	p p m
	E. coli	100,000	M P N / 1 0 0 m L	NU	M P N / 1 0 0 m L	NU	M P N / 1 0 0 m L	100,000	M P N / 1 0 0 m L	NU	M P N / 1 0 0 m L
	Enterococci	100,000	c f u / 1 0 0 m L	NU	c f u / 1 0 0 m L	NU	c f u / 1 0 0 m L	100,000	c f u / 1 0 0 m L	NU	c f u / 1 0 0 m L
	pH	NU	s u								
	Copper, total	NU	p p m	NU	p p m	2.6	p p m	NU	p p m	NU	p p m
	Phenols	NU	p p m	NU	p p m	3.4	p p m	NU	p p m	3.4	p p m
	Oil and Grease	NU	m g / L	NU	m g / L	NU	m g / L	NU	m g / L	>15	m g / L
	Total Petroleum Hydrocarb	NU	p p m	NU	p p m	NU	p p m	NU	p p m	>15	p p m

3.0 MCM 3 - CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

3.1 Permit Requirements

(a) *Requirements and Control Measures*

The permittee shall continue to develop, implement and enforce a program requiring the permittee's small and large construction activities, as defined in Part I of this 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 a 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.

The permittee shall assess program elements that were described in the previous permits, 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 and all elements in newly regulated Phase II MS4 areas must be 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) *The permittee shall review and update as necessary, the statewide SWMP and MCM implementation procedures required by Part III.A.2. Any changes must be included in the statewide annual reports. Such written procedures must be maintained on site or in the SWMP and made available for inspection by the TCEQ.*

(c) *The permittee shall continue to require that its construction sites include implementation of 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 MS4.*

(1) *Erosion and Sediment Controls - Design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants from construction sites.*

(2) *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 except as provided in a. through d. below:*

a. Where the immediate initiation of stabilization measures after construction activity temporarily or permanently ceased is precluded by snow cover or

frozen ground conditions, stabilization measures must be initiated as soon as practicable.

In arid, semiarid, and drought-stricken areas, where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures must be employed as soon as practicable. Where vegetative controls are not feasible due to arid conditions, the permittee shall immediately install, and within 14 calendar days of a temporary or permanent cessation of work in any portion of the site complete, non-vegetative erosion controls. If non-vegetative controls are not feasible, the permittee shall install temporary sediment controls as required in item c. below.

- c. In areas where temporary stabilization measures are infeasible, the permittee may alternatively utilize perimeter controls. The permittee shall document in a stormwater pollution prevention plan (SWP3) the reason why stabilization measures are not feasible, and must demonstrate that the perimeter controls will retain sediment on site to the extent practicable.*
 - d. If the initiation or completion of vegetative stabilization is affected by circumstances beyond the control of the permittee, vegetative stabilization must be initiated or completed as soon as conditions or circumstances allow it on the site. The requirement to initiate stabilization is triggered as soon as it is known with reasonable certainty that work will be stopped for 14 or more additional calendar days.*
- (3) BMPs – Design, install, implement, and maintain effective BMPs to minimize the discharge of pollutants to the MS4. At a minimum, such BMPs must be designed, installed, implemented, and maintained to:*
- a. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters;*
 - b. 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*
 - c. Minimize the discharge of pollutants from spills and leaks.*

(4) As an alternative to (1) through (3) above, the permittee shall ensure that all small and large construction activities discharging to its MS4 have developed and implemented a SWP3 in accordance with the TPDES CGP TXR150000.

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

- (1) Wastewater from washout of concrete and wastewater from water well drilling operations, unless managed by an appropriate control;*
- (2) Wastewater from washout and cleanout of stucco, paint, from release oils, 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) *Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed by appropriate BMPs.*

(e) Construction Plan Review Procedures

To the extent allowable by state, federal, and local law, the permittee shall continue to maintain and implement site plan review procedures that describe which plans will be reviewed as well as when an operator may begin construction. 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:

- (1) *The site plan review procedures must incorporate consideration of potential water quality impacts.*
- (2) *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.

(f) Construction Site Inspections and Enforcement

To the extent allowable by state, federal, and local law, the permittee shall continue to implement procedures for inspecting large and small construction projects. At a minimum, the permittee shall conduct inspections of sites operated by the permittee or its contractors and that are located in the permittee's regulated area.

- (1) *Inspections must occur at a frequency determined by the permittee, 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.*
- (2) *Inspections must occur during the active construction phase.*
 - a. *The permittee shall develop, implement, and revise as necessary, written procedures outlining the inspection and enforcement requirements. These procedures must be maintained at the permittee's district office and in the statewide SWMP and be made available to TCEQ.*
 - b. *Inspections of construction sites must, at a minimum:*
 - (i) *Determine whether the site has appropriate coverage under the TPDES CGP TXR150000. If no coverage exists, notify the contractor or the permittee's own construction site operator of the need for permit coverage.*

(ii) Conduct a site inspection to determine if control measures have been selected, installed, implemented, and maintained according to the permittee's requirements.

(iii) Assess compliance with the permittee's standards, permit, policy etc.

(iv) Provide a written or electronic inspection report.

c. Based on site inspection findings, the permittee 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.

If necessary, the permittee shall notify the adjacent MS4 operators with enforcement authority or the TCEQ Program Support Section according to Part III.A.3(c).

(g) Information submitted by the Public

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

(h) MS4 Staff Training

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

(i) Additional Requirements for Previous Phase I Permitted Areas

In addition to all the requirements described above, the permittee shall meet the following requirements in areas that previously were permitted under a Phase I permit.

(1) List of Sites - The permittees shall maintain a current list of construction sites that discharge directly to the MS4 and that have been issued an NPDES or a TPDES permit. The list must include the name, location and permit number of the discharges that have been authorized under an NPDES or TPDES stormwater discharges permit for construction activities (if known).

(2) Education and training – The permittee shall assure appropriate education and training measures for construction site operators.

3.2 Program Overview

TxDOT's construction stormwater program has been developed and implemented to reduce the discharge of pollutants into the MS4 from construction sites, and provide 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 using Checklists;
- 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.

3.2.1 Requirements and Control Measures

TxDOT will assess program elements that were described in the previous permits, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharge of pollutants from its MS4 to the MEP. New elements and all elements in newly regulated Phase II MS4 areas will be 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), TxDOT is not required to enforce the program to reduce pollutant discharges from such site(s).

3.2.2 SWMP Update

TxDOT will review and update as necessary the SWMP and MCM implementation procedures required by Part III.A.2 of Permit No. WQ0005011000. Any changes will be reflected in the annual reports. Such written procedures will be maintained at the district offices and in the SWMP and made available for inspection by the TCEQ.

3.2.3 Implementation of Erosion and Sediment Control BMPs

TxDOT will ensure that all small and large construction activities discharging to its MS4 have developed and implemented a SWP3 in accordance with the TPDES CGP TXR150000. The MS4 permit meets the requirements in the CGP; therefore, by maintaining compliance with the CGP, the MS4 permit requirements are met. In addition, TxDOT construction projects that require CGP authorization will comply with the permit requirements. TxDOT's policy is to design, implement, and install appropriate practices and BMPs for soil disturbing activity where a potential for stormwater discharges exists, regardless of the type of activity or acreage disturbed. The TxDOT project plans include a Stormwater Pollution Prevention Plan (SWP3) that defines BMPs to control sedimentation and erosion. TxDOT reviews and approves the SWP3 on its construction projects.

TxDOT will ensure that construction sites within its MS4 design, install, implement, and maintain effective BMPs to minimize the discharge of pollutants to the TxDOT MS4. At a minimum, TxDOT's BMPs are designed, installed, implemented and maintained to:

- 1) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters;
- 2) 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,
- 3) Minimize the discharge of pollutants from spills and leaks.

The Environmental Permits, Issues, and Commitments (EPIC) sheet provides an overview of environmental requirements contained within the project plans.

Project construction plans are reviewed and approved by TxDOT before the project moves forward in the Advance Planning & Development Department, which also reviews the plans, specification and estimate processes prior to construction.

Stormwater awareness training is required for employees that conduct soil-disturbing activities.

As part of the EMS program, projects that let after January 1, 2016 require both TxDOT and the contractor to submit an NOI for each project that disturbs one or more acres. TxDOT is the primary operator with control over constructions plans and specifications. The contractor is the primary operator with day-to-day operational control. Projects that let prior to January 1, 2016 require that the contractor sign a Contractor Certification of Compliance with Storm Water Requirements form 2458.

At TxDOT'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 the district engineer or another responsible TxDOT representative.

Some routine maintenance activities completed by TxDOT 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; the routine grading of existing dirt roads; and 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.

3.2.4 Prohibited Discharges

The following discharges are prohibited:

- 1) Wastewater from washout of concrete and wastewater from water well drilling operations, unless managed by an appropriate control;

- 2) Wastewater from washout and cleanout of stucco, paint, from release oils, 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) Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed by appropriate BMPs.

3.2.5 Construction Plan Review Procedures

At the pre-construction meeting, TxDOT will notify the Contractor of their TPDES permitting responsibilities associated with construction activities, as appropriate.

Utility contractors that are working within the ROW must first provide a Utility Installation Request form, and obtain approval prior to commencing those construction activities. The approval form requires the requestor to comply with the Clean Water Act (for example, obtain TPDES general permit TXR150000) to develop BMPs to minimize erosion, and to revegetate the project area. Attachment G contains a Utility Installation Request Form.

TxDOT will implement the CGP in accordance with TxDOT's plans and specifications on all projects. When TxDOT is discharging to another MS4, if the local jurisdiction has a SWMP requirement that vary(s) from TxDOT plans and specifications, TxDOT will make every effort to reach a mutually acceptable solution.

3.2.6 Construction Site Inspections and Enforcement

By statute, TxDOT has the power to control virtually all of the activities occurring within the ROW, but there is little, if any, authority to regulate discharges occurring off the ROW and flowing into state maintained drainage systems. The codification of state law in the rules of the Texas Administrative Code (TAC - Title 43, Part 1, Chapter 21, Subchapter C) gives TxDOT the power to construct, maintain, and operate a drainage system for state highways to accommodate stormwater, which originates within and reaches highway ROWs. TxDOT contracts with others for the construction and sometimes for the maintenance of these systems. As such, contracting is the primary control for enforcement.

TxDOT evaluates the stormwater control measures specified in the SWP3. TxDOT has created a "Stormwater Field Inspector's Guide" to assist TxDOT inspectors with identifying any infrastructure stormwater device deficiencies. The guide provides design criteria for each device, as well as repair procedures and when maintenance should be scheduled. Sediment will be removed from devices and damaged devices repaired as required by the contract and the CGP.

TxDOT implements the EMS for all construction project sites that disturb one acre or more of land. The EMS is TxDOT's commitment to improve environmental compliance performance at road construction sites across the state. As part of this effort, TxDOT has developed a number of tools, training opportunities, management practices and compliance

requirements for all affected TxDOT personnel, consultants, contractors, and other participants in TxDOT's road construction operations. Attachment H contains EMS Stage Gate checklists.

3.2.7 Information Submitted by the Public

TxDOT utilizes public input (for example, the opportunity for public comment or public meetings) in the implementation of the MS4 program through the Transportation Improvement Program (TIP) or Statewide Transportation Improvement Program (STIP). If a public meeting is held, a citizen advisory committee is formed, or a similar public function is established to allow the public an opportunity to participate in transportation development and the associated SWMP implementation. TxDOT will comply with all applicable state and local public notice requirements for the activity.

TxDOT also maintains a stormwater web page for reporting spills and illegal dumping, and can be found at <http://www.txdot.gov/contact-us/form.html?id=swp-email>.

3.2.8 MS4 Staff Training

Prior to initiation of construction, the contractor will meet with the TxDOT Area Engineer (AE) in a pre-construction meeting to discuss stormwater issues for the construction site. TxDOT will ensure contractors are aware of practices and policies identified in this section, as well as emphasize the need for compliance.

Contractor training requirements are described in Special Provision 506-003, Section 506.3.3 for the CRPE, CRPE Alternate, Contractor Superintendent, etc. TxDOT and contractor training requirements are described in the EMS training matrix (see Attachment B).

3.2.9 Additional Requirements for Previous Phase I Permitted Areas

In addition to the requirements described above, TxDOT will meet the following requirements in areas that previously were permitted under a Phase I permit.

- 1) List of sites - TxDOT will maintain a current list of non-TxDOT construction sites that discharge directly to the MS4 and that have been issued an NPDES or a TPDES permit. The list will include the name, location and permit number of the discharges that have been authorized under an NPDES or TPDES stormwater discharges permit for construction activities (if known). The list will be generated from the submission of NOIs received from dischargers.
- 2) Education and training – TxDOT will assure appropriate education and training measures are provided for construction site operators.

3.3 Best Management Practices and Measurable Goals

Utilizing the following BMPs, TxDOT will ensure that all small and large construction activities discharging to its MS4 are in accordance with the TPDES CGP TXR150000.

3.3.1 Requirements and Control Measures

TxDOT will fully implement all applicable new elements and all applicable elements in newly regulated Phase II MS4 areas by the end of the current permit term. All new elements and elements in newly regulated Phase II areas completed will be included in the Annual report in the reporting year accomplished.

3.3.2 SWMP Update

TxDOT will review and update as necessary, the SWMP and MCM implementation procedures required by Part III.A.2 of Permit No. WQ0005011000. Any changes will be reflected in the annual reports. Any updated written procedures to the SWMP will be forwarded to and maintained at the district offices.

3.3.3 Implementation of Erosion and Sediment Control BMPs

All TxDOT construction projects within the ROW, with NOIs or CSNs, comply with the CGP, TxDOT Standard Specification 2014, and EMS. TxDOT ensures MS4 compliance through monitoring, inspections, and enforcement.

As stated previously, for projects let after January 1, 2016 TxDOT is the primary operator with control and responsibility over construction plans and specifications. The TxDOT contractor is the primary operator with operational control over day-to-day activities at the construction site and is responsible for ensuring that the SWP3 and other permit conditions are in compliance. Having both TxDOT and the contractor as primary operator on construction sites supports partnership for environmental compliance. Projects that let prior to January 1, 2016 require that the contractor sign a Contractor Certification of Compliance with Storm Water Requirements (Form 2458).

The DEQC conducts construction joint inspections with the TxDOT inspector and the contractor CRPE. The inspections verify that the contractor has correctly installed and maintained BMPs per the SWP3 site map and per TxDOT specifications. The joint inspection allows the opportunity for the DEQC to provide training and feedback as appropriate. The DEQC uses TxDOT Form 2448 for these inspections.

TxDOT will maintain the quantity of Form 2458, for construction sites let prior to January 1, 2016, and the number of Form 2448 for all other sites, completed during the permit year and include this quantity in the annual report for the applicable reporting year.

3.3.4 Prohibited Discharges

TxDOT will update its list of Prohibited Discharges, as necessary. If changes are made to the list, those changes will be included in the current reporting year annual report.

3.3.5 Construction Plan Review Procedures

Prior to initiation of construction, the contractor will meet with TxDOT representatives in a preconstruction conference to discuss stormwater issues for the construction site. TxDOT will ensure contractors are aware of practices and policies identified in this section, as well as emphasize the need for compliance. TxDOT will also

notify the site operator of its TPDES permitting responsibilities associated with construction activities, as appropriate. A pre-conference form is used to document the meeting. An example of this form is included in Attachment I.

TxDOT conducts a preconstruction meeting with the contractor prior to commencement of construction activities that includes an environmental agenda of the project environmental requirements. Reviewing the environmental requirements for the project in the preconstruction meeting ensures understanding by all responsible parties. In addition, the contractor assigns their contractor responsible person environmental (CRPE) who is responsible for ensuring the contractor training is complete, performing daily monitoring of BMPs, and participating in joint District Environmental Quality Coordinator (DEQC) inspections with the TxDOT DEQC.

TxDOT will track the number of pre-conference forms obtained during the permit year and include this number in the annual report.

3.3.6 Construction Site Inspections and Enforcement

TxDOT construction projects that disturb one or more acres of land will comply with the CGP, TxDOT Standard Specification 2014, and TxDOT EMS policy. The DEQC performs inspections of the construction project sites to verify compliance and takes enforcement action as necessary to ensure compliance.

The CRPE monitors the construction site BMPs daily and if necessary takes action to ensure compliance with the CGP, TxDOT Standard Specification 2014, EMS and other environmental requirements.

The TxDOT inspector performs SWP3 inspections (TxDOT Form 2118) on project sites every 7 days, or once every 14 days and within 24 hours after 0.5 inches or more of rainfall. Each District decides which of these two intervals is most appropriate for their District. TxDOT 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 instructions on the Form, and through TxDOT training on the completion of the Form.

The DEQC conducts joint Construction Stage Gate Checklist (CSGC) inspections with the CRPE and TxDOT inspector that occur at minimum within one month of beginning initial construction activities and annually, or if the project is less than one year when 50% of work has been completed. The DEQC conducts annual inspections of construction projects using the CSGC Forms 2448 and 2458 to verify BMPs have been correctly installed and maintained. The annual DEQC inspection may be used in place of the joint CSGC inspection if both the CRPE and TxDOT inspector are present and involved during inspection. Frequency for completing additional CSGC inspections by TxDOT and the contractor CRPE is determined at the preconstruction meeting.

TxDOT will obtain the number of CSGC Forms 2448 and 2458 obtained during the permit year and include this number in the annual report.

3.3.7 Information Submitted by the Public

TxDOT will report the number of construction complaint calls and complaint forms received during the reporting year in the annual report.

3.3.8 MS4 Staff Training

TxDOT staff and contractor training requirements are described in Special Provision 506-003, Section 506.3.3 for the CRPE, CRPE Alternate, Contractor Superintendent, etc., TxDOT and contractor training requirements are described in the EMS training matrix in Attachment B.

TxDOT will provide the number of TxDOT staff and contractors that participated in Special Provision 506-003, Section 506.3.3 for the CRPE, CRPE Alternate, Contractor Superintendent, etc, and EMS training modules during the reporting year in the annual report.

3.3.9 Additional Requirements for Previous Phase I Permitted Areas

TxDOT will maintain a list of current non-TxDOT construction sites active during the permit year and reported to TxDOT, including the name, location and permit number of the discharges that have been authorized under an NPDES or TPDES stormwater discharge permit for construction activities. TxDOT will only report those received from dischargers. TxDOT will include this list in the annual report.

Education and training of construction site operators will be included with Section 3.3.8 and not reported as a separate number, as that list will already include the number receiving education and training.

3.4 BMP Implementation Schedule, Activity, and Measurable Goals

Table 3.1

CONSTRUCTION SITE STORMWATER RUNOFF CONTROL				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
Annually/Aug	3.3.1-Program Development	Fully implement all applicable new elements and all applicable elements in newly regulated Phase II MS4 areas by the end of the current permit term.	All new elements and elements in newly regulated Phase II areas completed will be included in the annual report.	ENV District
Annually/Aug	3.3.2-SWMP Update	Review and update as necessary, the SWMP and MCM implementation procedures.	Any changes will be reflected in the annual report.	ENV
Annually/Aug	3.3.3-Erosion and Sediment Control	All TxDOT construction projects within the ROW, with NOIs or CSNs, comply with the CGP, TxDOT Standard Specification 2014, and EMS.	Report the number of Forms 2448 obtained during the permit year.	District ENV
Annually/Aug	3.3.4-Prohibited Discharges	Update the list of Prohibited Discharges, as necessary.	If changes are made to the list, those changes will be included in the current reporting year annual report.	ENV
Annually/Aug	3.3.5-Construction Plan Review Procedures	Notify the site operator of its TPDES permitting responsibilities associated with construction activity, as appropriate.	Report the number of pre-construction meetings completed during the permit year.	District ENV
Annually/Aug	3.3.6-Construction Site Inspections and Enforcement	Performs inspections of the construction project sites to verify compliance and takes enforcement action as necessary to ensure compliance.	Report the number of Forms 2448 obtained during the permit year.	District ENV
Annually/Aug	3.3.7-Information Submitted by the Public	Receive, as available, construction calls and complaint forms.	Report the number construction calls and complaint forms received during the reporting year.	District ENV

CONSTRUCTION SITE STORMWATER RUNOFF CONTROL				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
Annually/Aug	3.3.8-MS4 Staff Training	Provide contractor training as described in Special Provision 506-003, Section 506.3.3.	Report the number of TxDOT staff and contractors that participated in Special Provision 506-003, Section 506.3.3 for the CRPE, CRPE Alternate, Contractor Superintendent, etc, and EMS training modules during the reporting year.	District ENV
THE FOLLOWING BMPs WILL BE PERFORMED ONLY IN PREVIOUSLY PERMITTED PHASE I AREAS				
Annually/Aug	3.3.9.a- List of Sites	Maintain a current list of non-TxDOT construction sites active during the permit year, including the name, location, and permit number of the discharges that have been authorized under an NPDES or TPDES stormwater discharge permit.	Include the list in the annual report.	District ENV
Annually/Aug	3.3.9.b- Education and Training	Assure appropriate education and training measures is provided for construction site operators.	Education and training of construction site operators will be included with Section 3.3.8 and not reported as a separate number, as that list will already include the number receiving education and training.	District ENV

4.0 MCM 4 - POST-CONSTRUCTION STORMWATER MANAGEMENT IN AREAS OF NEW DEVELOPMENT AND REDEVELOPMENT

4.1 Permit Requirements

(a) The permittee shall continue to 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 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 that discharge into the MS4. The program must be established for private (if any) and public development sites. The program may utilize an offsite mitigation and payment in lieu of components to address this requirement.

The permittee shall assess program elements that were described in the previous permit, modify as necessary, to continue reducing the discharge of pollutants from the MS4 to the MEP. New elements and all elements in newly regulated areas must be fully implemented by the end of the permit term.

(b) The permittee 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 permittee shall establish, implement, and enforce a requirement for its contractors and its own departments that develop and redevelop sites to 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 areas must have the program element fully implemented by the end of the permit term.

(c) The permittee shall review and update as necessary, the statewide SWMP and MCM implementation procedures required by Part III.A.2. Any changes must be reflected in the statewide annual reports. Such written procedures must be maintained at the permittee's district office and in the SWMP and made available for inspection by TCEQ.

(d) The permittee shall document and maintain records of enforcement actions and make them available for review by the TCEQ.

(e) The permittee shall, to the extent allowable under state, federal, and local law, continue to ensure the long-term operation and maintenance of structural stormwater control measures owned and operated by the permittee.

4.2 Program Overview

TxDOT will continue to 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 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 has been established for public development sites within the TxDOT ROW.

TxDOT Storm Water Planning and Design Guidelines for New Development and Significant Redevelopment, June 2010, are utilized by environmental, planning and design staff. This guideline includes a description of permanent structural and non-structural control measures to reduce pollutants from roadway runoff, and how the controls will be developed and incorporated into the planning process. The goals of such controls for minimizing water quality impact include:

- 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.

TxDOT has a well-defined planning process in place for the development of transportation projects. 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, TxDOT follows the environmental review process outlined by the National Environmental Policy Act of 1969 (NEPA) and Federal Highway Administration rules (23 CFR 771) or the state equivalent rule (43 TAC Part 1 Chapter 2).

TxDOT'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. TxDOT is required to coordinate with TCEQ as outlined in the TxDOT/TCEQ MOU (see Attachment A).

For typical highway construction projects, TxDOT's post-construction plan design efforts primarily address stormwater volume reduction/control, velocity dissipation, pollutant reduction, and erosion control practices. Specifically, the use of vegetated ROW enables infiltration and evapotranspiration of stormwater runoff from the TxDOT roadways based on moderate retention and velocity dissipation. The velocity of stormwater discharge is reduced, thus limiting erosion and stream channel degradation and pollutant discharge. TxDOT ROW and new ROW with earthen surfaces are vegetated or re-vegetated according to the specifications included in TxDOT's Roadside Vegetation Management Manual.

In addition to the Stormwater Management Guidelines for Construction Activities, TxDOT's Bridge Division's Hydraulic Manual establishes general procedures for development of highway drainage facilities. It includes a survey of existing characteristics, estimates of future characteristics, engineering design criteria, discharge estimates, structure

requirements, and constraints for the hydraulic design or analysis of highway drainage and receiving facilities. The manual also discusses in some detail stormwater management, erosion control, pollution prevention plans, and issues related to managing the quantity and quality of runoff.

Post-Construction BMP strategies that TxDOT may employ are as follows:

Structural Controls:

- 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

Non-Structural Controls:

- Street sweeping
- Litter collection
- "No Mow" areas
- Inlet stenciling/Stormwater Inlet Markers

Identification and Selection of Structural Controls

The hydraulics and necessary structural controls for stormwater runoff are identified by TxDOT during the design phase for construction or redevelopment projects located within the regulated area. TxDOT maintains a number of 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.

TxDOT will maintain copies of the most recent guidance manuals in locations readily accessible to staff and contractors. TxDOT will continue to use the following manuals and documents. TxDOT will follow long-term operation and maintenance of structural controls protocol in the following manuals.

Roadside Vegetation Management Manual

This guidance document was prepared by the Vegetation Management Section of the Maintenance Division to support TxDOT. This document provides a comprehensive discussion on the establishment and maintenance of vegetative cover.

<http://onlinemanuals.txdot.gov/txdotmanuals/veg/index.htm>

Evaluation and Management of Highway Runoff Water Quality

The manual was prepared by the Federal Highways Administration (FHWA) and is used by TxDOT highway designers and environmental professionals to identify the appropriate impact prediction and mitigation tools available for use during highway project planning and development activities. The manual has five major sections: Introduction, Coordination with Environmental Agencies and the Public, Highway Runoff Water Quality, Water Quality Impact Assessment, and Best Management Practices.

<ftp://ftp.odot.state.or.us/techserv/Geo-Environmental/Environmental/Procedural%20Manuals/Water%20Quality/References/Evaluation%20and%20Management%20of%20Highway%20Runoff%20Water%20Quality.pdf>

The Hydraulic Design Manual

The manual was prepared by TxDOT's Design Division to establish general procedures for development of highway drainage facilities. It includes a survey of existing characteristics, estimates of future characteristics, engineering design criteria, discharge estimates, structure requirements, and constraints for the hydraulic design or analysis of highway drainage and receiving facilities. The manual also discusses in some detail stormwater management, erosion control, pollution prevention plans, and issues related to managing quantity and quality of runoff.

<http://onlinemanuals.txdot.gov/txdotmanuals/hyd/index.htm>

4.2.1 Program Development

TxDOT will assess program elements that were described in the previous permits, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharge of pollutants from its MS4 to the MEP. New elements and all elements in newly regulated Phase II MS4 areas will be fully implemented by the end of this permit term.

4.2.2 Ordinances and Other Regulatory Mechanisms

TxDOT does not have the legal authority to enforce state environmental laws against third parties. TxDOT must rely completely on the TCEQ or the local municipal government for law enforcement.

TxDOT has established, implements, and enforces a requirement for its contractors, by contract, and its own departments that develop and redevelop sites to 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, TxDOT may utilize an alternative approach. Newly regulated areas will have the program element fully implemented by the end of the permit term.

4.2.3 SWMP Update

TxDOT will review and update, as necessary, the SWMP and MCM implementation procedures required by Part III.A.2 of Permit No. WQ0005011000. Any changes will be reflected in the annual reports. Such written procedures will be maintained at the district offices and in the SWMP and made available for inspection by the TCEQ.

4.2.4 Documentation and Records

TxDOT will document and maintain records of enforcement actions and make them available for review by the TCEQ.

4.2.5 Long-term Operation and Maintenance

TxDOT will, to the extent allowable under state, federal, and local law, continue to ensure the long-term operation and maintenance of structural stormwater control measures owned and operated by TxDOT.

4.3 Best Management Practices and Measurable Goals

Permit No. WQ0005011000 requires that TxDOT maintain stormwater control measures appropriate for its MS4. In addition, TxDOT will maintain all long term post-construction stormwater control measures. TxDOT controls will not be located on private property and TxDOT will solely maintain the responsibility and accountability for the operation and maintenance of any controls utilized.

Structural controls may include practices such as permeable pavement and vegetated swales; which are considered to be LID practices, or GI BMPs. TxDOT is required to inspect, where applicable, post-construction controls to ensure that control measures are operating correctly and are being maintained.

For the purpose of Permit No. WQ0005011000, "redevelopment" does not include routine maintenance activities and linear utility installation. Examples of linear utility installation are construction activities that maintain the original line, grade, and hydraulic capacity of the surrounding areas, such as the installation of underground gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains and water mains. Routine maintenance activities are construction activities that are performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including but not limited to: (1) Re-grading of gravel roads or parking lots; (2) stream bank restoration projects (does not include the placement of spoil material); (3) Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch; (4) Placement of aggregate shoulder backing that makes the transition between the road shoulder and the ditch or embankment; (5) Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and

similar work that does not expose soil or disturb the bottom six inches of sub-base material; (6) Long-term use of equipment storage areas at or near highway maintenance facilities; (7) Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or embankment; and (8) Replacement of curbs, gutters, sidewalk and guide rail posts.

4.3.1 Program Development

TxDOT will fully implement all applicable new elements and all applicable elements in newly regulated Phase II MS4 areas by the end of the current permit term. All new elements and elements in newly regulated Phase II areas completed will be included in the Annual report in the reporting year accomplished.

4.3.2 Ordinances and Other Regulatory Mechanisms

TxDOT lacks authority to prohibit or to control post-construction discharges of stormwater from areas of new development and redevelopment located outside of the ROW. New development and redevelopment projects within the ROW are under TxDOT control and are regulated through contract agreement during construction. TxDOT policy requires all new development and re-development projects, including highway construction subject to the TCEQ Stormwater CGP, 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 in nature 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.

TxDOT will include in its current year annual report any changes to its regulatory mechanism.

4.3.3 SWMP Update

TxDOT will review and update, as necessary, the SWMP and MCM implementation procedures required by Part III.A.2 of Permit No. WQ0005011000. Any changes will be reflected in the annual reports if updates are made. Any updated written procedures to the SWMP will be forwarded to and maintained at the district offices.

4.3.4 Documentation and Records

TxDOT will retain all associated records for at least three years after coverage under this permit terminates and make them available for TCEQ review.

4.3.5 Long-term Operation and Maintenance

TxDOT personnel or TxDOT approved consultants will routinely drive the regulated area to inspect and routinely maintain permanent control measures and ensure adequate long-term operation of BMPs. Maintenance of permanent controls includes mowing, repair of erosion features, pond sediment removal, etc. TxDOT currently has design standards that ensure compliance for structural and non-structural runoff controls.

TxDOT will include in its annual report to TCEQ the amount of maintenance activities performed on post construction controls.

4.4 BMP Implementation Schedule, Activity, and Measurable Goals

Table 4.1

POST-CONSTRUCTION STORMWATER MANAGEMENT IN AREAS OF NEW DEVELOPMENT AND REDEVELOPMENT				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
Annually/Aug	4.3.1-Program Development	Fully implement all applicable new elements and all applicable elements in newly regulated Phase II MS4 areas by the end of the current permit term.	All new elements and elements in newly regulated Phase II areas completed will be included in the Annual report.	ENV District
Annually/Aug	4.3.2-Ordinances and Other Regulatory Mechanisms	Regulate incidents and MS4 water quality issues related to areas of new development and redevelopment that cause erosion or similar water quality issues.	Report any changes to current regulatory mechanism, if made.	District ENV
Annually/Aug	4.3.3-SWMP Update	Review and update as necessary, the SWMP and MCM implementation procedures.	Any changes will be reflected in the annual reports.	ENV
Annually/Aug	4.3.4-Documentation and Records	Retain all associated records for at least three years after coverage under this permit terminates.	Make records available for review by the TCEQ.	District ENV
Annually/Aug	4.3.5-Long-term Operation and Maintenance	Inspect and routinely maintain permanent control measures and ensure adequate long-term operation of BMPs.	Include the amount of maintenance activities performed on post construction controls.	District ENV

5.0 MCM 5 - POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR TRANSPORTATION OPERATIONS

5.1 Permit Requirements

(a) Program development

The permittee shall continue to 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 roadway activities and areas owned by the permittee including, but not limited to, ROW maintenance; street, road, or highway maintenance; fleet and building maintenance; stormwater system maintenance; new construction and land disturbances; vehicle and equipment maintenance and storage yards; and salt/sand storage locations.

The permittee 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 and all elements in newly regulated Phase II MS4 areas must be fully implemented by the end of this permit term. See also Part III.A.1.(g).

(b) Permittee-owned Facilities and Control Inventory

The permittee shall develop and maintain an inventory of facilities and stormwater controls that it owns and operates within the regulated areas of the MS4. If feasible, the inventory may 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 not limited to, the following, as applicable:

- (1) Equipment storage and maintenance facilities;*
- (2) Fuel storage facilities;*
- (3) Materials storage facilities;*
- (4) Pesticide storage facilities;*
- (5) Buildings, including office buildings;*
- (6) Parking lots;*
- (7) Salt storage facilities;*
- (8) Street repair and maintenance sites;*
- (9) Vehicle storage and maintenance yards;*
- (10) Rest areas; and*
- (11) Structural stormwater controls.*

(c) *Training and Education*

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

(d) *Disposal of Waste Material*

Waste materials removed from the MS4s must be disposed of in accordance with 30 TAC Chapters 330 or 335, as applicable.

(e) *Contractor Requirements and Oversight*

(1) *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.*

(2) *The permittee shall provide oversight of contractor activities to ensure that contractors are using appropriate control measures and SOPs. Oversight procedures must be developed before the end of the permit term and maintained at the permittee's district office or at the headquarters and made available for inspection by TCEQ.*

(f) *Roadway Operation and Maintenance Activities*

(1) *Assessment of permittee-owned operations*

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

- a. Road and parking lot maintenance may include such areas as pothole repair, pavement marking, sealing, and re-paving;*
- b. Bridge maintenance may include such areas as re-chipping, grinding, and saw cutting;*
- c. Cold weather operations, including plowing, sanding, and application of deicing and anti-icing compounds and maintenance of snow disposal areas; and*
- d. ROW maintenance, including mowing, herbicide and pesticide application, and planting vegetation.*

(2) *The permittee shall identify POCs 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).*

(3) *The permittee 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:

- a. Replacing materials and chemicals with more environmentally benign materials or methods;*

- b. Changing operations to minimize the exposure or mobilization of pollutants to prevent them from entering surface waters; and*
 - c. Placing barriers around or conducting runoff away from deicing chemical storage areas to prevent discharge into surface waters.*
- (4) Inspection of pollution prevention measures - All pollution prevention measures implemented at permittee-owned facilities must be visually inspected at a frequency determined by the permittee to ensure they are working properly. A log of inspections must be maintained at the permittee's district office and made available for review by the TCEQ upon request.*

(g) Structural Control Maintenance

If BMPs include structural controls, maintenance of the controls must be performed at a frequency determined by the permittee and consistent with maintaining the effectiveness of the BMP.

(h) Additional Requirements for Previous Phase I Permitted Areas

In addition to all the requirements described above, the permittee shall meet the following requirements in areas that were previously permitted under a Phase I permit.

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 rest areas, easements, public ROWs, 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 include:*
 - (a) Use of native plants or xeriscaping;*
 - (b) Keeping clippings and leaves out of the MS4 and the streets 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; and*
 - (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 minimizes 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.*

5.2 Program Overview

5.2.1 Program Development

TxDOT will assess program elements that were described in the previous permits, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharge of pollutants from its MS4 to the MEP. New elements and all elements in newly regulated Phase II MS4 areas will be fully implemented by the end of this permit term.

5.2.2 TxDOT-Owned Facilities and Control Inventory

TxDOT does not own or operate facilities subject to the TCEQ Industrial Stormwater Multi-Sector General Permit (MSGP). There are no TxDOT activities that are subject to the TCEQ MSGP. Within the permitted boundary, **TxDOT does not operate or maintain the following types of operations:** park and open space; waste transfer stations; composting facilities; hazardous waste disposal facilities; hazardous waste handling and transfer facilities; incinerators; landfills; schools, libraries, police stations, fire stations, and office buildings; parking lots; golf courses; swimming pools; recycling facilities; or solid waste handling and transfer facilities. TxDOT will develop and maintain a list of TxDOT owned non-roadway facilities within the regulated area. These facilities may include:

- 1) Equipment storage and maintenance facilities;
- 2) Fuel storage facilities;
- 3) Materials storage facilities;
- 4) Pesticide storage facilities;
- 5) Buildings, including office buildings;
- 6) Parking lots;
- 7) Salt storage facilities;
- 8) Street repair and maintenance sites;
- 9) Vehicle storage and maintenance yards;
- 10) Rest areas; and
- 11) Structural stormwater controls.

5.2.3 Training and Education

TxDOT does not have MS4-specific field staff. Field staff consist of multi-disciplinary personnel assigned by the district engineer, and responsibilities range from maintenance to engineering. Staff perform several tasks (for example, construction inspection, emergency response, and environmental processes) during normal job responsibilities.

Personnel who perform MS4 operations are provided with training that contains information on identifying illicit discharge, preventing, and reducing potential stormwater pollution from the TxDOT MS4. Attachment B lists all applicable training classes; the list presented in Attachment B may change due to updates, new training module development, and/or removal of outdated materials.

5.2.4 Disposal of Waste Material

Waste materials removed from the TxDOT regulated area will be disposed of in accordance with 30 TAC Chapters 330 or 335, as applicable.

The frequency of finding unknown substances on the highway varies. The characterization of unknowns usually results in costly testing to first classify the material. A waste can be classified as hazardous by the EPA because it is listed, it exhibits hazardous characteristics, or it is a mixture of wastes that contains a listed waste or a characteristic waste. The wastes may be saturating soils or within sediment encountered during a maintenance activity. There is a potential for the problem to become magnified when dealing with unlabeled waste drums improperly stored or appearing on the ROW. When waste is found on the ROW from an unknown source and/or is unidentified, the available options are usually limited to analytical testing before disposal.

TxDOT ensures all hazardous waste, used motor vehicle fluids, and other waste used by TxDOT employees are disposed of in accordance with applicable regulations and are not exposed to stormwater runoff.

In addition, TxDOT has a recycling program that is in effect as part of its overall waste reduction effort. Since there are no residents in the TxDOT MS4 or ROW, TxDOT does not operate a household collection program. However, TxDOT does support, publicize, and promote related programs to its employees and when contacted by the public. TxDOT will provide them with the best available information on a service in their community and/or area. As a BMP, TxDOT has outsourced a large percentage of general auto repairs, including oil changes.

Dredge spoils, accumulated sediment, and floatables removed from the MS4 will be stockpiled or disposed of in a local landfill or upland locations as necessary.

5.2.5 Contractor Requirements and Oversight

The primary use of the ROW is to accommodate the state highway system. However, other utilities are allowed to use the ROW under certain circumstances. TxDOT's utility policy applies to underground, surface, or overhead facilities. These are private lines as well as public, including power transmission, telephone, telegraph, television cable, water, gas,

oil, petroleum products, chemicals, steam, sanitary sewer and similar lines. TxDOT utilizes a utility permit process with intent to regulate the location, design and methods for installation and adjustment of utility lines on state-controlled highways.

5.2.6 Roadway Operation and Maintenance Activities

The Pollution Prevention/Good Housekeeping MCM consists of BMPs that focus on training and the prevention or reduction of pollutants in runoff from transportation operations that occur within the TxDOT regulated area.

TxDOT has existing good housekeeping measures and non-structural BMPs that reduce the discharge of pollutants from the following transportation operations.

- Street, road, or highway maintenance;
- Fleet and building maintenance;
- Stormwater system maintenance;
- New construction and land disturbances;
- Vehicle and equipment maintenance and storage yards; and,
- Salt/sand storage locations.

5.2.7 Structural Control Maintenance

Due to the linear nature of TxDOT's MS4 (for example, highway alignments), TxDOT roadways primarily use vegetative controls that ensure water quality. The most common structural controls used by TxDOT are vegetative controls/filters as follows:

- Grassed channels, waterways, ditches, or swales designed to inhibit erosion and enhance the settling of suspended solids; and.
- Overland flow through a filter strip where such strips consist of grass or forested vegetation designed to filter pollutants from sheet flow runoff and increase filtration.

TxDOT structural control measures may also include the following:

- Retention/irrigation ponds;
- Extended detention basin (wet/dry basins);
- Constructed wetlands;
- Sand filters;
- Sedimentation ponds/traps;
- Infiltration ponds;
- Catch basins;
- Grated inlets; and,
- Outfall velocity dissipation controls.

Additionally, new specification of materials used to construct roadways such as permeable friction courses (PFC) also serve as a filter for runoff, as stormwater flows through PFC. A PFC was originally designed to reduce visibility impairment on windshields due to stormwater vehicular spray. This technology is a key example of TxDOT identifying a structural control that not only improves water quality, but also has a dual use of improving public safety.

TxDOT designs stormwater structural controls in a manner to reduce the discharge of pollutants to the MEP. TxDOT utilizes the following manuals, design specifications, and maintenance guidance:

- TxDOT's manual entitled "*Stormwater Management Guidelines for Construction Activities*" provides guidelines to prevent potential erosion and pollutants from projects from flowing into WUS. The manual also provides guidelines for each structural control device, including height, width, depth, and drainage area design requirements;
- TxDOT maintains stringent design specifications, ensuring structural goals meet water quality requirements;
- Structural control measures can be used alone or in combination to address site-specific highway runoff pollution problems. Section 5.2 of the Stormwater Management Guidelines for Construction Activities, found at <https://ftp.dot.state.tx.us/pub/txdot-info/env/storm/5.0sedimentationcontrol.pdf> describes additional structural control measures as well as the appropriate usage and typical design efforts; and,
- The effectiveness of controls is a function of variables related to site conditions, highway design, surrounding water quality, and other stormwater considerations.

5.2.8 Additional Requirements for Previous Phase I Permitted Areas

In addition to all of the requirements described above, TxDOT will meet the following requirements in areas that were previously permitted under a Phase I permit.

Pesticide, Herbicide, and Fertilizer Application and Management

- a) Landscape maintenance – TxDOT will evaluate the materials used and activities performed on public spaces owned and operated by TxDOT such as rest areas, easements, public ROWs, 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) TxDOT will implement the following practices to minimize landscaping-related pollutant generation with regard to public spaces owned and operated by TxDOT:

- 1) Educational activities, permits, certifications, and other measures for the permittee's applicators and distributors.
- 2) Pest management measures that encourage non-chemical solutions where feasible. Examples include:
 - (a) Use of native plants or xeriscaping;
 - (b) Keeping clippings and leaves out of the MS4 and the streets 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; and,
 - (d) Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing motorist safety.
- c) TxDOT will develop schedules for chemical application in public spaces owned and operated by the permittee that minimizes the discharge of pollutants from the application due to irrigation and expected precipitation.
- d) TxDOT will ensure collection and proper disposal of the permittee's unused pesticides, herbicides, and fertilizers.

5.3 Best Management Practices and Measurable Goals

5.3.1 Program Development

TxDOT will fully implement all applicable new elements and all applicable elements in newly regulated Phase II MS4 areas by the end of the current permit term. All new elements and elements in newly regulated Phase II areas completed will be included in the Annual report in the reporting year accomplished.

5.3.2 TxDOT-Owned Facilities and Control Inventory

TxDOT will ensure inspections of good housekeeping and related BMPs are completed once per permit term at facilities within or immediately adjacent to the regulated area by implementing the following BMPs:

- 1) TxDOT will complete the *"Facility Environmental Compliance Survey"* at least once during the permit term for each facility within or adjacent to the ROW within the MS4. A TxDOT team will inspect TxDOT maintenance facility operations in the following program areas at each TxDOT maintenance facility: stormwater, solid waste management, hazardous waste management, used oil and oil filter management, used antifreeze management, used lead acid battery management, scrap tire management, general housekeeping, equipment washing wastewater management, spill prevention control and countermeasure (SPCC) planning, and petroleum storage tank management. Attachment J contains the TxDOT Facility Environmental Compliance Survey.

TxDOT will include the number of inspections completed during the permit year in the annual report.

- 2) TxDOT personnel or TxDOT approved consultants will inspect and maintain permanent structural control measures and ensure adequate long-term operation of BMPs. Maintenance of permanent structural controls includes repair of erosion features, removal of sediment and debris, etc. TxDOT currently has design standards that ensure compliance for structural and non-structural runoff controls. TxDOT will update its inventory and assess the status of the structural controls as determined by TxDOT.

TxDOT will include the number of inspections completed during the permit year in the annual report.

- 3) TxDOT ENV will map/locate permanent structural controls, such as detention/irrigation ponds, hazardous waste traps, sand filter traps, infiltration ponds, or catch basins. TxDOT will perform the mapping of 5 districts per year or will perform the mapping of the entire MS4 within the 5-year permit term.

A map will be included in the annual reports.

- 4) TxDOT's procedure for disposal of dredged spoil and accumulated sediment from structural controls is to dispose of sediment into either upland locations or landfills. This procedure will not result in re-deposition of sediment into the system, and assures proper disposal of sediments in accordance with 30 TAC Chapter 330 or 335 rules. Floatables that are collected will be disposed of in a municipal landfill.

TxDOT will report the number of structural controls receiving maintenance each year in the annual report.

5.3.3 Training and Education

TxDOT employees who perform work that could affect stormwater within the MS4 attend at least one of the training classes listed in Attachment B per permit term.

TxDOT requires all in-house personnel handling and applying herbicides, pesticides, and fertilizers take a 12-hour training course and become licensed ground applicators. Licensing is achieved by passing an examination administered by the Texas Department of Agriculture. An annual eight-hour refresher course is required for licensed applicators.

Training programs familiarize TxDOT employees about office waste recycling. TxDOT continues to educate affected personnel concerning recycling of waste oil, batteries and tires; disposal of hazardous materials and solvents; and proper removal of asbestos and lead-based paint. Since 1995, TxDOT has been a member of the Recycling Development Marketing Board, and TxDOT has developed a Recycling and Recycled Products Program geared toward road construction and maintenance, offices, equipment fleet, buildings, break areas, and cafeterias. Training classes are listed in Attachment B.

TxDOT will report the number of employees and contractors that received training during the permit year in the annual report.

5.3.4 Disposal of Waste Material

TxDOT manages the removal of waste products threatening water quality on the ROW by:

- Checking the EPA list of hazardous chemical names if known. EPA also provides a list of sources that generate hazardous waste and should be checked;
- Understanding the process of identification and disposal;
- Testing the waste for hazardous characteristics; and,
- By removing the subject material from the ROW as quickly as possible to avoid potential migration and further contamination.

The discharge or disposal of used motor vehicle fluids and household hazardous wastes, and the intentional disposal of collected quantities of grass clippings, leaf litter, and animal wastes into the MS4 is prohibited.

TxDOT will report the cost, and volume if available, of waste material disposed of each year in the annual report.

5.3.5 Contractor Requirements and Oversight

Under existing laws, various utility firms and agencies have a legal right to install their lines along and across state highways. TxDOT will assure that its policies governing the design, location, and methods of installation are set out in the Maintenance Operations Manual (found at <http://onlinemanuals.txdot.gov/txdotmanuals/ope/ope.pdf>), and in the Utility Accommodation Policy Manual maintained by the ROW Division. The ROW Division's "Utility Manual" (found at <http://onlinemanuals.txdot.gov/txdotmanuals/utl/index.htm>) are implemented by contractors. TxDOT will give guidance in the administration of utility adjustments or financial participation therein, where applicable. Although difficult to determine the legal status of some of the proposed installations, TxDOT maintains its rights to designate the location and conditions that will govern their installation and maintenance.

TxDOT receives requests to temporarily use highway ROW for investigation and remediation of leaking petroleum storage tanks (LPST). The applicants are both private property owners and public entities. Through cooperation with TCEQ, TxDOT is successfully using an agreement process with the LPST site owner and contractor to manage the LPST investigation and remediation operations on TxDOT ROW. Any remediation involving the ROW requires TxDOT approval.

TxDOT will report the number of utility permits issued during the permit year in the annual report. Any issues related to contractor operations will also be included, as necessary, in the annual report.

5.3.6 Roadway Operation and Maintenance Activities

TxDOT operates and maintains highways in a manner to minimize the discharge of pollutants from road repair, equipment yards, and material storage/maintenance facilities to the MEP. BMPs and statewide programs described throughout this SWMP have the primary

goal of minimizing pollutants from roadways, as the highways are TxDOT's primary MS4 area of operation. In addition, TxDOT implements the following BMPs to minimize pollutant discharge:

1) Assessment of permittee-owned operations

TxDOT has evaluated operation and maintenance (O&M) activities for their potential to discharge pollutants in stormwater. TxDOT's findings for each permit requirement (*in italics*) is:

a) *Road and parking lot maintenance may include such areas as pothole repair, pavement marking, sealing, and re-paving;*

TxDOT engages in earth-disturbing operations during regular maintenance of roadways. These operations, such as shoulder blading and ditch cleaning, do not presently meet the definition of construction activities as regulated by the TPDES program, but TxDOT encourages the use of controls to limit erosion and sedimentation resulting from these projects. Most highway maintenance sites experience little erosion since the work is performed as follows:

- At the proper time of year (season);
- At a location protected from sensitive environments;
- With minimal land area disturbance; and,
- Only after an investigation/knowledge of area soils.

During usual maintenance, minimal amounts of land area are disturbed or rehabilitated into additional paved surface areas, which could increase stormwater runoff. Ditch work is scheduled in seasons when the vegetation will recover, or seeding, sodding, and fertilizing could safely be utilized.

b) *Bridge maintenance may include such areas as re-chipping, grinding, and saw cutting;*

Bridge paint removal and application projects are closely scrutinized to ensure potentially hazardous materials do not adversely affect the environment. Sand blasting has typically been used in the cleaning and removal of paint from equipment and structures, particularly on maintenance of existing bridges. New air control regulations limiting airborne particles and the work locations near water impoundments has placed a greater awareness of the potential for environmental impact to receiving waters. Old paints often contain a substantial amount of heavy metals (e.g., lead, chromium), with some of the newer paints containing volatile organic compounds (VOCs).

Before paint is to be removed, it is to be tested for heavy metals (especially lead), and where suspected, asbestos. If lead is present, all blast material will be contained and collected. Blast material is to be tested for hazardous materials and disposed of properly. TxDOT, at several levels, is working with state and federal agencies in researching methods of encapsulating the resulting

contaminant (usually lead and/or asbestos) and containing blast sand into reusable material such as concrete or clay bricks. If asbestos is present, sand blasting is not allowed.

Heavy equipment and building paint removal and application projects will continue to be performed by contract and state labor.

c) Cold weather operations, including plowing, sanding, and application of deicing and anti-icing compounds and maintenance of snow disposal areas; and

Nothing is more important than safety to TxDOT especially during harsh winter weather. TxDOT's primary objective is to provide motorists with safe travel on all of the roadways we maintain. We do this through the strategic use of various resources at our disposal as well as through the dedication, determination and teamwork of the men and women of TxDOT.

Roadways are prioritized by Interstate, U.S. Highway, State Highway, and Farm-to-Market as well as bridges, overpasses, high traffic interchanges, and high traffic roadways. Local authorities are responsible for city and county roads.

TxDOT crews begin preparing for winter weather early in the season. Equipment is inventoried, inspected and calibrated for quick response. Pre-icing and de-icing materials are inventoried and ordered, as needed. Stockpiles are replenished with enough materials for a multiple day event and emergency contracts are readied, just in case. "Watch for Ice on Bridges" signs are opened at the beginning of the season.

Activities that occur before a predicted ice/snow event include:

- Equipment Preparations:
 - All equipment is serviced;
 - Spreader boxes are installed on dump trucks;
 - Spreader equipment is calibrated to deliver correct material amounts; and,
 - Heavy equipment loaders are staged and operable.
- Other Preparations:
 - Routes are determined and assigned according to winter weather plans;
 - Sand and chemical stockpiles are strategically located in areas expected to be impacted;
 - TxDOT monitors weather reports and communicates with nearby districts to determine if help is needed;
 - If needed, crews may be dispatched to pre-treat bridges and overpasses; and,
 - Districts participate in National Weather Service conference calls.

- During an Ice/Snow Event:
 - Supervisors continually monitor weather and road conditions, traffic cameras, road sensors, hotlines and management reports;
 - Personnel and equipment adjustments are made as needed;
 - Crews spread sand and pre-icer or de-icer materials along assigned routes;
 - Work continues 24/7 to keep roadways passable;
 - Public Information Officers work with the media (newspapers, radio, TV) and through social media networks (Twitter, Facebook, etc.) to get road condition information out to the public; and,
 - Road conditions are updated on TxDOT's Web site.
- After an Ice/Snow Event:
 - Material stockpiles are replenished to be ready for the next event;
 - Roadways are swept clean of excess sand or other materials; and,
 - Winter plans are evaluated for effectiveness and adjusted if needed.
- Materials Used
 - Pre-icing: Liquid magnesium chloride is primarily sprayed on bridges and overpasses before a storm to help prevent a hard bond of ice, reduce snow buildup and to speed snow and ice breakup;
 - De-icing: Magnesium chloride pellets are mixed with sand to help remove thick layers of ice already on the road. Magnesium chloride is made with natural sea salt and is less corrosive than rock salt and more environmentally friendly than baking soda;
 - Grade 5 Sand: used to improve traction and as a mixing agent for magnesium chloride;
 - Salt: still preferred in some situations because it is very fast-acting. Sometimes used to free up stalled trucks on an icy road; and,
 - Calcium Magnesium Acetate: chemical formulation of dolomitic lime and acetic acid. Used in a granular form, it is easier to spread with pickups than the larger bulk bags of magnesium chloride.

Removal of snow and ice from TxDOT roadways is classified as an emergency operation that takes precedence over all other work to ensure public safety. Deicing salt is used on a limited basis by TxDOT. The preferred method of maintaining a safe roadway during icy conditions is through the use of sand without salt. Only during the most severe conditions will salt be mixed with the sand, at approximately 100 pounds of salt per cubic yard of sand. During and

after the icy conditions, inspections are conducted to ensure proper cleanup operations minimize pollutant discharge from the MS4.

- d) *ROW maintenance, including mowing, herbicide and pesticide application, and planting vegetation.*

Mowing is addressed in Section 5.3.6.5.

Although numerous structural controls are available to reduce pollutant loading, TxDOT's management practices rely heavily on vegetation and re-vegetation management principles.

TxDOT implements controls to reduce the discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers, applied by TxDOT's employees or contractors, to public ROW, or other TxDOT property. TxDOT has documented its management of roadside vegetation in the Roadside Vegetation Management Manual as follows:

- The purposes of the vegetation management guidelines are to: i) Enhance the safety of the traveling public; ii) Enhance environmental protection; iii) Promote and preserve native wildlife habitats and native flora throughout the state; iv) Mitigate erosion while providing adequate drainage; and v) Promote coordination and efficiency in maintenance activities;
- Vegetation management includes 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;
- TxDOT's herbicide program is based upon extensive research for chemicals which will provide the desired control of the target species while presenting the minimum possibility of harm to the environment, the applicator, or to the traveling public;
- Employees applying herbicides are licensed by the state and furthermore, TxDOT arranges annual training workshops for TxDOT maintenance personnel, subcontractors, and contractors. Materials include information about vegetation management;
- The Texas Agriculture Code requires TxDOT employees to possess a valid, non-commercial, pesticide applicator's license prior to applying herbicide on the transportation system ROW, or on the grounds of any TxDOT facility. The training prepares TxDOT employees to test for a non-commercial pesticide applicator's license from the Texas Department of Agriculture (TDA) and introduces TxDOT employees to TxDOT's herbicide program. This course is offered to maintenance personnel. Once licensed, applicators must attend a TxDOT training session or watch continuing education videos on an annual

basis. Also in accordance with TDA requirements, TxDOT maintains herbicide application records for two years after herbicide application;

- The plan calls for strict coordination between mowing and herbicide operations. As an example, TxDOT may overspray an area, which allows the herbicide to translocate to the target species' root system;
- While not as common, TxDOT does require insect pesticide applications for worker and public safety, fire ant areas, bees hives, and other insect nests in TxDOT ROW and operational areas including rest stops and signal boxes; and,
- TxDOT's Specifications for Construction and Maintenance of Highways, Streets, and Bridges, Item 166.2, specifies: the use of a complete fertilizer containing nitrogen (N), phosphorous (P), and potash (K) nutrients unless otherwise specified on the plans; at least 50% of the nitrogen component must be of a slow-release formulation; and, ensures that fertilizer is in an acceptable condition for distribution in containers labeled with the analysis. Item 166.3 - specifies that the fertilizer is delivered and applied uniformly at a rate equal to 100 lb. of nitrogen per acre or at the analysis and rate specified on the plans. Fertilizers are normally applied as a one-time item nearing the end of initial construction of a roadway and vegetation is being established.

2) TxDOT 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; and,
- Trash.

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

- Replacing materials and chemicals with more environmentally benign materials or methods. There are numerous chemicals being registered by the EPA for both agricultural (crop) and ROW (non-crop) situations. Some of these chemicals have proven to provide excellent benefits to the vegetation manager in over-coming and/or controlling specific vegetation problems along the transportation system. TxDOT does extensive research annually on herbicides to ensure it is using the best, latest, and safest EPA approved herbicides.
- Changing operations to minimize the exposure or mobilization of pollutants to prevent them from entering surface waters. TxDOT has incorporated, where applicable, a 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 concerns:

- 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.
- Placing barriers around or conducting runoff away from deicing salt/rock storage areas to prevent discharge into surface waters. TxDOT has berms or barriers around the deicing salt/rock storage areas. Some districts store salt/rock inside the building. TxDOT has been moving toward using a much lower salt concentration brine water for deicing and pre-icing.
- 4) Perform inspections of pollution prevention measures - All pollution prevention measures implemented at TxDOT-owned facilities will be visually inspected once per permit term. Inspection forms will be maintained at the TxDOT's district offices and made available for review by the TCEQ upon request.

TxDOT performs and submits its findings in Section 5.3.2 above.

5) Mowing and Vegetation Management for Street, Road, or Highway Maintenance

Mowing and vegetation management are an integral part of TxDOT's highway maintenance program. The wildflower program is part of a comprehensive vegetation management program. It encourages the growth of native species that require less mowing and care. The native grasses and wildflowers help to conserve water, control erosion and provide a habitat for wildlife. The department normally plants wildflowers annually and has a multi-million dollar annual landscaping budget. The amounts vary each year depending on its need. Mowing is delayed until wildflowers have produced mature seeds to assure the preservation and propagation of wildflower species. Detailed information on the wildflower program, as well as types of mowing, special situations mowing and litter pickup, and non-mow areas, are located in the Roadside Vegetation Management Manual, (<http://onlinemanuals.txdot.gov/txdotmanuals/veg/index.htm>).

TxDOT will report the number of miles mowed during the permit year and include in the annual report.

6) Storm Sewer System and Drainage Ditch Cleaning

Drainage ditches are cleaned on an as-needed basis during the summer. During the winter, all state-owned drainage ditches are systematically cleaned. Stormwater structures are cleaned on an as-needed basis as identified by inspection procedures.

TxDOT will report the number of miles of ditches cleaned during the permit year and include in the annual report.

7) Material Storage at Maintenance Facilities

TxDOT's Occupational Safety (OCC) and Environmental Affairs (ENV) divisions have implemented programs that require periodic inspections of each district/maintenance section. The objective of both programs is to note hazards within the workplace that may contribute to employee accidents and/or violate state and federal regulations (including water quality). The responses by the Districts have shown that the OCC and ENV survey teams are serving as educators as well as reporters. These programs have resulted in improved operations associated with the storage, handling, labeling and personal protection requirements involved with such items as solvents, wet batteries, paint/oil/grease barrels, etc.

8) Stockpiled Materials

Stockpile Management procedures and practices are designed to reduce or eliminate air and stormwater pollution from stockpiles of soil, paving materials such as portland cement concrete rubble, reclaimed asphalt pavement (RAP), hot mixed-cold laid bituminous mixes, limestone rock asphalt, pre-coated aggregates, various patching mixes, and road deicing salt and sand.

TxDOT implements best management practices at all facilities that stockpile soil and other materials. Protection of stockpiles is a year-round requirement. To properly manage stockpiles TxDOT:

- Locates stockpiles away from concentrated flows of stormwater, drainage courses, and inlets;
- Protects all stockpiles from stormwater run-on using temporary perimeter sediment barriers, such as berms, dikes, fiber rolls, silt fences, sandbag, gravel bags, or straw bale barriers where available and appropriate;
- Places bagged materials on pallets and under cover where available and appropriate;
- Will inspect stockpiled materials once every 18 months to verify continued BMP implementation; and,
- Repair and/or replace perimeter controls and covers as needed to keep them functioning properly.

TxDOT will report the number of miles mowed, the linear feet of storm sewer system and drainage ditches cleaned, and the number of inspections performed at material storage and stockpile areas in the annual report.

5.3.7 Structural Control Maintenance

BMPs associated with this section are performed and reported in Sections 5.3.2 and 5.3.6 above. These activities include:

- TxDOT personnel or TxDOT approved consultants will inspect and maintain permanent structural control measures and ensure adequate long-term operation of BMPs. Maintenance of permanent structural controls includes repair of erosion features, removal of sediment and debris, etc. TxDOT currently has design standards that ensure compliance for structural and non-structural runoff controls. TxDOT will update its inventory and assess the status of the structural controls as determined by TxDOT.

TxDOT includes the number of inspections completed, and the volume of trash and debris removed, if available, from permanent structural controls during the permit year in Section 5.3.2.

- TxDOT ENV will map/locate permanent structural controls, such as detention/irrigation ponds, hazardous waste traps, sand filter traps, infiltration ponds, or catch basins. TxDOT will perform the mapping of 5 districts per year or will perform the mapping of the entire MS4 within the 5-year permit term.

A map will be included in the annual reports in Section 5.3.2.

- TxDOT's procedure for disposal of dredged spoil and accumulated sediment from structural controls is to dispose of sediment into either upland locations or landfills. This procedure will not result in re-deposition of sediment into the system, and assures proper disposal of sediments in accordance with 30 TAC Chapter 330 or 335 rules. Floatables that are collected will be disposed of in a municipal landfill.

TxDOT reports the cost of spoil, sediment and trash removed in the annual report in Section 5.3.2.

- Mowing and vegetation management.

TxDOT reports the number of miles mowed during the permit year and include in the annual report in Section 5.3.6.

- Storm sewer system and drainage ditch cleaning.

TxDOT reports the number of miles of ditches cleaned during the permit year and include in the annual report in Section 5.3.6.

5.3.8 Additional Requirements for Previous Phase I Permitted Areas

In addition to all the requirements described above, TxDOT meets the following requirements in areas that were previously permitted under a Phase I permit.

Pesticide, Herbicide, and Fertilizer Application and Management

- 1) Landscape maintenance – Mowing and vegetation management are an integral part of TxDOT's highway maintenance program. The wildflower program is part of a comprehensive vegetation management program. It encourages the growth of native species that require less mowing and care. The native grasses and wildflowers help to conserve water, control erosion and provide a habitat for wildlife. The department normally plants wildflowers annually and has a multi-million dollar annual landscaping budget. The amounts vary each year depending on its need. Mowing is delayed until wildflowers have produced mature seeds to assure the preservation and propagation of wildflower species. Detailed information on the wildflower program, as well as types of mowing, special situations mowing and litter pickup, and non-mow areas, are located in the Roadside Vegetation Management Manual,

(<http://onlinemanuals.txdot.gov/txdotmanuals/veg/index.htm>).

TxDOT reports the number of miles mowed during the permit year in Section 5.3.6.

- 2) TxDOT implements the following practices to minimize landscaping-related pollutant generation with regard to public spaces it owns and operates:
 - a) Employees applying herbicides are licensed by the state and furthermore, TxDOT arranges annual training workshops for TxDOT maintenance personnel, subcontractors, and contractors. Employees receiving training are reported in Section 5.3.3.
 - b) TxDOT implements controls to reduce the discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers, applied by TxDOT's employees or contractors, to public ROW, or other TxDOT property.

This includes schedules developed for application to minimize runoff as described in Section 5.3.6. The controls are specified and reported in Section 5.3.6.

TxDOT ensures the proper collection and disposal of unused pesticides, herbicides, and fertilizers as specified in Section 5.3.6.

TxDOT reports these activities in Section 5.3.6.

5.4 BMP Implementation Schedule Activity, and Measurable Goals

Table 5.1

POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR TRANSPORTATION OPERATIONS				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
Annually/Aug	5.3.1- Program Development	Fully implement all applicable new elements and all applicable elements in newly regulated Phase II MS4 areas by the end of the current permit term.	All new elements and elements in newly regulated Phase II areas completed will be included in the Annual report.	ENV District
Annually/Aug	5.3.2.a - TxDOT- Owned Facilities and Control Inventory	Complete the <i>“Facility Environmental Compliance Survey”</i> at each facility within or immediately adjacent to the regulated area at least once during the permit term.	Log the number of facility inspections completed during the permit year in the annual report.	District ENV
	5.3.2.b - TxDOT- Owned Facilities and Control Inventory	Inspect and maintain permanent structural control measures and ensure adequate long-term operation of BMPs.	Include the number of facility inspections completed during the permit year in the annual report.	District ENV
	5.3.2.c - TxDOT- Owned Facilities and Control Inventory	Map/locate permanent structural controls. Perform mapping of 5 districts per year.	Include updated map in the annual report.	ENV District
	5.3.2.d - TxDOT- Owned Facilities and Control Inventory	Implement procedures for disposal of dredged spoil and accumulated sediment from structural controls and dispose of sediment into either upland locations or landfills.	Report the number of facility inspections in the annual report. Volume of spoil, sediment, and trash is reported in Compass Codes 520, 521, 522, 523, 527, 524, 561, 562, 563, 570, and 620.	ENV District
Annually/Aug	5.3.3-Training and Education	Require TxDOT staff to attend training classes listed in Attachment B as applicable.	Record the number of participants for each training class. Records will be maintained at each District and ENV for TCEQ review.	District ENV
Annually/Aug	5.3.4- Disposal of Waste Material	Manages the removal of waste products threatening water quality on the ROW.	Report the cost and volumes from Compass Data; Function Codes: 511 (ROW Mowing), 513 (Spot Mowing), 830 (Hazard Material Clean-up, Spills or Leaking Storage Tanks), 831 (Hazard Material Clean-up, Abandoned Materials)	District ENV

POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR TRANSPORTATION OPERATIONS				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
Annually/Aug	5.3.5- Contractor Requirements and Oversight	Assure that policies governing the design, location, and methods of installation are set out and followed by contractors.	Report the number of utility permit requests received from contractors during the permit year in the annual report. Any issues relayed to contractor operations will also be included, as necessary, in the annual report.	District
Annually/Aug	5.3.6.a - Roadway Operation and Maintenance Activities	Mowing and vegetation management for street, road, or highway maintenance.	Report the costs, number of acres mowed and chemical controls used during the permit year and include in the annual report. Compass Function Codes 511, 513, 541 and 545.	District
	5.3.6.b - Roadway Operation and Maintenance Activities	Storm sewer system and drainage ditch cleaning.	Report the cost and cubic yards of ditches cleaned during the permit year and include in the annual report. Compass Function Codes 561.	ENV
	5.3.6.c - Roadway Operation and Maintenance Activities	Seeding and vegetation control.	Report the pesticide herbicide cost from Compass Function Codes 540, 548, 551, and 552 and include in the annual report.	District ENV
	5.3.6.d - Roadway Operation and Maintenance Activities	Material storage at maintenance facilities.	Number of inspections performed. Reported in 5.3.2.a above.	ENV
	5.3.6.e - Roadway Operation and Maintenance Activities	Stockpiled materials.	Number of inspections performed. Reported in 5.3.2.a above.	ENV
Annually/Aug	5.3.7.a - Structural Control Maintenance	Inspect and maintain permanent structural control measures and ensure adequate long-term operation of BMPs.	The number of inspections completed, and the cost of trash and debris removed, if available, from permanent structural controls during the permit year. Compass Codes 520, 521, 522, 523, 524, 527, 561, 562, 563, 570, and 620.	District ENV

POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR TRANSPORTATION OPERATIONS				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
	5.3.7.b - Structural Control Maintenance	Map/locate permanent structural controls, such as detention/irrigation ponds, hazardous waste traps, sand filter traps, infiltration ponds, or catch basins.	The map will be included in the annual reports in Section 5.3.2.c.	District ENV
	5.3.7.c - Structural Control Maintenance	Disposal of dredged spoil and accumulated sediment from structural controls.	The volume, quantity, and cost of spoil, sediment and trash removed. Compass Codes 520, 521, 522, 523, 524, 527, 561, 562, 563, 570, and 620.	District ENV
	5.3.7.d - Structural Control Maintenance	Mowing and vegetation management.	The number of miles mowed during the permit year are reported in Section 5.3.6.a.	District ENV
	5.3.7.e - Structural Control Maintenance	Storm sewer system and drainage ditch cleaning.	The miles of ditches cleaned during the permit year are reported in Section 5.3.6.b.	District ENV

POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR TRANSPORTATION OPERATIONS				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
ADDITIONAL REQUIREMENTS FOR PREVIOUS PHASE I PERMITTED AREAS				
Annually/Aug	5.3.8.a - Pesticide, Herbicide, and Fertilizer Application and Management	Landscape maintenance.	TxDOT reports the number of miles mowed during the permit year in Section 5.3.6.a.	ENV
	5.3.8.b - Pesticide, Herbicide, and Fertilizer Application and Management	Employees applying herbicides are licensed by the state and furthermore, TxDOT arranges annual training workshops for TxDOT maintenance personnel, subcontractors, and contractors.	Employees receiving training are reported in Section 5.3.3.	ENV
	5.3.8.c - Pesticide, Herbicide, and Fertilizer Application and Management	Implement controls to reduce the discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers.	The controls are specified and reported in Section 5.3.6.c.	District

	5.3.8.d - Pesticide, Herbicide, and Fertilizer Application and Management	Ensure proper collection and disposal of unused pesticides, herbicides, and fertilizers.	TxDOT reports these activities in Section 5.3.6.c.	District
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6.0 MONITORING AND EVALUATION

6.1 Permit Requirements

The permittee shall, in areas previously permitted under a Phase I permit, develop and implement an Alternate Stormwater Assessment Program (See Part III.B.2(i)(5)) and continue implementing a floatables monitoring and reduction program. The program must include:

- 1. Dry weather screening – The permittee shall continue to screen and detect the presence of illicit discharges to its MS4 (See Part III.B.2(i)(5)).*
- 2. Evaluation of water quality – The permittee shall continue to evaluate the watershed using existing stormwater characterization data. This evaluation must be conducted in the existing Phase I areas where the permittee was previously responsible for outfall or watershed monitoring under the Wet Weather Characterization program and must include available data for the pollutants previously monitored by the permittee under its Phase I permits, as listed in Attachment 3. The results of the evaluation must be submitted with the year 4 annual report. Phase I areas under this requirement include: TxDOT Beaumont (WQ0004644000), City of San Antonio (WQ0004284000), TxDOT Austin (WQ0004645000), City of Houston (WQ0004685000), TxDOT Houston District (Pasadena) (WQ0004520000), City of Fort Worth (WQ0004350000), City of Arlington (WQ0004635000), and City of Dallas (WQ0004521000). (See Part III.B.2(i)(5)).*
- 3. Floatables monitoring - The permittee shall continue to implement a program to reduce the discharge of floatables (e.g. litter and other human generated solid refuse) into the MS4, which must include source controls and, where necessary, structural controls and other appropriate controls. The amount of material collected shall be estimated by weight, volume, or by other practical means. Results shall be included in the statewide annual report.*

6.2 Program Overview

TxDOT will, in areas previously permitted under a Phase I permit, continue dry weather screening, perform an evaluation of water quality through the development and implementation of an Alternate Stormwater Assessment Program (See Part III.B.2(i)(5) of Permit No. WQ0005011000), and continue implementing a floatables monitoring and reduction program.

6.3 Best Management Practices and Measurable Goals

6.3.1 Dry weather screening

TxDOT will continue to screen and detect the presence of illicit discharges to its MS4 as defined in Section 2.3.9 of this SWMP. This evaluation will be conducted in the existing Phase I areas.

This permit requirement is performed and reported in Section 2.3.9 above.

6.3.2 Evaluation of water quality

TxDOT will continue to evaluate the watershed using existing stormwater characterization data. This evaluation will be conducted in the existing Phase I areas where the permittee was previously responsible for outfall or watershed monitoring under the Wet Weather Characterization program and will include available data for the pollutants previously monitored by the permittee under its Phase I permits, as listed in Attachment 3 of Permit No. WQ0005501000. The results of the evaluation will be submitted with the year 4 annual report. Phase I areas under this requirement include: TxDOT Beaumont (WQ0004644000), City of San Antonio (WQ0004284000), TxDOT Austin (WQ0004645000), City of Houston (WQ0004685000), TxDOT Houston District (Pasadena) (WQ0004520000), City of Fort Worth (WQ0004350000), City of Arlington (WQ0004635000), and City of Dallas (WQ0004521000). (See Part III.B.2(i)(5)) as defined in Section 2.3.9 of this SWMP.

This permit requirement is performed and reported in Section 2.3.9 above.

6.3.3 Floatables Monitoring

TxDOT's previously issued Phase I permits required the implementation of a program to reduce the discharge of floatables (for example, litter and other human generated solid refuse) into the TxDOT MS4. To assure compliance with TxDOT TPDES permit requirements, TxDOT has and will continue to implement a program to reduce the discharge of floatables (for example, litter and other human generated solid refuse) into the TxDOT MS4, which will include source controls and, where necessary, structural controls and other appropriate controls.

TxDOT implements a statewide program including the "Don't Mess with Texas" campaign, the "Adopt-a-Highway" program, and street sweeping to reduce the discharge of floatables into its statewide MS4. The program primarily uses litter pickup, monitoring, and source control to reduce floatables.

TxDOT hires private contractors to perform street sweeping on TxDOT roadways throughout the permitted areas. Most of the street sweeping is vacuum-assisted which provides the greatest level of particulate recovery. In addition, TxDOT compiles data (i.e., litter weight) from the "Adopt-a-Highway" Program and reports the quantity to TCEQ in annual reports.

TxDOT also tracks annual expenditures for the DMWT program which will be included in the annual reports.

This permit requirement is performed and reported in Section 1.3.1, 1.3.2, 1.3.3, 5.3.4, 5.3.6, and 5.3.7 above.

6.4 Monitoring and Evaluation Implementation Schedule Activity, and Measurable Goals

Table 6.1

MONITORING AND EVALUATION				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
THE FOLLOWING BMPs WILL BE PERFORMED ONLY IN PREVIOUSLY PERMITTED PHASE I AREAS				
Annually/Aug	6.3.1-Dry Weather Screening	Screen 20 percent of the previously permitted Phase I areas and detect the presence of illicit connections and improper discharges from adjacent MS4s and illegal third parties discharges to the MS4.	Requirement is performed and reported in Section 2.3.9.	ENV District
Year 4/Aug	6.3.2-Evaluation of Water Quality	Evaluate the listed watersheds using existing stormwater characterization data collected by reliable sources such as TCEQ, local river authorities, partnerships, and/or other local efforts as appropriate.	Requirement is performed and reported in Section 2.3.9.f.	District ENV
Annually/Aug	6.3.3-Floatables	Implement statewide programs including the “Don’t Mess with Texas” campaign, the “Adopt-a-Highway” program, and street sweeping to reduce the discharge of floatables into the statewide MS4.	Annual expenditures for the "DMWT" program are reported in Section 1.3.1.	ENV
			"Adopt-a-Highway" program data is reported in Section 1.3.2 and 1.3.3.	ENV
			Trash and debris disposed of as floatable removal is reported in Section 5.3.4, 5.3.6, and 5.3.7.	District

7.0 IMPAIRED WATER BODIES AND TOTAL MAXIMUM DAILY LOAD (TMDL) REQUIREMENTS

7.1 Permit Requirement

Discharges of the pollutant(s) of concern (POC(s)) to impaired water bodies for which there is a TCEQ and EPA approved total maximum daily load (TMDL) are not eligible for this permit unless they are consistent with the approved TMDL. A water body is impaired for purposes of the permit if it has been identified, pursuant to the latest TCEQ and EPA approved CWA §303(d) list or identified in the Index of Water Quality Impairments in the Integrated Report of Surface Water Quality for Clean Water Act Sections 305(b) and 303(d), as not meeting Texas Surface Water Quality Standards.

The permittee shall control the discharges of POC(s) to impaired waters and waters with approved TMDLs as provided in sections (a) and (b) below, and shall assess the progress in controlling those pollutants.

(a) Discharges to Water Quality Impaired Water Bodies with an Approved TMDL

For any portion of the MS4 that discharges to a portion of a watershed with an approved TMDL, where stormwater has the potential to cause or contribute to the impairment, the permittee shall include in the SWMP controls targeting the POC(s) along with any additional or modified controls required in the TMDL and this section.

The SWMP and required annual reports must include information on implementing any targeted controls required to reduce the POC(s) as described below:

(1) Targeted Controls

The SWMP must include a detailed description of all targeted controls to be implemented, such as identifying areas of focused effort or implementing additional Best Management Practices (BMPs) to reduce the POC(s) in the impaired waters.

(2) Measurable Goals

For each targeted control, the SWMP must include a measurable goal and an implementation schedule describing BMPs to be implemented during each year of the permit term.

(3) Identification of Benchmarks

The SWMP must identify a benchmark for the POC(s). Benchmarks are designed to assist in determining if the BMPs established are effective in addressing the POC(s) in stormwater discharge(s) from the MS4 to the maximum extent practicable (MEP). The BMPs addressing the POC(s) must be re-evaluated on an annual basis for progress towards the benchmarks and modified as necessary within an adaptive management framework. These benchmarks are not numeric effluent limitations or permit conditions but intended to be guidelines for evaluating progress towards reducing pollutant discharges consistent with the benchmarks. The exceedance of a

benchmark is not a permit violation and does not in itself indicate a violation of instream water quality standards.

The benchmark must be determined based on one of the following options:

- a. If the MS4, or a portion thereof, is subject to a TMDL that identifies a Waste Load Allocation(s) (WLA) for permitted MS4 stormwater sources, then the SWMP may identify it as the benchmark. Where an aggregate allocation is used as a benchmark, all affected MS4 operators are jointly responsible for progress in meeting the benchmark and shall (jointly or individually) develop a monitoring/assessment plan as required in Part II.D.3(a)(6).*
- b. Alternatively, if multiple MS4s are discharging into the same impaired watershed with an approved TMDL, with an aggregate WLA for all permitted stormwater MS4s, then the MS4s may combine or share efforts to determine an alternative sub-benchmark for the POC (e.g., bacteria) for their respective MS4. The SWMP must clearly define this alternative approach and must describe how the sub-benchmark would cumulatively support the aggregate WLA. Where an aggregate benchmark has been broken into sub-benchmarks for individual MS4s, each permittee is only responsible for progress in meeting its sub-benchmark.*

(4) Statewide Annual Report

The annual report must include an analysis of how the selected BMPs will be effective in contributing to achieving the benchmark.

(5) Impairment for Bacteria

If the POC is bacteria, the permittee shall include focused BMPs addressing the below areas, as applicable, in the SWMP and implement as appropriate. If a TMDL Implementation Plan (I-Plan) is available, the permittee may refer to the I-Plan for appropriate BMPs. The SWMP and annual report must include the selected BMPs. The permittee may not exclude BMPs associated with the minimum control measures required under 40 CFR §122.34 from its list of proposed BMPs. Proposed BMPs will be reviewed by the executive director during the SWMP review and approval process.

The BMPs shall, as appropriate, address the following:

- a. Sanitary Sewer Systems;*
- b. On-site Sewage Facilities;*
- c. Illicit Discharges and Dumping from septic systems, grease traps, grit traps, or other sources; and*
- d. Animal Sources such as pet waste from rest areas.*

(6) Monitoring or Assessment of Progress

The permittee shall monitor or assess progress in achieving benchmarks and determine the effectiveness of BMPs, and shall include documentation of this

monitoring or assessment in the SWMP and annual reports. In addition, the SWMP must include methods to be used.

- a. The permittee may use either of the following methods to evaluate progress towards the benchmark and improvements in water quality:*

(i) Evaluating Program Implementation Measures

The permittee may evaluate and report progress towards the benchmark by describing the activities and BMPs implemented, by identifying the appropriateness of the identified BMPs, and by evaluating the success of implementing the measurable goals.

The permittee may assess progress by using program implementation indicators, such as: (1) number of sources identified or eliminated; (2) decrease in number of illegal dumping; (3) increase in illegal dumping reporting; (4) success associated with the Don't Mess With Texas program campaign and how many times the public accessed the website; or, (5) increase in illegal discharge detection through dry screening, etc.; or

(ii) Assessing Improvements in Water Quality

The permittee may assess improvements in water quality by using available data for segment and assessment units of water bodies from other reliable sources such as the wet weather watershed program or other sources, or by proposing and justifying a different approach such as collecting additional instream or outfall monitoring data, etc. Data may be acquired from TCEQ, local river authorities, partnerships (such as regional watershed monitoring efforts), and/or other local efforts as appropriate.

- b. Progress towards achieving the benchmark shall be reported in the annual report. Annual reports shall report the benchmark and the year(s) during the permit term that the MS4 conducted additional sampling or other assessment activities.*

(7) Observing no Progress Towards the Benchmark

If, by the end of the third year from the effective date of the permit, the permittee observes no progress toward the benchmark either from program implementation or water quality assessments as described in Part II.D.3(a)(6), the permittee shall identify alternative focused BMPs that address new or increased efforts towards the benchmark or, as appropriate, shall develop a new approach to identify the most significant sources of the POC(s) and shall develop alternative focused BMPs for those (this may also include information that identifies issues beyond the MS4's control). These revised BMPs must be included in the SWMP and subsequent annual reports.

Where the permittee originally used a benchmark based on an aggregated WLA, the permittee may combine or share efforts with other MS4s discharging to the same watershed to determine an alternative sub-benchmark for the POC(s) for their

respective MS4s, as described in Part II.D3(a)(3)b. above. Permittees must document, in their SWMP for the next permit term, the proposed schedule for the development and subsequent adoption of alternative sub benchmark for the POC(s) for their respective MS4s and associated assessment of progress in meeting those individual benchmarks.

(b) Discharges Directly to Water Quality Impaired Water Bodies without an Approved TMDL

The permittee shall also determine whether any portion of the MS4 discharges directly to one or more water quality impaired water bodies where a TMDL has not yet been approved by TCEQ and EPA. If the permittee discharges directly into an impaired water body without an approved TMDL, the permittee shall perform the following activities for the areas of the MS4 subject to these requirements:

(1) Discharging a Pollutant of Concern

- a. Within the first year following the permit effective date, the permittee shall determine whether the MS4 may be a source of the POC(s) by referring to the CWA §303(d) list and then determining if discharges from the MS4 would be likely to contain the POC(s) at levels of concern.*
- b. If the permittee determines that the MS4 may discharge the POC(s) to an impaired water body without an approved TMDL, the permittee shall, no later than two years following the permit effective date, ensure that the SWMP includes focused BMPs, along with corresponding measurable goals, that the permittee will implement, to reduce, the discharge of POC(s) that contribute to the impairment of the water body.*
- c. In addition, no later than three years following the permit effective date, the permittee shall submit written notification to TCEQ to amend the SWMP to include any additional BMPs to address the POC(s).*

(2) Impairment of Bacteria

Where the impairment is for bacteria, the permittee shall identify potential significant sources and develop and implement focused BMPs for those sources. The permittee may at the very least address the sources listed in Part II.D.3(a)(5).

- (3) The annual report must include information on compliance with this section, including results of any sampling conducted by the permittee.*

7.2 Program Overview

TxDOT will identify outfalls within its regulated MS4 areas that will discharge directly into impaired water bodies using the latest TCEQ and EPA approved CWA §303(d) list within the first permit year. TxDOT will also identify the associated POCs within these segments during the first permit year. If additional BMPs are needed, TxDOT will revise the SWMP within the second permit year. TxDOT will perform the procedures described in the following “Water Quality Impaired Water Bodies (WQIWB) and Total Maximum Daily Load (TMDL) Best Management Practices (BMPs) Flow Chart” in Attachment K.

7.3 Best Management Practices and Measurable Goals

7.3.1 Discharges to Water Quality Impaired Water Bodies with an Approved TMDL

TxDOT will assess if its MS4 area draining to an impaired water body has the potential to cause or contribute to the impairment within the first permit year from the effective date of the permit and report its findings in the second year annual report. TxDOT will utilize the most recent list of impaired water bodies and EPA approved TMDL as well as current pending TMDLs and approved or pending Implementation Plans (I-Plans) made available by TCEQ. Tables 7.2 and 7.3 list the EPA approved TMDLs and approved or pending Implementation Plans (I-Plans), and impaired water bodies as defined by the TCEQ in the 2014 Texas Integrated Report - Texas 303(d) List (Category 5). If the assessment indicates that TxDOT’s operations may potentially contribute as a source of an adopted TMDL POC, TxDOT will revise Table 7.2 and Table 7.3 with appropriate TxDOT BMPs and report them in the annual report.

For any portion of the TxDOT MS4 that discharges to a portion of a watershed with an approved TMDL, where stormwater has the potential to cause or contribute to the impairment, TxDOT will include in the SWMP, controls targeting the POCs, along with any additional or modified controls required in the TMDL and this section.

The SWMP and required annual reports will include information on implementing any targeted controls required to reduce the POCs as described below:

1) Targeted Controls

Targeted Controls are listed in Table 7.4 and include Focused Effort/Additional BMPs, POCs, Benchmark Goals/Measurable Goals, and Implementation Schedules).

TxDOT will identify areas of focused effort or identify additional BMPs that will be implemented to reduce the POCs in the impaired waters.

2) Measurable Goals

For each targeted control (See Table 7.4), TxDOT will include a measurable goal and an implementation schedule describing BMPs to be implemented during each year of the permit term.

3) Identification of Benchmarks

Because TxDOT's regulated area may be located within several watersheds, TxDOT will identify a benchmark goal (see Table 7.4) for the identified POC based on the watershed and TxDOT's district locations with one of the following options:

- a) If the TxDOT regulated area is subject to a TMDL that identifies an aggregate WLA for all permitted MS4 stormwater sources, then TxDOT will identify such aggregate WLA as the benchmark. TxDOT will coordinate with other affected MS4 operators and will be jointly responsible for progress in meeting the benchmark goal and/or will jointly develop a monitoring/assessment plan according to the approved I-Plan; or,
- b) Alternatively, if multiple MS4s are discharging into the same impaired water body with an approved TMDL, with an aggregate WLA for all permitted stormwater MS4s, then TxDOT may combine or share efforts to determine an alternative sub-benchmark goal for the pollutant(s) of concern for the TxDOT MS4. TxDOT will clearly define this alternative approach and will describe how the sub-benchmark goals would cumulatively support the aggregate WLA as defined in the approved I-Plan. TxDOT will be responsible for progress in meeting its WLA sub-benchmark goal; or,
- c) Alternatively, if multiple MS4s are discharging into the same impaired water body with an approved TMDL, with an aggregate WLA for all permitted stormwater MS4s, then TxDOT may combine or share efforts to determine an alternative sub-benchmark goal for the pollutant(s) of concern for the TxDOT MS4. TxDOT will clearly define this alternative approach and will describe how the sub-benchmark goals would cumulatively support the aggregate WLA as defined in the approved I-Plan. TxDOT will be responsible for progress in meeting its WLA sub-benchmark goal; or,
- d) If the TxDOT regulated area is subject to an individual WLA specifically assigned to TxDOT, this individual WLA will be the benchmark goal. TxDOT will be responsible for progress in meeting its WLA benchmark goal as defined in the approved I-Plan.

4) Statewide Annual Report

The annual report will include an analysis of how the selected BMPs will be effective in contributing to achieving the benchmark goal.

5) Impairment for Bacteria

If the POC is bacteria, TxDOT will evaluate the following potential sources, as listed in the Permit No. WQ0005011000, if located within TxDOT's Regulated area:

- a) Sanitary Sewer Systems;
- b) On-site Sewage Facilities;

- c) Illicit Discharges and Dumping from septic systems, grease traps, grit traps; and,
- d) Animal Sources such as pet waste from rest areas.

TxDOT does not own or operate sanitary sewer systems or on-site sewage facilities within its regulated area. Illicit Discharges from septic systems, grease traps, and grit traps do not originate from the TxDOT MS4; rather, the illicit discharges originate from adjacent MS4s and third-party discharges into the TxDOT MS4. In addition, there are no rest areas constructed within TxDOT's MS4 regulated area; therefore pet wastes are not a potential source of bacteria to the TxDOT MS4.

To further identify potential animal sources for bacteria on TxDOT's regulated area, TxDOT utilizes current research studies performed by the Bacteria Sources Tracking (BST) group of the Texas Water Resources Institute (TWRI), and TxDOT's own research programs.

Bacteria Sources Tracking (BST) is a new methodology that is currently being used to determine the sources of fecal bacteria in environmental samples (e.g., from human, livestock or wildlife origins, and faulty on-site waste disposal systems). The BST group¹ has compiled a bacteria DNA library that includes bacteria pollution indicators and fecal bacteria source indicators to quantify possible impacts to water from animal and sewage wastes. The BST's research indicates that *Escherichia coli* (E. Coli), Total Coliform (TC), and Fecal Coliform (FC) sources are associated with the gastrointestinal tracts of humans and warm-blooded animals while Fecal Streptococci (FS) and Enterococci Groups sources of bacteria are in animal feces.

Recently approved I-Plans have indicated that birds nesting under and near bridges do not contribute to elevated levels of bacteria, and that their contribution to stream segments would be considered background concentrations. The background concentration level contributed by birds roosting under bridges has been shown to be insignificant when compared to the major sources listed in the BST studies.

Deterring the building of nests under bridges and box culverts is not considered a permanent mitigation of the potential bacteria source since birds can also build nests in the trees next to TxDOT bridges.

As shown above, TxDOT's regulated area is not a major source of bacteria. TxDOT will implement necessary BMPs, as identified in the approved Implementation Plan (I-Plan) that is assigned to TxDOT, to reduce bacteria to the maximum extent practicable (MEP), in those stream segments with approved TMDLs.

6) Monitoring or Assessment of Progress

¹ Texas Water Resources Institute at Texas A&M University.

TxDOT will monitor or assess progress in achieving benchmark goals and determining the effectiveness of BMPs, and will include documentation of this monitoring or assessment in the annual reports. TxDOT may utilize the following methods to accomplish the assessment:

a) TxDOT may assess progress by using program implementation indicators such as:

- Number of sources identified or eliminated;
- Decrease in amount of illegal dumping;
- Increase in illegal dumping reporting;
- "Don't Mess With Texas" campaign and web accessed;
- "Adopt-a-Highway" program; or,
- Increase in illegal discharge detection through dry screening, etc.

b) Assessing Improvements in Water Quality

TxDOT will assess improvements in water quality by using available data for the segment and assessment units of water bodies from other reliable sources, or by proposing and justifying a different approach such as collecting additional instream or outfall monitoring data, etc. Data may be acquired from TCEQ, local river authorities, partnerships, and/or other local efforts as appropriate.

Progress toward achieving the benchmark goal will be reported in the annual report. Annual reports will include the benchmark goal and the year(s) during the permit term if TxDOT conducted additional sampling or other assessment activities.

7) Observing no Progress Toward the Benchmark Goal

If, by the end of the I-Plan implementation goals period, TxDOT observes no progress toward the benchmark goal either from program implementation or water quality assessments as described above, TxDOT will identify alternative focused BMPs that address new or increased efforts towards the benchmark goal or, as appropriate, will develop a new approach to identify the most significant sources of POCs and will develop alternative focused BMPs for those (this may also include information that identifies issues beyond the MS4's control). These revised BMPs will be included in the SWMP and subsequent annual reports.

7.3.2 Discharges Directly to Water Quality Impaired Water Bodies Without an Approved TMDL

TxDOT will determine whether any portion of the MS4 discharges directly to one or more water quality impaired water bodies where a TMDL has not yet been approved by TCEQ and EPA. If TxDOT discharges directly into an impaired water body without an approved TMDL, TxDOT will perform the following activities for the areas of the MS4 subject to these requirements:

- 1) Discharging a Pollutant of Concern
 - a) Within the first year following the permit effective date (November 30, 2017), TxDOT will determine whether the MS4 may be a source of the POCs by referring to the CWA §303(d) list and then determining if discharges from the MS4 would be likely to contain the POCs at levels of concern. This activity will be performed in the first permit year and will be reported in the second year annual report.
 - b) If TxDOT determines that the MS4 may discharge the POCs to an impaired water body without an approved TMDL, TxDOT will, no later than two years following the permit effective date, ensure that the SWMP includes focused BMPs, along with corresponding measurable goals, that TxDOT will implement, to reduce, the discharge of POCs that contribute to the impairment of the water body. This activity will be reported in the third year annual report.
 - c) In addition, no later than three years following the permit effective date, TxDOT will submit written notification to TCEQ to amend the SWMP to include any additional BMPs to address the POCs. This activity will be reported in the fourth year annual report.

Table 7.3 provides an example of the analysis. Table 7.3 will be updated to reflect the above determination.

2) Impairment of Bacteria

Where the impairment is for bacteria, TxDOT will identify potential significant sources and develop and implement targeted BMPs for those sources. TxDOT will implement the focused BMPs listed above.

3) Annual Report

The annual report will include an analysis of how the selected BMPs will be effective in contributing to achieving the benchmark goal.

7.4 Impaired Water Bodies and Total Maximum Daily Load (TMDL) Requirements Implementation Schedule Activity, and Measurable Goals

Table 7.1

IMPAIRED WATER BODIES AND TOTAL MAXIMUM DAILY LOAD (TMDL) REQUIREMENTS				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
Discharges to Water Quality Impaired Water Bodies with an Approved TMDL				
Implement in Year 1/Nov Report in Year 2/Aug	7.3.1-Discharges to Water Quality Impaired Water Bodies with an Approved TMDL	Assess if the MS4 area draining to an impaired water body has the potential to cause or contribute to the impairment.	If the assessment indicates that TxDOT's operations may potentially contribute as a source of an adopted TMDL POC, TxDOT will implement appropriate BMPs and include in the annual report those impaired water bodies and POCs identified. Update Tables 7.2 and 7.3.	ENV
Annually/Aug	7.3.1.1-Targeted Controls	TxDOT will identify areas of focused effort or identify additional BMPs that will be implemented to reduce the POCs in the impaired waters.	1) Include BMPs in SWMP. 2) Report BMPs to TCEQ in annual report.	ENV
Annually/Aug	7.3.1.2-Measurable Goals	For each targeted control, TxDOT will include a measurable goal and an implementation schedule describing BMPs to be implemented during each year of the permit term.	1) Include measurable goals in SWMP. 2) Report measurable goals to TCEQ in annual report.	ENV
Annually/Aug	7.3.1.3-Identification of Benchmarks	TxDOT will identify a benchmark goal (see Table 7.2) for the identified POC based on the watershed and TxDOT's district locations with one of the options provided in Section 7.3.1.3)a), b), c), or d) options.	1) Select and implement the appropriate option. 2) Report the option selected in the annual report..	ENV
Annually/Aug	7.3.1.4- Statewide Annual Report	Conduct an analysis of how the selected BMPs will be effective in contributing to achieving the benchmark goal.	Include analysis in annual report.	ENV

IMPAIRED WATER BODIES AND TOTAL MAXIMUM DAILY LOAD (TMDL) REQUIREMENTS				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
Annually/Aug	7.3.1.5- Impairment for Bacteria	If the POC is bacteria, TxDOT will evaluate the sources listed in SWMP Section 7.3.1.5.	TxDOT has addressed the potential sources and will provide a summary of its findings in the annual report.	ENV
Annually/Aug	7.3.1.6- Monitoring or Assessment of Progress	Monitor or assess progress in achieving benchmark goals and determining the effectiveness of BMPs.	Include documentation of this monitoring or assessment in the annual reports and methods to be used.	ENV
Varies Depending on I-Plan End Date	7.3.1.7- Observing no Progress Toward the Benchmark Goal	If TxDOT observes no progress toward the benchmark goal, TxDOT will identify alternative focused BMPs that address new or increased efforts towards the benchmark goal.	These revised BMPs will be included in the SWMP and subsequent annual reports.	ENV
Discharges Directly to Water Quality Impaired Water Bodies Without an Approved TMDL				
Annually/Aug	7.3.2-Discharges Directly to Water Quality Impaired Water Bodies Without an Approved TMDL	TxDOT will determine whether any portion of the MS4 discharges directly to one or more water quality impaired water bodies where a TMDL has not yet been approved by TCEQ and EPA.	If TxDOT discharges directly into an impaired water body without an approved TMDL, TxDOT will perform the following activities for the areas of the MS4 subject to these requirements set forth in 7.3.2...1,2, and 3 below. Update Table 7.3.	ENV
Implement in Year 1/Nov Report in Year 2/Aug	7.3.2.1.a - Discharging a Pollutant of Concern	TxDOT will determine whether the MS4 may be a source of the POCs by referring to the CWA §303(d) list.	Determining if discharges from the MS4 would be likely to contain the POCs at levels of concern.	ENV
Implement in Year 2/Nov Report in Year 3/Aug	7.3.2.1.b - Discharging a Pollutant of Concern	If TxDOT determines that the MS4 may discharge the POCs to an impaired water body without an approved TMDL.	Ensure that the SWMP includes focused BMPs, along with corresponding measurable goals, that TxDOT will implement.	ENV

IMPAIRED WATER BODIES AND TOTAL MAXIMUM DAILY LOAD (TMDL) REQUIREMENTS				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
Implement in Year 3/Nov Report in Year 4/Aug	7.3.2.1.c - Discharging a Pollutant of Concern	TxDOT will submit written notification to TCEQ to amend the SWMP to include any additional BMPs to address the POCs	Submit notification to TCEQ.	ENV
Year 4/Aug	7.3.2.2- Impairment of Bacteria	TxDOT will identify potential significant sources and develop and implement targeted BMPs for those sources.	TxDOT has addressed the potential sources and will provide a summary of its findings in the annual report.	ENV
Annually/Aug	7.3.2.3-Annual Report	The annual report will include an analysis of how the selected BMPs will be effective in contributing to achieving the benchmark goal as determinations are made.	Submit annual report to TCEQ.	ENV

Table 7.2

EXISTING APPROVED TMDLS AND IMPLEMENTATION PLANS (I-Plans) WITH TXDOT'S BMPS								
District Name	Segment Number	Segment Name	Pollutant of Concern	TMDL Project Name	TMDL Adopted	IP Approval	Is TxDOT MS4 potential source for impairment?	TxDOT BMPS
HOU	1254	Aquilla Reservoir	Atrazine	TBD	Original 3/23/01; Revised 6/14/02	1/18/2002	TBD	TBD
PHA	1113, 1113A, 1113B, 1113C, 1113D , 1113E	Armand Bayou in the Houston-Galveston Region	Bacteria	TBD	8/5/2015	Subsumed in BIG I- Plan approved 1/30/13	TBD	TBD
PHA	2202	Arroyo Colorado	Legacy Pollutants: DDE, Chlordane, Toxaphene	TBD	1/17/2001	9/14/2001	TBD	TBD
AUS	2202	Arroyo Colorado	Legacy Pollutants: DDT, DDD, dieldrin, endrin, lindane, hexachlorobenzene , heptachlor, heptachlor epoxide	TBD	7/25/2003	Same activities as in I-Plan approved 9/14/01	TBD	TBD
TBD	Waller Creek, 1429C; Walnut Creek, 1428B; Spicewood Tributary to Shoal Creek, 1403J; and Taylor Slough South, 1403K	Austin Area Watersheds	Bacteria	TBD	1/21/2015	1/21/2015	TBD	TBD
TBD	Walnut Creek, Segments 1428B_01, 1428B_02, 1428B_03, and 1428B_04	Austin Area Watersheds Attachment	Bacteria	TBD	Submitted via WQMP	Same activities as in I-Plan approved 01/21/15	TBD	TBD

EXISTING APPROVED TMDLS AND IMPLEMENTATION PLANS (I-Plans) WITH TXDOT'S BMPS

District Name	Segment Number	Segment Name	Pollutant of Concern	TMDL Project Name	TMDL Adopted	IP Approval	Is TxDOT MS4 potential source for impairment?	TxDOT BMPs
TBD	1007B, 1007C, 1007E, 1007L	Brays Bayou in the Houston-Galveston Region	Bacteria	TBD	9/15/2010	BIG I-Plan approved 01/30/13	TBD	TBD
TBD	1007S, 1007T, 1007U	Brays Bayou—Addendum Houston-Galveston Region	Bacteria	TBD	4/13/2017	Subsumed in BIG I-Plan approved 01/30/13	TBD	TBD
TBD	1013, 1013A, 1013C, 1014, 1014A, 1014B, 1014E, 1014H, 1014K, 1014L, 1014M, 1014N, 1014O, 1017, 1017A, 1017B, 1017D, 1017E	Buffalo and Whiteoak Bayous in the Houston-Galveston Region	Bacteria	TBD	4/8/2009	BIG I-Plan approved 01/30/13	TBD	TBD
TBD	1017C	Houston-Galveston Region	Bacteria	TBD	4/13/2017	NA	TBD	TBD
TBD	1017F	Houston-Galveston Region	Bacteria	TBD	15-Apr	NA	TBD	TBD
TBD	1209C, 1209D, 1209L	Carters Creek Watershed	Bacteria	TBD	8/22/2012	8/22/2012	TBD	TBD
TBD	1101, 1102	Clear Creek Above and Below Tidal	Chlordane	TBD	1/17/2001	9/14/2001	TBD	TBD
TBD	1101, 1102	Clear Creek Above and Below Tidal	Trichloroethane, Dichloroethane	TBD	Original 02/9/01; Revised 06/14/02	10/12/2001	TBD	TBD
TBD	1101, 1101B, 1101D, 1102, 1102A, 1102B, 1102C, 1102D, 1102E	Clear Creek and Tributaries in the Houston-Galveston Region	Bacteria	TBD	9/10/2008	BIG I-Plan approved 01/30/13	TBD	TBD

EXISTING APPROVED TMDLS AND IMPLEMENTATION PLANS (I-Plans) WITH TXDOT'S BMPS

District Name	Segment Number	Segment Name	Pollutant of Concern	TMDL Project Name	TMDL Adopted	IP Approval	Is TxDOT MS4 potential source for impairment?	TxDOT BMPs
TBD	1101A, 1101C, 1101E, and 1102G	Houston-Galveston Region	Bacteria	TBD		NA	TBD	TBD
TBD	1426	Colorado River Below E.V. Spence Reservoir	Chloride, Total Dissolved Solids	TBD	2/7/2007	10/10/2007	TBD	TBD
TBD	0822A, 0822B	Cottonwood Branch and Grapevine Creek in the Greater Trinity Region	Bacteria	TBD	9/21/2011	Greater Trinity I-Plan approved 12/15/2013	TBD	TBD
TBD	805, 841	Dallas Legacy	Chlordane, DDD, DDE, DDT, PCBs, Chlordane, Dieldrin, Heptachlor epoxide	TBD	12/20/2000	8/10/2001	TBD	TBD
TBD	1103, 1103A, 1103B, 1103C, 1104	Dickinson Bayou	Bacteria	TBD	2/8/2012	1/15/2014	TBD	TBD
TBD	1103, 1103D, 1103E	Dickinson Bayou Addendum	Bacteria	TBD	Submitted via WQMP 07/16	Same activities as in I-Plan approved 01/15/14	TBD	TBD
TBD	1006F, 1006H, 1007F, 1007G, 1007H, 1007I, 1007K, 1007M, 1007O, 1007R	Eastern Houston in the Houston-Galveston Region	Bacteria	TBD	9/15/2010	BIG I-Plan approved 01/30/13	TBD	TBD
TBD	1007V	Houston-Galveston Region	Bacteria-	TBD		NA	TBD	TBD
TBD	1411	E.V. Spence	Sulfate, TDS	TBD	Original 11/17/00; Revised 06/14/02	8/10/2001	TBD	TBD

EXISTING APPROVED TMDLS AND IMPLEMENTATION PLANS (I-Plans) WITH TXDOT'S BMPS

District Name	Segment Number	Segment Name	Pollutant of Concern	TMDL Project Name	TMDL Adopted	IP Approval	Is TxDOT MS4 potential source for impairment?	TxDOT BMPs
TBD	806, 829	Fort Worth Legacy	Chlordane, DDE, PCBs, Chlordane, Dieldrin	TBD	11/17/2000	7/13/2001	TBD	TBD
TBD	1428C	Gilleland Creek	Bacteria	TBD	8/8/2007	2/9/2011	TBD	TBD
TBD	1016, 1016A, 1016B, 1016C, and 1016D	Greens Bayou in the Houston-Galveston Region	Bacteria	TBD	6/2/2010	BIG I-Plan approved 01/30/13	TBD	TBD
TBD	1806	Guadalupe River Above Canyon Lake	Bacteria	TBD	7/25/2007	8/31/2011	TBD	TBD
TBD	1006D, 1006I, 1006J	Halls Bayou in the Houston-Galveston Region	Bacteria	TBD	9/15/2010	BIG I-Plan approved 01/30/13	TBD	TBD
TBD	1001, 1005, 1006, 1007, 1013, 1014, 1016, 1017, 2426, 2427, 2428, 2429, 2430, 2436	Houston Ship Channel Nickel	Nickel	TBD	Original 08/11/00; Revised 06/14/02	7/13/2001	TBD	TBD
TBD	1403	Lake Austin	DO	TBD	11/17/2000	7/13/2001	TBD	TBD
TBD	1004E, 1008, 1008H, 1009, 1009C, 1009D, 1009E, 1010, and 1011	Lake Houston Upstream Watersheds in the Houston-Galveston Region	Bacteria	TBD	4/6/2011	BIG I-Plan approved 01/30/13	TBD	TBD
TBD	1008B, 1008C, 1008E, and 1011	Lake Houston Watersheds: Addendum 1 in the Houston-Galveston Region	Bacteria	TBD	Submitted via WQMP 10/13	Subsumed in BIG I-Plan approved 1/30/13	TBD	TBD

EXISTING APPROVED TMDLS AND IMPLEMENTATION PLANS (I-Plans) WITH TXDOT'S BMPS

District Name	Segment Number	Segment Name	Pollutant of Concern	TMDL Project Name	TMDL Adopted	IP Approval	Is TxDOT MS4 potential source for impairment?	TxDOT BMPs
TBD	403	Lake O' the Pines	DO	TBD	4/12/2006	7/9/2008	TBD	TBD
TBD	807	Lake Worth Watershed	PCBs	TBD	8/10/2005	8/23/2006	TBD	TBD
TBD	PCBs	Lake Worth Watershed Addendum	808	TBD	Submitted via WQMP 07/14	Same activities as in I-Plan approved 08/23/06	TBD	TBD
TBD	2110	Lower Sabinal River	nitrate-nitrogen	TBD	8/10/2005	8/23/2006	TBD	TBD
TBD	1901	Lower San Antonio River	Bacteria	TBD	8/20/2008	NA	TBD	TBD
TBD	0841, 0841B, 0841C, 0841E, 0841G, 0841H, 0841J, 0841L, 0841M, 0841R, 0841T, and 0841U	Greater Trinity Region	Bacteria	TBD		I-Plan approved 12/15/2013	TBD	TBD
TBD	2001, 2003	Mission and Aransas Rivers	Bacteria	TBD	5/25/2016	5/25/2016	TBD	TBD
TBD	0841F, 0841K, 0841N, 0841V	Mountain Creek Lake Upstream Watersheds in the Greater Trinity Region	Bacteria	TBD	11/2/2016	Subsumed in Greater Trinity I-Plan approved 12/15/13	TBD	TBD
TBD	1226, 1255	North Bosque River	Phosphorus	TBD	2/9/2001	12/13/2002	TBD	TBD
TBD	2482	Nueces Bay	Zinc in Oyster Tissue	TBD	11/1/2006	10/24/2007	TBD	TBD
TBD	0508, 0508A, 0508B, 0508C, 0511, 0511A, 0511B, 0511C, and 0511E	Orange County Watersheds	Bacteria, Dissolved Oxygen, pH	TBD	6/13/2007	8/5/2015	TBD	TBD

EXISTING APPROVED TMDLS AND IMPLEMENTATION PLANS (I-Plans) WITH TXDOT'S BMPS

District Name	Segment Number	Segment Name	Pollutant of Concern	TMDL Project Name	TMDL Adopted	IP Approval	Is TxDOT MS4 potential source for impairment?	TxDOT BMPs
TBD	2485	Oso Bay	Bacteria	TBD	8/22/2007	NA	TBD	TBD
TBD	2204	Petronila Creek Above Tidal	Chloride, Sulfate, Total Dissolved Solids	TBD	1/10/2007	10/10/2007	TBD	TBD
TBD	1002, 1003, 1004, 1004D	San Jacinto River, East and West Forks; Lake Houston; and Crystal Creek in the Houston-Galveston Region	Bacteria	TBD	8/24/2016	Subsumed in BIG I-Plan approved 1/30/13	TBD	TBD
TBD	1007A, 1007D, 1007N	Sims Bayou in the Houston-Galveston Region	Bacteria	TBD	9/15/2010	BIG I-Plan approved 01/30/13	TBD	TBD
TBD	1245	Upper Oyster Creek	Bacteria, DO	TBD	8/8/2007	1/15/2014	TBD	TBD
TBD	1910, 1910A, 1911	Upper San Antonio River	Bacteria	TBD	7/25/2007	4/6/2016	TBD	TBD
TBD	1910D, 1911B, 1911C, 1911D, 1911E	Upper San Antonio River, Addendum	Bacteria	TBD	Submitted via WQMP 04/16	Same activities as in I-Plan approved 04/06/16	TBD	TBD
TBD	2421, 2422, 2423, 2424, 2432, 2439	Upper Texas Coast Oyster Waters	Bacteria	TBD	8/20/2008	8/19/2015	TBD	TBD
TBD	2435OW	Upper Texas Coast Oyster Waters—Addendum II	Bacteria	TBD	Submitted via WQMP 01/12	Same activities as in I-Plan approved 08/19/15	TBD	TBD
TBD	2433OW, 2434OW	Upper Texas Coast Oyster Waters—Addendum III	Bacteria	TBD	Submitted via WQMP 04/12	Same activities as in I-Plan approved 8/19/15	TBD	TBD
TBD	805	Upper Trinity River in the Greater Trinity Region	Bacteria	TBD	5/11/2011	Greater Trinity	TBD	TBD

Table 7.3

ANALYSES OF TXDOT MS4 DISCHARGING DIRECTLY INTO IMPAIRED WATER BODIES (IWB)					
TxDOT District	303(d) Listed Stream	Stream Segment	Pollutant of Concern	Does TxDOT MS4 discharge directly into IWB?	River Basin
List Compiled From the 2014 Texas Integrated Report - Texas 303(d) List (Category 5)					
Amarillo	Canadian River Above Lake Meredith	0103	Chloride	TBD	Canadian
Austin	Somerville Lake	1212	pH	TBD	Brazos
	San Gabriel River	1214	Chloride, Sulfate	TBD	
	Brushy Creek	1244	Bacteria	TBD	
	San Gabriel/North Fork San Gabriel	1248	TDS, Chloride	TBD	
	Lake Austin	1403	Depressed DO	TBD	Colorado
	Colorado River Below Town Lake	1428	Bacteria	TBD	
	Town Lake	1429	Bacteria, impaired macrobenthic community	TBD	
	Canyon Lake	1805	Mercury in edible tissue	TBD	Guadalupe
Beaumont	Neches River Below Lake Palistine	0604	Dioxin and mercury in edible tissue	TBD	Neches
	Pine Island Bayou	0607	Bacteria, Depressed DO	TBD	
	Village Creek	0608	Mercury in edible tissue	TBD	
	Hillebrandt Bayou	0704	Bacteria, Depressed DO	TBD	Neches-Trinity Coastal
	Cedar Bayou Tidal	0901	Bacteria, dioxin in edible tissue, PCBs in edible tissue	TBD	Trinity San Jacinto Coastal
Bryan	Navasota River Below Lake Limestone	1209	Bacteria	TBD	Brazos
Corpus Christi	Corpus Christi Bay	2481	Bacteria	TBD	Bays and Estuaries
	Oso Bay	2485	Bacteria, Depressed DO	TBD	
	Laguna Madre	2491	Bacteria, Depressed DO	TBD	
	Gulf Waters	2501	Bacteria, mercury in edible tissue	TBD	

ANALYSES OF TXDOT MS4 DISCHARGING DIRECTLY INTO IMPAIRED WATER BODIES (IWB)					
TxDOT District	303(d) Listed Stream	Stream Segment	Pollutant of Concern	Does TxDOT MS4 discharge directly into IWB?	River Basin
Dallas	Lake Tawakoni	0507	pH	TBD	Sabine
	Trinity River above Lake Livingston	0804	Dioxin in edible tissue, PCBs in edible tissue	TBD	Trinity
	Upper Trinity River	0805	Dioxin in edible tissue, PCBs in edible tissue	TBD	
	East Fork Trinity River	0819	Sulfate, TDS	TBD	
	Lavon Lake	0821	Bacteria	TBD	
	Lower West Fork Trinity River	0841	Bacteria, dioxin in edible tissue, PCBs in edible tissue	TBD	
El Paso	Rio Grande Below Riverside Diversion Dam	2307	Bacteria, Chloride, TDS	TBD	Rio Grande
	Rio Grande Above International Dam	2314	Bacteria	TBD	
Fort Worth	Trinity River above Lake Livingston	0804	Dioxin in edible tissue, PCBs in edible tissue	TBD	Trinity
	Upper Trinity River	0805	Dioxin in edible tissue, PCBs in edible tissue	TBD	
	West Fork Trinity River Below Lake Worth	0806	Bacteria, dioxin in edible tissue, PCBs in edible tissue	TBD	
	East Fork Trinity River	0819	Sulfate, TDS	TBD	
	Lavon Lake	0821	Bacteria	TBD	
	Clear Fork Trinity River Below Benbrook Lake	0829	Dioxin in edible tissue, PCBs in edible tissue	TBD	
	Joe Pool Lake	0838	Bacteria	TBD	
	Lower West Fork Trinity River	0841	Bacteria, dioxin in edible tissue, PCBs in edible tissue	TBD	

ANALYSES OF TXDOT MS4 DISCHARGING DIRECTLY INTO IMPAIRED WATER BODIES (IWB)					
TxDOT District	303(d) Listed Stream	Stream Segment	Pollutant of Concern	Does TxDOT MS4 discharge directly into IWB?	River Basin
Houston	Cedar Bayou Tidal	0901	Bacteria, dioxin in edible tissue, PCBs in edible tissue	TBD	Trinity-San Jacinto Coastal
	San Jacinto River Tidal	1001	Chlordane, dieldrin, dioxin, heptachlor epoxide, and PCBs in edible tissue	TBD	
	Lake Houston	1002	Bacteria, mercury in edible tissue	TBD	
	East Fork San Jacinto River	1003	Bacteria	TBD	
	West Fork San Jacinto River	1004	Bacteria	TBD	
	Houston Ship Channel/San Jacinto River Tidal	1005	Chlordane, dieldrin, dioxin, heptachlor epoxide, and PCBs in edible tissue	TBD	San Jacinto
	Houston Ship Channel Tidal	1006	Bacteria, Chlordane, dieldrin, dioxin, heptachlor epoxide, and PCBs in edible tissue, toxicity in sediment	TBD	
	Houston Ship Channel/Buffalo Bayou Tidal	1007	Bacteria, dioxin in edible tissue, PCBs in edible tissue, toxicity in sediment, Depressed DO	TBD	
	Spring Creek	1008	Depressed DO	TBD	
	Buffalo Bayou Tidal	1013	Depressed DO	TBD	
	Buffalo Bayou Above Tidal	1014	Depressed DO, impaired fish and macrobenthic communities	TBD	
	Greens Bayou Above Tidal	1016	Depressed DO	TBD	

ANALYSES OF TXDOT MS4 DISCHARGING DIRECTLY INTO IMPAIRED WATER BODIES (IWB)					
TxDOT District	303(d) Listed Stream	Stream Segment	Pollutant of Concern	Does TxDOT MS4 discharge directly into IWB?	River Basin
	Whiteoak Bayou Above Tidal	1017	Depressed DO	TBD	
	Clear Creek Tidal	1101	Dioxin and PCBs in edible tissue, Depressed DO	TBD	San Jacinto-Brazos Coastal
	Clear Creek Above Tidal	1102	Bacteria, PCBs in edible tissue	TBD	
	Dickinson Bayou Tidal	1103	Bacteria, dioxin in edible tissue, PCBs in edible tissue, Depressed DO	TBD	
	Bastrop Bayou Tidal	1105	Bacteria, Depressed DO	TBD	
	Armand Bayou Tidal	1113	Bacteria, dioxin and PCBs in edible tissue, Depressed DO, impaired fish and macrobenthic communities	TBD	
	Upper Oyster Creek	1245	Bacteria	TBD	Brazos
	Upper Galveston Bay	2421	Dioxin and PCBs in edible tissue	TBD	Bays and Estuaries
	West Bay	2424	Bacteria, Dioxin and PCBs in edible tissue, Depressed DO,	TBD	
	Clear Lake	2425	Bacteria, Dioxin and PCBs in edible tissue	TBD	
	Tabbs Bay	2426	Dioxin and PCBs in edible tissue	TBD	
	San Jacinto Bay	2427	Dioxin and PCBs in edible tissue	TBD	

ANALYSES OF TXDOT MS4 DISCHARGING DIRECTLY INTO IMPAIRED WATER BODIES (IWB)					
TxDOT District	303(d) Listed Stream	Stream Segment	Pollutant of Concern	Does TxDOT MS4 discharge directly into IWB?	River Basin
	Black Duck Bay	2428	Dioxin and PCBs in edible tissue	TBD	
	Scott Bay	2429	Dioxin and PCBs in edible tissue	TBD	
	Burnett Bay	2430	Dioxin and PCBs in edible tissue	TBD	
	Barbours Cut	2436	Dioxin and PCBs in edible tissue	TBD	
	Bayport Channel	2438	Dioxin and PCBs in edible tissue	TBD	
Laredo	Rio Grande Below Amistad Reservoir	2304	Bacteria	TBD	
Lubbock	Double Mountain Fork Brazos River	1241	Bacteria	TBD	Brazos
Odessa	Colorado River Below Lake J.B. Thomas	1412	Bacteria	TBD	Colorado
Pharr	Arroyo Colorado Tidal	2201	Bacteria, DDE, mercury, and PCBs in edible tissue Depressed DO	TBD	Nueces-Rio Grande Coastal
	Arroyo Colorado Above Tidal	2202	Bacteria, mercury in edible tissue, PCBs in edible tissue	TBD	
	Rio Grande Below Falcon Reservoir	2302	Bacteria	TBD	Rio Grande
	Laguna Madre	2491	Bacteria, Bacteria (oyster waters), Depressed DO	TBD	Bays and Estuaries
	Brownsville Ship Channel	2494	Bacteria	TBD	
	Gulf Waters	2501	Bacteria, mercury in edible tissue	TBD	Gulf of Mexico
San Angelo	Concho River	1421	Bacteria, Depressed DO	TBD	Brazos

ANALYSES OF TXDOT MS4 DISCHARGING DIRECTLY INTO IMPAIRED WATER BODIES (IWB)					
TxDOT District	303(d) Listed Stream	Stream Segment	Pollutant of Concern	Does TxDOT MS4 discharge directly into IWB?	River Basin
San Antonio	Medina River Below Medina Diversion Lake	1903	Bacteria	TBD	San Antonio
	Lower Leon Creek	1906	Depressed DO, PCBs in edible tissue	TBD	
	Upper Cibolo Creek	1908	Bacteria, chloride	TBD	
	Salado Creek	1910	Bacteria, impaired fish and macrobenthic communities, Depressed DO	TBD	
	Upper San Antonio River	1911	Bacteria, impaired fish community	TBD	
Tyler	Lake Palestine	0605	Bacteria, pH, Depressed DO	TBD	Neches
	Angelina River Above Sam Rayburn Reservoir	0611	Bacteria	TBD	
Waco	Nolan Creek/South Nolan Creek	1218	Bacteria	TBD	Brazos
	North Bosque River	1226	Bacteria	TBD	
Wichita Falls	Wichita River Below Diversion Lake	0214	Bacteria	TBD	Red

Table 7.4

Pollutant of Concern (POC)*, Targeted Controls, Benchmark Goals and Implementation Schedules for Discharges to Water Quality Impaired Water Bodies with an Approved TMDL

POC*	Focused Effort/Additional BMPs	Benchmark Goals/Measurable Goals	Implementation Schedules
Total Dissolved Solid (TDS)**	Additional street sweeping and storm sewer clean out. OR Retrofit/install Permeable Friction Course (PFC) in affected ROW areas. OR Apply Implementation Plan assigned to TxDOT	Document the additional street sweeping or storm sewer clean out or retrofitting/installation of PFC (Projects of this type that have gone to letting for the reporting period) OR Apply WLA I-Plan	As needed or specify in WLA I-Plan. Report (Projects of this type that have gone to letting for the reporting period) in annual report.
Copper in water**	Install Filter Strips, Grassy Swale, PFC, or permanent structural controls or low impact development (LID) in affected ROW areas. OR Apply Implementation Plan assigned to TxDOT	Document the retrofitting/installation of additional controls OR Apply WLA I-Plan	As needed or specify in WLA I-Plan. Report (Projects of this type that have gone to letting for the reporting period) in annual report
Chloride**	Install berm perimeter for deicing rock pile or store materials inside cover area. OR Apply Implementation Plan assigned to TxDOT	Document the retrofitting/installation of additional controls. OR Apply WLA I-Plan	As needed or specify in WLA I-Plan. Report (Projects of this type that have gone to letting for the reporting period) in annual report
Bacteria**	Collaboration with other MS4 entities as needed. OR Public education outreach OR Additional research studies OR Apply Implementation Plan assigned to TxDOT	Document the collaboration efforts. OR Types of public outreach OR Results of research studies OR Apply WLA I-Plan	As needed or specify in WLA I-Plan. Report (Projects of this type that have gone to letting for the reporting period) in annual report
Dissolved Oxygen (DO)	Not applicable	Not applicable	Not applicable
Sulfate	Not applicable	Not applicable	Not applicable
Aluminum in water	Not applicable	Not applicable	Not applicable
Selenium in water	Not applicable	Not applicable	Not applicable
Mercury in tissue	Not applicable	Not applicable	Not applicable
Dioxin in tissue	Legacy –Not applicable	Legacy –Not applicable	Legacy –Not applicable
PCBs	Legacy –Not applicable	Legacy –Not applicable	Legacy –Not applicable
Toxicity in Sediment	Not applicable	Not applicable	Not applicable
pH	Not applicable	Not applicable	Not applicable

*List of POCs came from 2010 TCEQ 303(d) Category 5 list.

** POC that TxDOT MS4 may have potential to contribute to the impairment.

8.0 DISCHARGES TO THE EDWARDS AQUIFER RECHARGE ZONE

8.1 Permit Requirement

Discharges of stormwater from the MS4, and other non-stormwater discharges, are not authorized by this permit where those discharges are prohibited by 30 TAC Chapter 213 (Edwards Aquifer Rule). New discharges located within the Edwards Aquifer Recharge Zone, or within that area upstream from the recharge zone and defined as the Contributing Zone, must meet all applicable requirements of, and operate according to, 30 TAC Chapter 213 (Edwards Aquifer Rule) in addition to the provisions and requirements of this permit.

For existing discharges, the requirements of the agency-approved Water Pollution Abatement Plan (WPAP) under the Edwards Aquifer Rule are in addition to the requirements of this permit. BMPs and maintenance schedules for structural stormwater controls, for example, may be required as a provision of the rule.

The permittee's agency-approved WPAPs that are required by the Edwards Aquifer Rule must be referenced in the SWMP. Additional agency-approved WPAPs received after the SWMP submittal must be recorded in the annual report for each respective permit year. For discharges originating from the MS4 permitted area, and located on or within ten stream miles upstream of the Edwards Aquifer Recharge Zone, applicants must also submit written notification to the appropriate TCEQ regional office.

Counties: Comal, Bexar, Medina, Uvalde, and Kinney Contact:

*TCEQ, Water Program Manager
San Antonio Regional Office 14250
Judson Road*

*San Antonio, Texas 78233-4480
(210) 490-3096*

Counties: Williamson, Travis, and Hays

Contact:

*TCEQ, Water Program Manager
Austin Regional Office
12100 Park 35 Circle, Bldg. A, Rm 179
Austin, Texas 78753
(512) 339-2929*

8.2 Implementation Overview

All the special precautions and requirements of the Edwards Rules are specifically related to the type of geology in the area of proposed construction. These geologic conditions are rare and are only present in isolated areas of the state's central region.

For purposes of implementation of this SWMP, TxDOT makes clear that the Edwards Rules only apply to three TxDOT Districts. The boundaries of these districts have at least one roadway corridor that coincides with the TCEQ designation of Edwards Aquifer Recharge Zone (RZ) or Contributing Zone (CZ) boundaries. Figure 8.1 displays the Edwards Aquifer Zones.

Below are the TxDOT Districts and the Counties of those Districts where the Edwards Rules apply:

Austin District – Williamson, Travis and Hays

San Antonio District – Comal, Bexar, Medina and Uvalde

Laredo District - Kinney (not in MS4 Area)

Within the areas listed above, if there is construction proposed in TxDOT ROW that is greater than a five-acre disturbance on the CZ; or any soil disturbance or regulated activity on the Recharge Zone; an application and coordinating documentation will be provided to the designated TCEQ Region office for review. This document can be either a Water Pollution Abatement Plan (WPAP); or if over the CZ a Contributing Zone Plan (CZP). These documents will describe the project proposed, the water quality mitigation, the maintenance of both temporary and permanent controls or the justification for any exception request thereof. The project will not commence until approved by the Executive Director through the Region office review.

8.3 Best Management Practices (BMP) and Measurable Goals

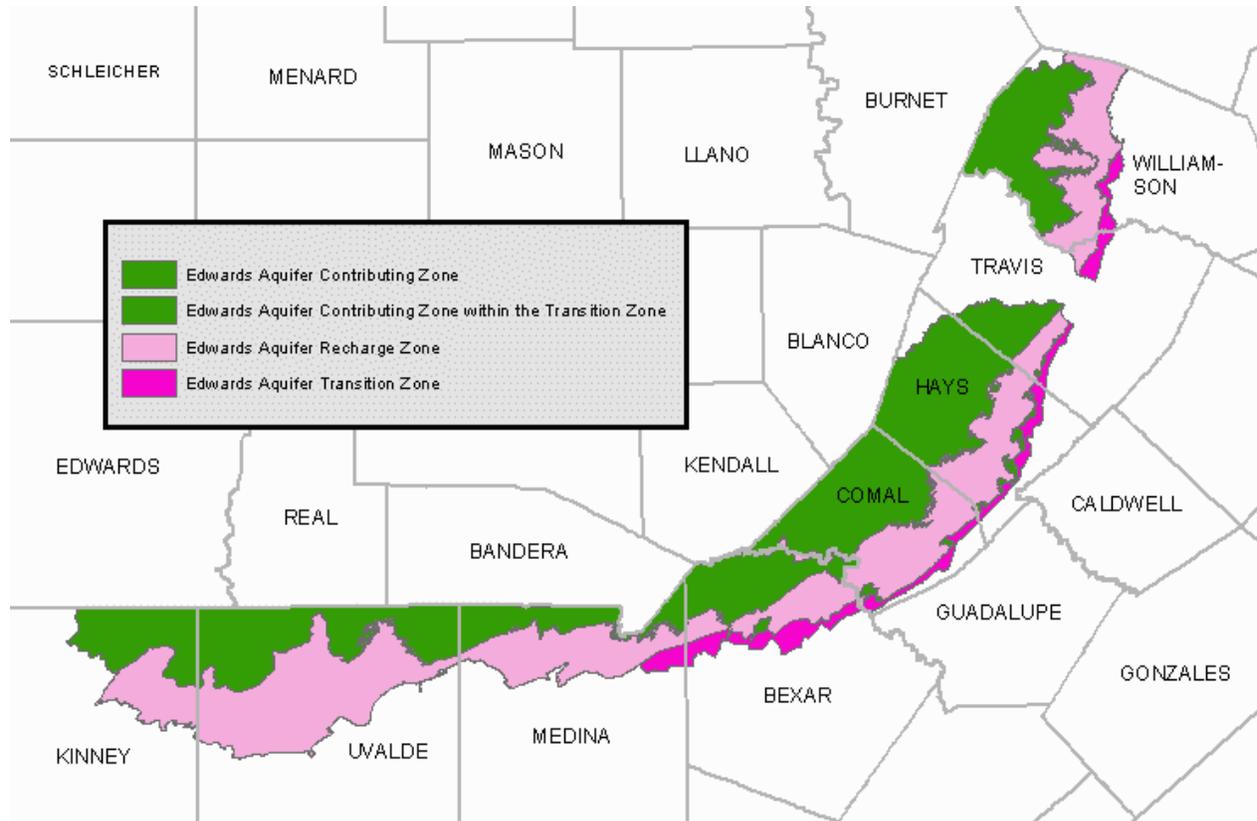
The project site will include BMPs to limit Total Suspended Solids (TSS). The TSS is calculated, using the prescribed methods within the TCEQ Guidance Manual (RG-348), for the site conditions and drainage character involved, requiring at least 80% TSS removal based on the new impervious cover proposed. Other additional or more specific practices may be imposed by TCEQ reviewers if the work is proximal to areas of exceptional sensitivity to ground water or endangered species.

The BMPs utilized may be any single or combination of devices listed in the TCEQ Guidance Manual that are approved mitigation techniques. Examples of temporary controls would include silt fence, rock berms, gabions, temporary traps or detention basins and temporary seeding (hydromulch). Permanent controls would include permanent wet ponds, filtration basins, detention ponds, grassy swales, vegetation filter strips, bio-filtration, various filtering devices built in-line of storm drains, hazardous material traps and porous pavement surfaces. In addition to gaining approval for the type of BMPs chosen, TxDOT will also commit to maintaining the effective operation of these permanent controls and provide periodic inspections for ongoing functionality.

The WPAP or CZP will be approved by the TCEQ. The approval letter from TCEQ represents that if all directives are followed, there is no foreseeable significant impact to water quality.

Edwards Aquifer Recharge Zone Metadata

Figure 8.1



8.3.1 TxDOT Agency Approved WPAPs

The following is a list of TxDOT Agency approved WPAPs:

Figure 8.2

TxDOT AGENCY APPROVED WPAPs					
EDWARDS ID	PLAN TYPE	REC DATE	REGULATED ENTITY NAME	TYPE OF RESPONSE	RESPONSE DATE
00011401	WPAP	1/14/00	BLANCO ROAD EXTENSION FM 2696	Approved	3/21/00
99081101B	WPAP-MOD	3/1/00	CEDAR PARK CAMPUS	Approved	4/25/00

TxDOT AGENCY APPROVED WPAPs					
EDWARDS ID	PLAN TYPE	REC DATE	REGULATED ENTITY NAME	TYPE OF RESPONSE	RESPONSE DATE
00040401	WPAP	4/4/00	I H 35 MAINLANES WIDENING	Approved	5/5/00
00072401	WPAP	7/24/00	LOOP 1 STATE HIGHWAY 45 FRONTAGE ROAD	Approved	9/25/00
00091901	WPAP	9/19/00	COUNTY ROAD 271 AT MEDINA RIVER	Approved	10/19/00
00101201	WPAP	10/12/00	LOOP 1604 FROM FM 1535 TO BITTERS ROAD	Approved	12/6/00
00121201	WPAP	12/12/00	FM 1325	Approved	1/22/01
01031301	WPAP	3/13/01	RM 620 WIDENING CSJ 0683 01 066	Approved	5/1/01
01041901	WPAP	4/19/01	US 281 SOUTHBOUND FRONTAGE ROADS	Approved	5/18/01
01051404	WPAP	5/14/01	FM 1863	Approved	6/15/01
01073003	WPAP	7/30/01	LOOP 1 SH 45 INTERCHANGE SECTION 3 PHASE 1 EAST	Approved	3/14/02
00011401A	WPAP-MOD	8/7/01	FM 2696 BLANCO ROAD	Approved	9/13/01
01091401	WPAP	9/14/01	FM 306 AT HOFFMAN LANE	Approved	2/22/02
01100106	WPAP	10/1/01	STATE HIGHWAY 45 SECTION 4A PHASE II	Approved	2/22/02
01122802	WPAP	12/28/01	FM 3406	Approved	2/1/02
00101201A	WPAP-MOD	2/4/02	LOOP 1604 FROM FM 1535 TO BITTERS ROAD	Approved	3/14/02
02022002	WPAP	2/20/02	RM 2244 WIDENING PROJECT	Approved	4/12/02
02051701	WPAP	5/17/02	LOOP 1 STATE HIGHWAY 45 INTERCHANGE PHASE 1 WEST	Approved	8/14/02
02052101	WPAP	5/21/02	LOOP 1 MAIN LANES	Approved	8/20/02
02121101	WPAP	12/11/02	LOOP 1 EXTENSION PARMER LANE TO TANDEM BOULEVARD	Approved	4/1/03
03031203	WPAP	3/12/03	LOOP 1 EXTENSION SECTION 2	Approved	5/27/03
03050901	WPAP	5/9/03	SH 45 SECTION VII	Approved	9/12/03
03060201	WPAP	6/2/03	STATE HIGHWAY 130 SEGMENT 1 SECTION 1	Approved	9/12/03
03060501	WPAP	6/5/03	SH 45 SECTION 8 - PARMER LANE TO RIDGELINE BLVD	Approved	9/29/03

TxDOT AGENCY APPROVED WPAPs					
EDWARDS ID	PLAN TYPE	REC DATE	REGULATED ENTITY NAME	TYPE OF RESPONSE	RESPONSE DATE
03060502	WPAP	6/5/03	RM 1431 ACCELERATION DECELERATION LANES	Approved	9/12/03
03072101	WPAP	7/21/03	US 183 SECTION 9	Approved	12/31/03
03082801	WPAP	8/28/03	STATE HIGHWAY 127	Approved	12/17/03
92022701A	WPAP-MOD	9/12/03	FM 734 LEFT TURN LANE	Approved	12/18/03
03091502	WPAP	9/15/03	STATE HIGHWAY 130 SEGMENT 1 PHASE 2	Approved	12/3/03
04030303	WPAP	3/3/04	STATE HIGHWAY 46	Approved	4/20/04
04031002	WPAP	3/10/04	LOOP 1604	Approved	5/13/04
04031101	WPAP	3/11/04	RM 12	Approved	4/26/04
04081010	WPAP	8/10/04	RM 1051	Approved	11/10/04
04101401	WPAP	10/14/04	STATE HIGHWAY 29 CSJ 0337-01-029	Approved	12/23/04
04031002A	WPAP-MOD	11/8/04	LOOP 1604 AT BULVERDE ROAD	Approved	12/3/04
05012101	WPAP	1/21/05	RM 620 CULVERT	Approved	4/1/05
05030401	WPAP	3/4/05	STATE HIGHWAY 29	Approved	5/17/05
05031001	WPAP	3/10/05	US 290 WIDENING	Approved	5/16/05
05032910	WPAP	3/29/05	US 281	Approved	7/26/05
05042510	WPAP	4/25/05	FM 1863	Approved	6/14/05
05052301	WPAP	5/23/05	STATE HIGHWAY 71 IMPROVEMENTS	Approved	9/22/05
05060901	WPAP	6/9/05	IH 35 FRONTAGE ROAD AND OVERPASS	Approved	8/17/05
05072501	WPAP	7/25/05	IH 35 FRONTAGE ROADS @ ONION BRANCH	Approved	8/15/05
05072502	WPAP	7/25/05	IH 35 SOUTHBOUND FRONTAGE ROAD @ SOUTH FORK SAN GABRIEL RIVER	Approved	8/29/05
05090110	WPAP	9/1/05	LOOP 1604 TOLL STARTER SYSTEM	Approved	6/5/06
05032910B	WPAP-MOD	11/28/05	US 281	Approved	6/5/06
06010601	WPAP	1/6/06	RM 2243	Approved	4/14/06

TxDOT AGENCY APPROVED WPAPs					
EDWARDS ID	PLAN TYPE	REC DATE	REGULATED ENTITY NAME	TYPE OF RESPONSE	RESPONSE DATE
06020302	WPAP	2/3/06	RM 3406 @ CREEK BEND BLVD	Approved	4/12/06
05030310A	WPAP	2/17/06	FM 1535	Approved	5/11/06
06031310	WPAP	3/13/06	STATE HIGHWAY 173 @ CR 241 AND CR 247	Approved	4/12/06
06042710	WPAP	4/27/06	FM 1283	Approved	6/27/06
06051810	WPAP	5/18/06	US 281 @ OVERLOOK PARKWAY	Approved	7/13/06
06060110	WPAP	6/1/06	STATE HIGHWAY 16 @ FM 1560 CSJ 0291-10-090	Approved	7/31/06
06092810	WPAP	9/28/06	STATE HIGHWAY 46	Approved	11/27/06
07031601	WPAP	3/16/07	IH 35 AT SH 29 TURNAROUNDS	Approved	4/25/07
07041610	WPAP	4/16/07	IH 10 LOOP 1604 SOUTH TO TRANSITION ZONE	Approved	6/20/07
07072301	WPAP	7/23/07	IH 35 @ RM 620 BRIDGE TURNAROUND	Approved	9/7/07
07081310	WPAP	8/13/07	SH 46 AT RM 2722 IMPROVEMENTS	Approved	10/22/07
08011001A	WPAP	1/15/08	RM 620 IMPROVEMENTS	Approved	2/29/08
08011001B	WPAP	1/15/08	RM 620 IMPROVEMENTS	Approved	3/3/08
08011001C	WPAP	1/15/08	RM 620 IMPROVEMENTS	Approved	3/3/08
08012910	WPAP	1/29/08	FM 2696 GLADE CROSSING TO WEST OAK ESTATES	Approved	4/7/08
08090501	WPAP	9/5/08	IH 35 NORTHBOUND ACCESS RAMP MODIFICATIONS	Approved	10/10/08
08090504	WPAP	9/5/08	FM 2338 IMPROVEMENTS - FM 3405 TO D B WOOD RD	Approved	11/3/08
08090810	WPAP	9/8/08	IH 10 EAST BOUND FRONTAGE ROAD AT LEON CREEK	Approved	10/27/08
08102201	WPAP	10/22/08	IH 35 AT LAKEWAY DRIVE	Approved	12/31/08
05042510A	WPAP-MOD	4/9/09	FM 1863	Approved	5/11/09
10021101	WPAP	2/11/10	US 290 LOOP 1 DIRECT CONNECT RAMPS	Approved	4/22/10
09012702A	WPAP	3/5/10	IH 35 NORTHBOUND FRONTAGE ROAD	Approved	4/29/10

TxDOT AGENCY APPROVED WPAPs					
EDWARDS ID	PLAN TYPE	REC DATE	REGULATED ENTITY NAME	TYPE OF RESPONSE	RESPONSE DATE
07120602A	WPAP-MOD	3/26/10	FM 971	Approved	5/5/10
10052401	WPAP	5/24/10	RM 12 IMPROVEMENTS	Approved	6/29/10
	WPAP	3/2/11	SH 29 at Cimarron Hill	Approved	4/20/11
	WPAP	2/17/11	RM 620 Improvements	Approved	4/28/11
	WPAP	7/21/11	SH 127	Approved	9/7/11
	WPAP-MOD	7/28/11	SH 45 O'Conner Drive	Approved	9/9/11
	WPAP	7/7/11	FM 1626	Approved	9/21/11
	WPAP	8/11/11	Loop 337 at Ridge Hill	Approved	10/11/11
	WPAP	10/31/11	Loop 1604 at Vance Jackson	Approved	12/13/11
	WPAP-MOD	2/29/12	IH 35 Northbound frontage	Approved	4/9/12
	WPAP	7/2/12	SH 195 CR 240 to IH 35	Approved	9/11/12
	WPAP	7/19/12	FM 306	Approved	9/14/12
	WPAP-MOD	11/26/12	IH 10 LOOP 1604 SOUTH TO TRANSITION ZONE	Approved	1/7/13
	WPAP	2/11/13	RM 12 at Oakwood loop	Approved	3/21/13
	WPAP	2/14/13	FM 306 at Hunter road	Approved	4/4/13
	WPAP	5/3/13	North Walnut Ave	Approved	6/18/13
	WPAP	3/4/13	Loop 1 Shared Use Path	Approved	7/2/13
	WPAP	6/3/13	FM 1626	Approved	9/6/13
	WPAP	11/1/13	IH 35 ramp reversal	Approved	4/16/14
	WPAP	2/10/14	RM 967	Approved	4/10/14
	WPAP	3/5/14	RM 1431 Diverging diamond intersection	Approved	5/28/14
	WPAP	4/9/14	Spur 53	Approved	5/29/14
	WPAP	2/12/14	Loop 1 shared use path at 360	Approved	6/3/14
	WPAP	3/21/14	FM 1460	Approved	7/18/14
	WPAP	5/22/14	RM 12 Hugo Road to Pioneer Trail	Approved	8/27/14

TxDOT AGENCY APPROVED WPAPs					
EDWARDS ID	PLAN TYPE	REC DATE	REGULATED ENTITY NAME	TYPE OF RESPONSE	RESPONSE DATE
	WPAP	6/26/14	FM 487	Approved	9/10/14
	WPAP	4/22/14	SH 127 at Frio River	Approved	9/11/14
	WPAP	1/14/15	SH45 at Pearson Ranch Road	Approved	2/16/15
	WPAP	1/15/15	RM 12 Saddleridge Drive to Hugo Road	Approved	2/20/15
	WPAP	1/26/15	FM 3406	Approved	3/11/15
	WPAP	4/8/15	Loop 337 at Ridge Hill Drive	Approved	5/22/15
	WPAP	4/3/15	RM 2244 Redbud to Walsh Tarlton	Approved	6/8/15
	WPAP	7/17/15	Loop 360 at Loop 1	Approved	8/21/15

Definitions:

WPAP=Water Pollution Abatement Plan

WPAPMOD=Water Pollution Abatement Plan Modification

TxDOT will submit any additional agency-approved WPAPs received after the SWMP submittal and approval in the annual report for each respective permit year.

8.4 Discharges to the Edwards Aquifer Recharge Zone Implementation Schedule Activity, and Measurable Goal

Table 8.1

DISCHARGES TO THE EDWARDS AQUIFER RECHARGE ZONE				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
Annually/Aug	8.3.1-TxDOT Agency Approved WPAPs	Track Agency approved WPAPs	Submit a list of agency-approved WPAPs in the annual report for the respective permit year.	District ENV

9.0 EXPENDITURES

9.1 Permit Requirements

2. Statewide Annual Report

- (1) Annual expenditures for the reporting year, with a breakdown for the major elements of the SWMP, and the budget for the year (reporting year) following each annual report.*

9.2 Program Overview

Allocations of funds for environmental controls, stormwater management, and training are projected to remain somewhat constant for the foreseeable future.

9.3 Best Management Practices and Measurable Goals

To be in compliance with the Expenditures requirement, TxDOT will include the following expenditures that are considered representatives of the funding spent on the stormwater management program:

MCM 1 – Public Education, Outreach, Participation, and Involvement;

MCM 2 – Illicit Discharge Detection and Elimination (IDDE);

MCM 3 – Construction Site Stormwater Runoff Control;

MCM 4 – Post-Construction Stormwater Management in Areas of New Development and Redevelopment;

MCM 5 – Pollution Prevention and Good Housekeeping for Transportation Operations;

The above expenditures and projected expenditures will be included in the annual report.

9.4 Expenditures Implementation Schedule Activity, and Measurable Goal

Table 9.1

EXPENDITURES				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
Annually/Aug	9.1-Expenditures	Develop the cost of expenditures representative of the funding spent on the stormwater management program	Include the expenditures in the annual report.	ENV

10.0 OTHER REQUIREMENTS

10.1 Permit Requirements

By the end of the permit term, TxDOT must have completed and submitted to TCEQ original U.S. Geological Survey topographic quadrangle maps, or similar topographic maps with a scale between 1:10,000 and 1:24,000, which clearly delineates the following information:

- 1) All points of discharge from the MS4 area that were not submitted with the TxDOT MS4 permit application received by TCEQ on March 18, 2013; and
- 2) The location of major structural controls for stormwater discharge, including detention/retention ponds, major infiltration devices, etc.

The TxDOT will submit the requested information with the statewide annual reports over the five year permit term, such that each annual report submittal includes 20 percent of the information required in this section.

10.2 Program Overview

The mapping of all points of discharge from the MS4 and location of major structural controls for stormwater discharge will be performed by TxDOT ENV.

10.3 Best Management Practices and Measurable Goals

TxDOT will complete 20 percent of the mapping per permit year.

10.4 Other Requirements Implementation Schedule Activity, and Measurable Goals

Table 10.1

OTHER REQUIREMENTS - TOPOGRAPHIC MAPS				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
Annually/Aug	10.1-Point of Discharge Mapping	Map points of discharge from the MS4 area that were not submitted with the TxDOT MS4 permit application received by TCEQ on March 18, 2013.	Completion of 20 percent per year. Submit updated maps with the annual report.	ENV
	10.2-Major Structural Control Mapping	Map the location of major structural controls for stormwater discharge, including detention/retention ponds, major infiltration devices, etc.	Completion of 20 percent per year. Submit updated maps with the annual report.	ENV

11.0 LEGAL AUTHORITY

The Texas Transportation Commission, as provided in Article 6673, Vernon's Annotated Texas Statutes (V.A.T.S.), is authorized to plan, construct, operate, and maintain the state highways system in Texas. TxDOT is the state agency charged with carrying out this authorization. It is stated in Article 6674w-3, V.A.T.S., that TxDOT may acquire lands for the purpose, among many others, of draining any state highway. The statutes, along with rules set forth in the TAC, give TxDOT the power to construct, operate, and maintain a drainage system for state highways to accommodate the stormwater that originates within, and reaches highway ROWs.

TxDOT contracts with others for the construction, and sometimes for the maintenance, of these systems. Article 6674k, V.A.T.S., provides that the form of such contracts must be prescribed by the Texas Transportation Commission and may contain language advantageous to the state. The department may control these systems in this manner. Article 6673b, V.A.T.S., allows TxDOT to enter into necessary contracts with cities regarding various aspects of state highways within their corporate limits. TxDOT, through the TAC, has adopted rules governing these agreements. As a result, there are municipal maintenance agreements with cities that outline the responsibilities regarding, among other things, the maintenance of the highways, which would include the maintenance of the drainage systems appurtenant to the highways.

The TAC further provides that, when others desire to cross highways with a drainage facility, the design, construction, operation, and maintenance of the facility must be acceptable to TxDOT. The statutes of the State of Texas give TxDOT the power to control virtually all of the activities occurring within the ROW, but there is little, if any, authority to regulate discharges occurring off the ROW and flowing into state maintained drainage systems.

12.0 RESOURCES

TxDOT provides adequate funds, staff, equipment, and support capabilities to implement its activities under this SWMP. TxDOT spends program funding on litter removal, street sweeping, spot litter pick-up, "Adopt-a-Highway" programs, vegetation control, ditch maintenance, culvert and storm drain maintenance, stormwater pump station maintenance, and channel maintenance. The cost of TxDOT environmental and stormwater training classes are charged to the overhead accounts of each section trained and are not specifically tracked for stormwater costs. Public involvement and education programs are mostly funded by TxDOT's administration in Austin. In addition, some minor funding for employees has come out of the overhead of the district's Advance Transportation Planning section. All funding for stormwater maintenance costs, administration, training, and public involvement and education originates with the Texas Legislature and is allocated by this legislature to the department.

If warranted, District-specific controls will be developed and implemented in accordance with TxDOT's TPDES permit.

13.0 SWMP REVIEW AND UPDATES

The SWMP will be evaluated annually to determine the plan's effectiveness and efficiency. The SWMP will be revised as necessary to support needed changes based on the SWMP evaluation and/or requests made through permit requirements. The annual review of the current SWMP will be conducted in conjunction with the preparation of the annual report required under this permit. If required, the SWMPs will be revised by TxDOT during the term of the permit in accordance with the approved permit procedures.

If warranted, additional District-specific controls will be developed and implemented in accordance with TxDOT's TPDES Permit.

14.0 RECORDKEEPING

14.1 Permit Requirements

Section B. Recordkeeping

- 1) *The permittee shall retain all records, a copy of this TPDES permit, and records of all data used to complete the application for this permit and to satisfy the public participation requirements, for a period of at least three (3) years, or for the remainder of the term of this permit, whichever is longer. This period may be extended by a request from the executive director at any time.*
- 2) *The permittee shall submit the records to the executive director only when specifically asked to do so. The statewide SWMP required by this permit (including a copy of this permit) must be retained at a location accessible to the TCEQ.*
- 3) *The permittee shall make the application and the statewide SWMP available to the public at reasonable times during regular business hours, if requested to do so in writing. Copies of the SWMP must be made available within ten (10) working days of receipt of a written request. Other records must be provided in accordance with the Texas Public Information Act. However, all requests for records from federal facilities must be made in accordance with the Freedom of Information Act.*
- 4) *The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.*

14.2 Program Overview

TxDOT retains the SWMP and all associated records for at least three years after coverage under this permit terminates.

14.3 Best Management Practices and Measurable Goals

TxDOT will maintain all SWMP records for a minimum of three years.

14.4 Recordkeeping Implementation Schedule Activity, and Measurable Goal

Table 14.1

RECORDKEEPING				
Permit Year/Month	BMP	Activity	Measurable Goals	Responsible Staff
Annually/Aug	14.3-Recordkeeping	Maintain records for three years. Make the permit application and SWMP available to the public during regular business hours. Keep records after three years during administrative or enforcement actions.	Maintain records as set forth. Submit records to TCEQ when asked by their Director. This BMP does not need to be reported in the annual report.	ENV

15.0 REFERENCES

1. TxDOT. Occupational Safety Manual, July 2016.
2. TxDOT. Emergency Response Standard Operating Procedure No. 15-04.
3. TxDOT. Roadside Vegetation Management Manual, September 2013.
http://onlinemanuals.txdot.gov/txdotmanuals/veg/vegetation_management_guidelines.htm
4. TxDOT. Construction Site Runoff and Post Construction Runoff Control, June 2010.
T:\NRM\WRM\MS4\Manual_Guidance_forSWMP\Manuals\Construction_Site_runoff_and_Post_Const_Runoff (June 2010).docx
5. TxDOT. Don't Mess with Texas. <http://dontmesswithtexas.org>
6. TxDOT. Temporary Erosion, Sedimentation, and Environmental Controls SP506-003.
<http://www.dot.state.tx.us/apps-cg/specs/ShowAll.asp?year=4&type=SP&number=506>
7. TxDOT. FHWA Evaluation and Management of Highway Runoff Water Quality, December 1995.
<ftp://ftp.odot.state.or.us/techserv/Geo-Environmental/Environmental/Procedural%20Manuals/Water%20Quality/References/Evaluation%20and%20Management%20of%20Highway%20Runoff%20Water%20Quality.pdf>
8. TxDOT. Herbicide Operations Manual, 2012.
<ftp://ftp.dot.state.tx.us/pub/txdot-info/mnt/herbicide-manual.pdf>
9. TxDOT. The Hydraulic Design Manual, July 2016.
<http://onlinemanuals.txdot.gov/txdotmanuals/hyd/index.htm>
10. TxDOT. Recommended BMPs for TxDOT Storm Water System Maintenance Operations.
https://ftp.dot.state.tx.us/pub/txdot-info/env/mnt-bmp.pdf_server
11. TxDOT. Roadside Vegetation Management Manual, September 2013.
<http://onlinemanuals.txdot.gov/txdotmanuals/veg/index.htm>
12. TxDOT. Storm Water Field Inspector's Guide, June 2004.
<https://www.dot.state.tx.us/env/pdf/resources/StormWaterFieldInspectorsGuideFinal.pdf>
13. TxDOT. Storm Water Management Guidelines for Construction Activities, July 2002
<ftp://ftp.dot.state.tx.us/pub/txdot-info/env/storm/1introtoc.pdf>

14. TxDOT Storm Water Planning and Design Guidelines for New Development and Significant Redevelopment. June 2010.
[T:\NRM\WRM\MS4\Manual_Guidance_for_SWMP\Manuals\Stormwater_Planning_and_Design_New_Develop_and_Redevelopment \(June 2010\).docx](T:\NRM\WRM\MS4\Manual_Guidance_for_SWMP\Manuals\Stormwater_Planning_and_Design_New_Develop_and_Redevelopment_(June_2010).docx) (store in ENV hard drive)
15. TxDOT. TxDOT Specification "Construction and Maintenance of Highways, Streets, and Bridges, Item 506."
<http://www.txdot.gov/business/resources/txdot-specifications.html>
16. TxDOT. TxDOT Specification "Erosion, Sedimentation and Water Pollution Prevention and Control."
<https://ftp.txdot.gov/pub/txdot-info/cmd/cserve/specs/1995/standard/m506.pdf>
17. TxDOT. Use of Right-of-Way by Others Manual, December 2015.
<http://onlinemanuals.txdot.gov/txdotmanuals/use/index.htm>
18. TxDOT. Utility Accommodation Policy Manual by the Division of Right-of-Way.
http://onlinemanuals.txdot.gov/txdotmanuals/utl/references_for_utility_accommodation.htm
19. United States Department of Transportation. Emergency Response Guidebook.
https://www.ems.gov/pdf/preparedness/Resources/PHMSA_Emergency_Response_Guidebook.pdf

Studies

Erosion and Sediment Control Research Studies

TxDOT Project No. 1943

- An Evaluation of the Use and Effectiveness of Temporary Sediment Controls (897 KB)*
- A Review and Evaluation of Literature Pertaining to the Quantity and Control of Pollution from Highway Runoff and Construction (1,009 KB)*
- Effects of Highway Construction and Operation on Water Quality and Quantity in an Ephemeral Stream in the Austin, Texas area (688 KB)*

TxDOT Project No. 4572

- Water Quality Characteristics and Performance of Compost Filter Berms (2,667 KB)*
- Evaluation of Impact from Storm Water Discharges Associated with Road Construction Activities on Receiving Streams (1,457 KB)*

TxDOT Project No. 1379

- Temporary Erosion Control Measures Design Guidelines for TxDOT (3,701 KB)*
NCHRP 25-25(04)
- Environmental Stewardship Practices, Procedures, and Policies for Highway Construction and Maintenance (4,989 KB)*

Permanent Controls Research Studies

TxDOT Project No. 2945

- Evaluation of the Performance of Runoff Controls (1,807 KB)*
- Use of Vegetative Controls for Treatment of Highway Runoff (2,155 KB)*
- Effectiveness of Permanent Highway Runoff Controls: Sediment/Filtration Systems (2,161 KB)*

TxDOT Project No. 4173

- Retrofitting Drainage Systems for Water Quality (2,007 KB)*

TxDOT Project No. 4605

- Pollutant Removal on Vegetated Highway Shoulders (4,726 KB)*

ATTACHMENT A

TCEQ/TxDOT MOU

(B) all expenditures from the individual's account that includes:

- (i) the amount of the expenditure;
- (ii) the date of the expenditure;
- (iii) the person to whom the expenditure was made;
- (iv) except as described in clause (vi) of this subparagraph, a written statement issued by the person to whom the expenditure was made that includes the date the statement was created and the cost of the item or service paid for;
- (v) if the statement described in clause (iv) of this subparagraph documents an expenditure for more than one individual, the amount allocated to each individual identified on the statement; and
- (vi) if the expenditure is made to the individual for personal spending money, an acknowledgement signed by the individual indicating that the funds were received.

(3) The program provider may accrue an expense for necessary items and services for which the individual's personal funds are not available for payment, such as room and board, medical and dental services, legal fees or fines, and essential clothing.

(4) If an expense is accrued as described in paragraph (3) of this subsection, the program provider must enter into a written payment plan with the individual or LAR for reimbursement of the funds.

(v) If the program provider determines that an individual's behavior may require the implementation of behavior management techniques involving intrusive interventions or restriction of the individual's rights, the program provider must comply with this subsection.

(1) The program provider must:

- (A) obtain an assessment of the individual's needs and current level and severity of the behavior;
- (B) ensure that a service provider of behavioral support services:

(i) develops, with input from the individual, LAR, program provider, and actively involved persons, a behavior support plan that includes the use of techniques appropriate to the level and severity of the behavior; and

(ii) considers the effects of the techniques on the individual's physical and psychological well-being in developing the plan.

(2) The behavior support plan must:

- (A) describe how the behavioral data concerning the behavior is collected and monitored;
- (B) allow for the decrease in the use of the techniques based on the behavioral data; and
- (C) allow for revision of the plan when desired behavior is not displayed or the techniques are not effective.

(3) Before implementation of the behavior support plan, the program provider must:

- (A) obtain written consent from the individual or LAR to implement the plan;
- (B) provide written notification to the individual or LAR of the right to discontinue implementation of the plan at any time; and

(C) notify the individual's service coordinator of the plan.

(4) The program provider must, at least annually:

(A) review the effectiveness of the techniques and determine whether the behavior support plan needs to be continued; and

(B) notify the service coordinator if the plan needs to be continued.

(w) The program provider must report the death of an individual to DADS and the service coordinator by the end of the next business day following the death or the program provider's learning of the death and, if the program provider reasonably believes that the LAR does not know of the individual's death, to the LAR as soon as possible, but not later than 24 hours after the program provider learns of the individual's death.

(x) A program provider must not discharge or otherwise retaliate against:

(1) a staff member, service provider, individual, or other person who files a complaint, presents a grievance, or otherwise provides good faith information relating to the:

- (A) misuse of restraint by the program provider;
- (B) use of seclusion by the program provider; or
- (C) possible abuse, neglect, or exploitation of an individual; or

(2) an individual because someone on behalf of the individual files a complaint, presents a grievance, or otherwise provides good faith information relating to the:

- (A) misuse of restraint by the program provider;
- (B) use of seclusion by the program provider; or
- (C) possible abuse, neglect, or exploitation of an individual.

(y) A program provider must enter critical incident data in CARE no later than 30 calendar days after the last day of the month being reported.

This agency hereby certifies that the adoption has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on April 23, 2013.

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Kenneth L. Owens

General Counsel

Department of Aging and Disability Services

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For further information, please call: (512) 438-3734



TITLE 43. TRANSPORTATION

PART 1. TEXAS DEPARTMENT OF TRANSPORTATION

CHAPTER 2. ENVIRONMENTAL REVIEW OF TRANSPORTATION PROJECTS

ADOPTED RULES May 10, 2013 38 TexReg 2859

The Texas Department of Transportation (department) adopts the repeal of §2.23, Memorandum of Understanding with the Texas Natural Resource Conservation Commission. The department simultaneously adopts the replacement of the repealed section with new Subchapter I, §§2.301 – 2.308, Memorandum of Understanding with the Texas Commission on Environmental Quality. The repeal of §2.23 and new §§2.301 – 2.308 are adopted without changes to the proposal as published in the February 15, 2013, issue of the *Texas Register* (38 TexReg 801) and will not be republished.

EXPLANATION OF ADOPTED REPEAL AND NEW SECTIONS

Transportation Code, §201.607 requires the department to adopt a memorandum of understanding (MOU) with each state agency that has responsibilities for the protection of the natural environment or for the preservation of historic or archeological resources. Transportation Code, §201.607 also requires the department to adopt the MOU and all revisions to it by rule and to periodically evaluate and revise the MOU. In order to meet the legislative intent and to ensure that natural resources are given full consideration in accomplishing the department's activities, the department has evaluated its MOU with the Texas Commission on Environmental Quality (TCEQ) adopted in 2002 and finds it necessary to repeal existing §2.23 and simultaneously adopt new Subchapter I, §§2.301 – 2.308.

The new MOU between TCEQ and the department satisfies the statutory requirements for reviewing and revising MOUs with resource agencies. It is intended to replace the existing MOU, which has been in effect since March 21, 2002, with an MOU that more effectively streamlines TCEQ's review of the department's projects and simultaneously better allows TCEQ to focus on those projects most likely to affect natural resources. The MOU is better organized than the existing MOU, with different subject areas broken into separate sections. The MOU recognizes that the legislature changed the name of the Texas Natural Resource Conservation Commission to the Texas Commission on Environmental Quality. Additionally, the MOU reflects changes made by the department's recent revision of its environmental review rules, published in the March 9, 2012, issue of the *Texas Register* (37 TexReg 1727).

SECTION BY SECTION EXPLANATION OF MOU

Section 2.301 sets out the purpose of the MOU, to provide a formal mechanism by which TCEQ reviews transportation projects that have the potential to affect resources within TCEQ's jurisdiction.

Section 2.302 sets forth the statutory authority for TxDOT and TCEQ to enter into the MOU.

Section 2.303 contains definitions of various terms used in the MOU.

Section 2.304 sets forth the statutory responsibilities of TxDOT and TCEQ that are relevant to the purpose of the MOU.

Section 2.305 sets forth procedures for determining whether the department is required to coordinate a given transportation project with TCEQ. TxDOT will not coordinate a project that TxDOT classifies as a categorical exclusion, blanket categorical exclusion, or programmatic categorical exclusion under §2.81 or §2.82 of Chapter 2. TxDOT will coordinate a project for which TxDOT prepares an environmental assessment unless TxDOT has already coordinated an environmental report (discussed below) concerning the project and certain other conditions are

met. TxDOT will coordinate a project for which TxDOT prepares an environmental impact statement. TxDOT will coordinate a reevaluation concerning a project if the earlier coordination concerning the project is no longer valid as a result of changes in the project.

Section 2.305(a) recognizes TxDOT's new procedures that allow TxDOT to prepare an environmental report, which is a report, form, checklist, or other documentation analyzing an environmental issue in the context of a specific transportation project or presenting a thorough summary of an environmental study conducted in support of an environmental review document or demonstrating compliance with a specific environmental requirement. TxDOT's recently-adopted rules authorize a project sponsor to prepare an environmental report and submit it for technical review before the environmental review document is completed (see, 43 TAC §2.45). Similarly, the MOU would allow, but not require, TxDOT to coordinate separately an environmental report with TCEQ. For projects for which TxDOT prepares an environmental assessment, the MOU would allow TxDOT to satisfy coordination requirements by coordinating an environmental report provided all of the conditions in §2.305(a)(2)(B) are met.

Section 2.305(b) contains triggers for determining when coordination is required for projects for which TxDOT prepares an environmental assessment. For example, coordination is required if a project will add capacity in a nonattainment or maintenance area of the state. Use of these triggers will allow TCEQ to focus its resources on reviewing those projects most likely to adversely affect natural resources.

Section 2.305(c) includes general provisions concerning compliance with law and the computation of time. The MOU would authorize TxDOT (but not a local government) to conduct the coordination with TCEQ.

Section 2.305(d) specifies the protocols for TxDOT transmitting an environmental report or environmental review document to TCEQ and then TCEQ transmitting back its comments on the document. TCEQ must submit its comments within 30 days, unless TCEQ gives notice that it is extending the deadline for no more than an additional 15 days. TxDOT will respond in writing to TCEQ's comments and will ensure that the final version of the environmental review document describes the results of any coordination with and comments made by TCEQ.

Section 2.306 explains that TCEQ will provide publicly available information to TxDOT related to air quality so that TxDOT may incorporate such information into its analyses of how a project may impact air resources.

Section 2.307 states that TCEQ reserves all rights it has to enforce relevant laws and that the parties intend that TCEQ's participation in this MOU does not have the effect of waiving those rights or the requirements of any laws that apply to the projects covered by the MOU. Also, the parties agree that the MOU does not preclude either party from making any legal argument.

Section 2.308 expresses the intent of TxDOT and TCEQ to update the MOU in the future as required by Transportation Code, §201.607, or as necessitated by a change in state and federal law or a change in the state implementation plan.

COMMENTS

No comments on the proposed repeal or new sections were received.

SUBCHAPTER B. MEMORANDA OF UNDERSTANDING WITH NATURAL RESOURCE AGENCIES

43 TAC §2.23

STATUTORY AUTHORITY

The repeal is adopted under Transportation Code, §201.101, which provides the Texas Transportation Commission with the authority to establish rules for the conduct of the work of the department, and more specifically, Transportation Code, §201.607(b), which requires the department to adopt memoranda of understanding with each agency that has responsibility for the protection of the natural environment or for the preservation of historical or archeological resources, and to adopt all revisions to these memoranda by rule.

CROSS REFERENCE TO STATUTE

Transportation Code, §201.607.

This agency hereby certifies that the adoption has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on April 26, 2013.

TRD-201301659

Joanne Wright

Deputy General Counsel

Texas Department of Transportation

Effective date: May 16, 2013

Proposal publication date: February 15, 2013

For further information, please call: (512) 463-8683



SUBCHAPTER I. MEMORANDUM OF UNDERSTANDING WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

43 TAC §§2.301 - 2.308

STATUTORY AUTHORITY

The new sections are adopted under Transportation Code, §201.101, which provides the Texas Transportation Commission with the authority to establish rules for the conduct of the work of the department, and more specifically, Transportation Code, §201.607(b), which requires the department to adopt memoranda of understanding with each agency that has responsibility for the protection of the natural environment or for the preservation of historical or archeological resources, and to adopt all revisions to these memoranda by rule.

CROSS REFERENCE TO STATUTE

Transportation Code, §201.607.

This agency hereby certifies that the adoption has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

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Joanne Wright

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Texas Department of Transportation

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Proposal publication date: February 15, 2013

For further information, please call: (512) 463-8683



CHAPTER 2. ENVIRONMENTAL REVIEW OF TRANSPORTATION PROJECTS

The Texas Department of Transportation (department) adopts the repeal of §2.24, Memorandum of Understanding with the Texas Historical Commission. The department simultaneously adopts and replaces the repealed section with new Subchapter H, §§2.251 - 2.278, Memorandum of Understanding with the Texas Historical Commission. The repeal of §2.24 and new §§2.251 - 2.278 are adopted without changes to the proposal as published in the February 15, 2013, issue of the *Texas Register* (38 TexReg 807) and will not be republished.

EXPLANATION OF ADOPTED REPEAL AND NEW SECTIONS

Transportation Code, §201.607 requires the department to adopt a memorandum of understanding (MOU) with each state agency that has responsibilities for the protection of the natural environment or for the preservation of historic or archeological resources. Transportation Code, §201.607 also requires the department to adopt the MOU and all revisions to it by rule and to periodically evaluate and revise the MOU. In order to meet the legislative intent and to ensure that historic and archeological resources are given full consideration in accomplishing the department's activities, the department has evaluated its MOU with the Texas Historical Commission (THC), adopted in 2004, and finds it necessary to repeal existing §2.24 and simultaneously adopt new Subchapter H, §§2.251 - 2.278.

The new MOU between THC and the department satisfies the statutory requirements for reviewing and revising MOUs with resource agencies. It is intended to replace the existing MOU, which has been in effect since May 20, 2004, with an MOU that more effectively streamlines THC's review of the department's projects and simultaneously better allows THC to focus on those projects most likely to affect historic or archeological resources. The MOU has several new provisions and procedures that were developed based on experience gained from numerous projects that the department has submitted and THC has reviewed since the 2004 MOU was executed. It is also better organized than the existing MOU, with different subject areas broken into separate sections. Additionally, the MOU reflects changes made by the department's recent revision of its environmental review rules, published in the March 9, 2012, issue of the *Texas Register* (37 TexReg 1727).

SECTION BY SECTION EXPLANATION OF MOU

Section 2.251 sets out the purpose of the MOU, identifies the statutory provisions under which the MOU is adopted, and explains that the MOU supersedes the 2004 MOU.

Section 2.252 sets forth the applicability of the MOU by explaining that it applies to any transportation project for which an environmental review is performed under the department's environmental review rules and any other project coordinated at the department's request. Whether coordination for a given project is required under the MOU is addressed in §2.255, concerning

ADOPTED RULES May 10, 2013 38 TexReg 2861

Coordination Responsibilities, §2.257, concerning Projects Excluded from Review for Archeological Resources and Cemeteries, and §2.270, concerning Projects Excluded from Review for Non-Archeological Historic Properties. Section 2.252 also clarifies that federally funded, licensed, or permitted projects may follow the procedures set forth in the MOU only if doing so would not conflict with the lead federal agency's environmental rules.

Section 2.253 explains that, for federally funded projects, the terms of a programmatic agreement among the department, the Federal Highway Administration, the Texas State Historic Preservation Officer, and the Advisory Council on Historic Preservation, if applicable, will control rather than terms of the MOU. The section also obligates the department and THC to seek to revise the existing programmatic agreement to reflect the procedures of the MOU.

Section 2.254 contains definitions of various terms used in the MOU.

Section 2.255 sets forth the department's and THC's coordination responsibilities under the MOU. It explains that the department shall coordinate with THC on all transportation projects for which the department is the project sponsor under 43 TAC §2.7 unless the project is of a type that is exempt from coordination under another section of the MOU. Section 2.255 also specifies that coordination required by the MOU must be conducted by or through the department's Environmental Affairs Division, unless otherwise agreed to by THC. The section also clarifies that coordination of work in department right-of-way associated with a project for which the department is not the project sponsor under 43 TAC §2.7 is the responsibility of the project sponsor, and not the department, unless the department and THC agree that the department will coordinate the project. Finally, the section generally describes THC's coordination responsibilities under the MOU, such as to conduct any required review in an efficient manner.

Section 2.256 sets parameters on staff qualifications and the use of consultants for cultural resource investigations undertaken in accordance with the MOU. For example, all staff conducting such an investigation must meet certain professional standards detailed in the section.

Section 2.257 exempts certain types of routine projects from the requirement to conduct a project-specific review for impacts to archeological resources or cemeteries. Examples of exempt project types include installation, repair, or replacement of fencing, resurfacing, and replacement, upgrade, or repair of safety barriers. The section further explains that project types exempted from review under the MOU are also exempt from other THC rules regarding project-specific investigations or coordination for potential impacts to cemeteries, unless certain conditions are present.

Section 2.258 sets forth the procedures for project coordination when review for archeological resources and cemeteries is required. If, after conducting an evaluation of the area for potential effects for a given project, the department determines that the project will not affect archeological historic properties and that the area of potential effects contains no cemeteries, the department may approve the project to proceed to construction without review by THC. The department must submit to THC a quarterly report of projects so evaluated and internally approved.

If the department determines that a given project may affect archeological historic properties, or that the area of potential effects contains a cemetery, the department must submit to the

THC a request for review of the project. Section 2.258 explains the different types of findings, determinations, and recommendations that the department must include in its request for review. If the project will have an adverse effect on an archeological historic property or cemetery within the area of potential effects, the department must recommend to THC appropriate means by which to resolve the potential adverse effect. The section specifies the various forms the resolution of adverse effects may take and prescribes various requirements for cases in which data recovery is the selected means for resolving adverse effects. Finally, §2.258 sets parameters on when and how THC must respond to a request for review submitted by the department.

Section 2.259 contains provisions governing the department's investigations of a project's area of potential effects, including provisions for determining when field investigations are required and when background information such as maps and project-area photographs may be used.

Section 2.260 sets forth procedures for THC's issuance of antiquities permits to the department. Under these procedures, the department is not required to submit an antiquities permit application provided that certain conditions are satisfied, such as that the department provides THC with notification of the work and that the work is overseen by the archeological staff of the department's Environmental Affairs Division. The section also includes provisions allowing the department to initiate work under an emergency permit when conditions of natural disasters, man-made disasters, or post-review discovery necessitate immediate action. Provisions governing the department's work under permits issued by THC, such as provisions explaining when work under a permit will be considered complete, are also included in §2.260.

Section 2.261 contains provisions governing the department's conduct of surveys to investigate archeological resources and cemeteries. For example, the section explains that subsurface investigation is not required where it can be demonstrated that the portion of the site to be affected is not likely to have sufficient integrity to be eligible for designation as a State Antiquities Landmark.

Section 2.262 prescribes methods to be used by the department when conducting test excavations. The section allows the department to depart from the specified methods in cases where it is deemed appropriate, but requires the department to justify deviations in the resulting written report. Section 2.262 also requires data from test excavation projects to be made available to qualified researchers.

Section 2.263 requires the department, under certain conditions, to develop public educational outreach projects for significant data recovery investigations. Section 2.263 requires data from data recovery projects to be made available to qualified researchers.

Section 2.264 concerns exhumation, which is a form of investigation to resolve a project's adverse effects on a cemetery. The section explains when exhumation efforts may begin and identifies tasks that represent a sufficient, reasonable, and good faith effort to identify remains and any next of kin associated with burials in unknown or abandoned cemeteries.

Section 2.265 prescribes the procedures the department must follow when it discovers an archeological site after it has awarded a construction contract. The department must immediately suspend construction or any other activities that

would affect the site and perform various specified tasks before resuming.

Section 2.266 concerns standard treatments for particular resource types. It sets forth standards to be followed by the department when encountering isolated wells or cisterns unassociated with other remains or burnt rock midden features that have not been obviously destroyed by modern disturbances.

Section 2.267 sets standards for the department's recovery and curation of artifacts. For example, while the department may temporarily house artifacts and samples during laboratory analysis and research, it must transfer them to a permanent curatorial facility upon completion of the analysis.

Section 2.268 establishes minimum documentation requirements for projects subject to review for archeological resources and cemeteries under the MOU.

Section 2.269 requires the department to submit to THC quarterly reports listing all projects for which the department documented that no historic properties are present in the area of potential effects or that the project will have no adverse effects on archeological historic properties or cemeteries.

Section 2.270 pertains to review for impacts to non-archeological historic properties. It lists a number of project types that pose limited potential to affect historic properties and provides that, for listed project types, if qualified department staff determine that no evaluation of a given project is needed, then none is required under the MOU or under other THC rules.

Section 2.271 explains the procedure for review of a project for impacts to non-archeological historic properties when an evaluation is required. The section sets forth two different levels of review: internal review and coordinated review. For a project subject to review for impacts to non-archeological historic resources, if department personnel determine that the project will have no effect or no adverse effect on historic properties, then only internal review is required. Such a project is required to be recorded on a quarterly report.

If a project is determined by department personnel to have an adverse effect on a historic property, then coordinated review is required. Under the §2.271 procedures, THC must respond within 20 calendar days of the department's request for review by indicating whether an affected historic property will require a historic structures permit or whether THC intends to initiate a State Antiquities Landmark nomination for the affected property. If THC does not respond within 20 days, the department may assume THC's concurrence with its determinations and proceed with construction of the project. Section 2.271 also contains provisions governing notification of work affecting a county courthouse, projects that may subsequently require a federal permit or change to federal funding and that involve a direct taking of an historic property, and required documentation both for projects internally reviewed and for projects for which coordinated review is conducted.

Section 2.272 explains that, in cases in which the department cannot gain access to private land needed to complete an investigation under the MOU prior to approval of the environmental review document, it must complete the investigation once access is obtained, but prior to any construction-related impacts.

Section 2.273 provides that if the department utilizes the procedures set forth in the MOU, then it will be considered to be

in compliance with any other applicable THC requirements. In other words, with respect to department projects, the terms of the MOU control over THC's generally applicable rule requirements.

Section 2.274 specifies that any project-specific agreements reached between the department and THC will supersede the requirements of the MOU.

Section 2.275 obligates the department and THC to collaborate on improvements to their programs and development of innovative solutions for expedited review procedures, such as using project outcomes to refine approaches to resource identification, evaluation, treatment methods, programmatic mitigation measures and interagency agreements that facilitate early coordination, streamlining, and expedited review of the department's transportation projects.

Section 2.276 allows THC to review department project files for specific undertakings carried out under the MOU and recommend process improvements based on issues identified during the review.

Section 2.277 provides that THC and department staff will be responsible for attempting to resolve any conflict between THC and the department that results from the implementation of this subchapter before elevating to agency management.

Section 2.278 provides that THC and the department will convene every four years to review, update, or extend this agreement. This review cycle is shorter than the five-year review cycle prescribed by Transportation Code, §201.607(a).

COMMENTS

No comments on the proposed repeal or new sections were received.

SUBCHAPTER B. MEMORANDA OF UNDERSTANDING WITH NATURAL RESOURCE AGENCIES

43 TAC §2.24

STATUTORY AUTHORITY

The repeal is adopted under Transportation Code, §201.101, which provides the Texas Transportation Commission with the authority to establish rules for the conduct of the work of the department, and more specifically, Transportation Code, §201.607(b), which requires the department to adopt memoranda of understanding with each agency that has responsibility for the protection of the natural environment or for the preservation of historical or archeological resources, and to adopt all revisions to these memoranda by rule.

CROSS REFERENCE TO STATUTE

Transportation Code, §201.607.

This agency hereby certifies that the adoption has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on April 26, 2013.

TRD-201301861

Joanne Wright
Deputy General Counsel
Texas Department of Transportation
Effective date: May 16, 2013
Proposal publication date: February 15, 2013
For further information, please call: (512) 463-8683



SUBCHAPTER H. MEMORANDUM OF UNDERSTANDING WITH THE TEXAS HISTORICAL COMMISSION

43 TAC §§2.251 - 2.278

STATUTORY AUTHORITY

The new sections are adopted under Transportation Code, §201.101, which provides the Texas Transportation Commission with the authority to establish rules for the conduct of the work of the department, and more specifically, Transportation Code, §201.607(b), which requires the department to adopt memoranda of understanding with each agency that has re-

sponsibility for the protection of the natural environment or for the preservation of historical or archeological resources, and to adopt all revisions to these memoranda by rule.

CROSS REFERENCE TO STATUTE

Transportation Code, §201.607.

This agency hereby certifies that the adoption has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on April 26, 2013.

TRD-201301662

Joanne Wright
Deputy General Counsel
Texas Department of Transportation
Effective date: May 16, 2013
Proposal publication date: February 15, 2013
For further information, please call: (512) 463-8683



Texas Commission on Environmental Quality Interoffice Memorandum

To: Commissioners **Date:** November 16, 2012

Thru: Bridget C. Bohac, Chief Clerk
Zak Covar, Executive Director

From: Brian Christian, Division Director
Small Business and Environmental Assistance

Docket No.: 2012-0004-RUL

Subject: Commission Approval for Rulemaking Adoption
Chapter 7, Memoranda of Understanding
HB 451: Don't Mess with Texas Water Program
Rule Project No. 2012-012-007-AD

Background and reason(s) for the rulemaking:

Rulemaking is necessary to implement House Bill (HB) 451, which amends Texas Water Code, Chapter 26, by adding §26.053. HB 451, 82nd Legislature, was authored by Representative Lucio III and joint-authored by Representatives Creighton, Branch, and Bohac. HB 451 was sponsored by Senator Hegar. The bill took effect September 1, 2011.

HB 451 requires the TCEQ to create a program to prevent illegal dumping that affects surface waters of Texas. The bill requires TCEQ to work with the Texas Department of Transportation (TxDOT) to place signs on major highway water crossings that notify drivers of a toll-free number to call to report illegal dumping.

HB 451 requires rulemaking, although no deadline is provided. Rulemaking is estimated to be completed by December 2012.

Scope of the rulemaking:

A.) Summary of what the rulemaking will do:

Rulemaking consists of a Memorandum of Understanding (MOU) between TCEQ and TxDOT. The MOU outlines the responsibilities of both agencies in implementing this Program.

To implement HB 451, TCEQ will be required to: 1) establish a toll-free telephone number that forwards calls to the appropriate law enforcement agency; 2) coordinate participation with local governments; and 3) coordinate with TxDOT in the placement of signs.

TxDOT will be required to post signs compliant with the Program at locations identified and prioritized by the TCEQ and when previously posted signs identifying a major highway crossing or prohibiting illegal dumping are scheduled to be replaced.

B.) Scope required by federal regulations or state statutes:

HB 451 specifically requires rulemaking.

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C.) Additional staff recommendations that are not required by federal rule or state statute:

Although not specifically required by the legislation, it will be necessary for TCEQ to conduct public outreach to educate Texans about the existence of the Program.

Statutory authority:

Texas Water Code, §§5.103, 5.104(b), 26.011, 26.053
Texas Health and Safety Code, §§361.011, 361.017, 361.024

Effect on the:

A) Regulated community:

Local governments who participate in the Program may realize some fiscal implications if they need to develop infrastructure for handling enforcement of illegal dumping. It is anticipated that local governments that could incur significant costs may opt to not participate in the Program.

B) Public:

There could be a positive effect on citizens who live in an area that participates in the Program since they will have another mechanism to report illegal dumping. There is no expected fiscal impact to consumers.

C) Agency programs:

Several agency programs may be affected by the rule.

Small Business and Environmental Assistance (SBEA) staff will establish and maintain the toll-free telephone number. Staff will also manage any required agreements with participating local governments.

It will be necessary to coordinate with Information Resources staff to set up the toll-free number.

The rule will not create a group of affected persons who are not already affected by statute.

Stakeholder meetings:

SBEA held one open stakeholder meeting in Austin on November 8, 2011. Invited stakeholders included councils of government, cities, municipalities, law enforcement agencies, environmental groups, river authorities, and the general public.

In general, stakeholders expressed support for the Don't Mess with Texas Water Program. Stakeholders discussed the following issues:

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- Working with local entities and existing programs to help the public report illegal dumping. The new Program should work with and learn from existing programs.
- Using TxDOT's existing "Don't Mess with Texas" campaign to help build the Program. Many stakeholders indicated that this will help create a brand for the new Program.
- Handling and enforcement of illegal dumping complaints. Stakeholders expressed the necessity for participating local governments to be able to properly respond to reports of illegal dumping.
- Using the toll-free number hotline. Stakeholders indicated that the phone number needs to be easy for the public to use.
- Providing public outreach and education. Many stakeholders stated that a necessary part of the Program will be educating the public about the existence of the hotline and the importance of stopping illegal dumping.
- Posting road signs compliant with Program requirements. Some stakeholders suggested that signs should be posted in areas that will provide the most visibility.

Public comment:

The commission held a public hearing on August 30, 2012, at 2:00 p.m. Commission staff members were available before and after the hearing to address specific questions from those who attended the hearing. The comment period closed on September 10, 2012. The commission did not receive any comments on the proposed rule.

Significant changes from proposal:

No changes were made to the rule from proposal.

Potential controversial concerns and legislative interest:

There are no known controversial issues. Representative Lucio III filed an identical bill during the 81st Legislative Session, which passed the House but was never voted on by the Senate. Representative Lucio III has expressed the importance of this Program working with other illegal dumping programs and the Don't Mess with Texas campaign.

Does this rulemaking affect any current policies or require development of new policies?

This rulemaking does not affect current policy or require the development of new policy.

What are the consequences if this rulemaking does not go forward? Are there alternatives to rulemaking?

HB 451 specifically requires rulemaking to implement this Program.

Key points in the adoption rulemaking schedule:

Texas Register proposal publication date: August 10, 2012

Anticipated Texas Register publication date: December 21, 2012

Anticipated effective date: December 27, 2012

Six-month Texas Register filing deadline: February 10, 2013

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Agency contacts:

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Steven Shepherd, Staff Attorney, 239-0464
Charlotte Horn, Texas Register Coordinator, 239-0779
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cc: Chief Clerk, 2 copies
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Susana M. Hildebrand, P.E.
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Curtis Seaton
Tucker Royall
Office of General Counsel
Cynthia Carter
Charlotte Horn

ATTACHMENT B
TXDOT TRAINING CLASSES

Special Provision to Item 506

Temporary Erosion, Sedimentation, and Environmental Controls



Item 506, "Temporary Erosion, Sedimentation, and Environmental Controls," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 506.1., "Description." The second paragraph is voided and replaced by the following.

Contractor is considered primary operator to have day-to-day operational control as defined in TPDES GP TXR150000.

- 1.1. For projects with soil disturbance of less than 1 acre, no submittal to TCEQ will be required but Contractor will follow SWP3. For projects with soil disturbance of 1 acre to less than 5 acres a small site notice will be posted at the site. For projects with soil disturbance of 5 acres or more a notice of intent (NOI) is required and a large site notice posted at site. Postings will be in accordance with TPDES GP TXR150000. Postings not associated with project specific locations will be in same location as Department's postings.
- 1.2. **Notice of Intent (NOI).** Submit a NOI, if applicable, with the TCEQ under the TPDES GP TXR150000 at least 7 days prior to commencement of construction activities at the project site. Provide a signed copy to the Engineer and any other MS4 operators at the time of submittal. The Department will submit their NOI prior to contractor submission and will provide a copy for Contractor's use in completing the Contractor's NOI form.
- 1.3. **Notice of Change (NOC).** Upon concurrence of the Engineer, submit a NOC, if applicable, to the TCEQ within 14 days of discovery of a change or revision to the NOI as required by the TPDES GP TXR150000. Provide a signed copy of the NOC to the Engineer and any other MS4 operators at the time of submittal.
- 1.4. **Notice of Termination (NOT).** Upon concurrence of the Engineer, submit a NOT, if applicable, to the TCEQ within 30 days of the Engineer's approval that 70% native background vegetative cover is met or equivalent permanent stabilization have been employed in accordance with the TPDES GP TXR 150000. Provide a signed copy of the NOT to the Engineer and any other MS4 operators at the time of submittal.

Section 506.3.3., "Training," is supplemented by the following:

Training is provided by the Department at no cost to the Contractor and is valid for 3 yr. from the date of completion. The Engineer may require the following training at a frequency less than 3 yr. based on environmental needs:

- "Environmental Management System: Awareness Training for the Contractor" (English and Spanish) (Approximate running time 20 min.), and
- "Storm Water: Environmental Requirements During Construction" (English and Spanish) (Approximate running time 20 min.)

The CRPE, alternate CRPE designated for emergencies, Contractor's superintendent, Contractor, and subcontractor lead personnel involved in soil disturbing or SWP3 activities must enroll in and complete the training listed below and provide the certificate of completion to the Engineer before performing soil disturbing or SWP3 activities on the project. Coordinate enrollment as prescribed by the Department and pay associated fees for the following training:

- "Revegetation During Construction"
- "Construction General Permit Compliance," and

- "Construction State Gate Checklist (CSGC)."

Training and associated fee will not be measure or paid for directly but are subsidiary to this Item.

Environmental Management System Training

	Training Course	Class Code	Mandate Deadlines	Delivery Method	District Engineer/ Director	Area Engineer /Assist AE	Road Construction Project Engineer	Design/ Plan Review	ENV staff/ EC (based on job duties)	DEQC	Construction Inspector	Contractor Personnel/Subs per Specifications
All TxDOT Employees involved in Road Construction	Storm Water Compliance Requirements in Construction	ENV433	Within 30 days of hire or job assignment and repeated every 3 years	ELM	✓	✓	✓	✓	✓	✓	✓	
	EMS Awareness Training EMS Orientation	ENV414	Within 30 days of hire or job assignment and repeated every 3 years	ELM	✓	✓	✓	✓	✓	✓	✓	
Design	AP&D Stage Gate Checklist	DES435	With in 90 days of hire or assignment and repeat as needed	ELM				✓	✓	✓		
	Storm Water Erosion & Sediment Control Design Day 1	ENV300	Within 6 months of hire or job assignment and repeat as needed	Instructor Lead		✓	✓	✓	✓	✓	✓	
	Storm Water Erosion & Sediment Control Design Day 2	ENV301	Within 6 months of hire or job assignment and repeat as needed	Instructor Lead		✓	✓	✓	✓	✓		
	EPIC Sheet	DES908	With in 80 days of hire or job assignment and repeated every three years	ELM			✓	✓	✓	✓	✓	
	PS&E Stage Gate Checklist	DES907	Within 90 days of hire or job assignment and repeated as needed.	ELM				✓	✓	✓		
Construction	*Re-vegetation Course	MNT415	Within 90 days of hire or job assignment and repeated every 3 years	ELM UT Arlington		✓	✓			✓	✓	✓
	Construction Stage Gate Checklist	CON816	Within 30 days of hire or job assignment and repeated every 3 years	UT Arlington			✓		✓	✓	✓	✓
	Field Environmental Emergency Compliance	ENV405	Within 30 days of hire or job assignment and repeated every 3 years	ELM			✓			✓	✓	
	How to Comply Section 404 Permits	ENV457	Within 30 days of hire or job assignment and repeated every 3 years	ELM			✓	✓	✓	✓	✓	
	CGP Compliance and Enforcement	ENV432	Within 30 days of hire or job assignment and repeated every 3 years	ELM UT Arlington		✓	✓	✓	✓	✓	✓	✓
	Storm Water Inspection Checklist (Form 2118)	CON 817	Within 90 days of hire or job assignment and repeat every 3 years	ELM			✓			✓	✓	
	Storm Water Pollution Prevention Plan	ENV103	Within 6 months of hire or job assignment and repeat as needed	Instructor Lead		✓	✓	✓		✓	✓	
	Storm Water Compliance Requirements in Construction	Contractor	Preference is a preconstruction meeting or before earth turning work.	TxDOT Internet								✓
	Contractor EMS Awareness Training (Contractor)	Contractor	Preference is a preconstruction meeting or before earth turning work.	TxDOT Internet								✓

Goal is for courses ENV 300 and ENV 301 will be developed for ELM in FY 2016. Should schedule classes when available until ELM versions becomes available.

2/1/2016

Audience	Environmental and Hazard Communication Training Matrix		
	Training Course	Class Code	Course Description
Environmental coordinators	Stream Assessment & Restoration	ENV 205	Discussions including Stream mechanics, geomorphology, stream and riparian ecology, site assessment and data collection, hydrologic, hydraulic, and stability analysis, channel design, issues including erosion and deposition, and construction considerations and permitting requirements.
Maintenance staff	Small Spill Response Training	SFH410	This course provides the necessary information to safely respond to small spills of toxic materials which may occur in TxDOT laboratories or workplace situations.
Employees who handle hazardous materials	Hazard Communication	SFH420	The purpose of this course is to fulfill the requirements of the Texas Hazard Communication Act which is patterned after the federal Occupational Safety and Health Administration (OSHA) Hazard Communication Standard. The training includes regulation requirements and the importance of the information on the material safety data sheet.
Employees who handle hazardous materials	HazCom/Environmental Refresher	SFH421	This course is a refresher for Hazard Communication and Environmental Pursuit. It reinforces the principles and tools used to communicate the dangers of hazardous chemicals used in the workplace and the role of TxDOT employees as stewards of the environment. After initial training, refresher training is required every five (5) years.
Employees whose activities involve handling oil	Spill Prevention Control and Countermeasure (SPCC)	District-Specific Code	This course prepares employees who are involved with maintaining the storage and usage of oil products and describes actions that should be taken in the event of a release of oil products.

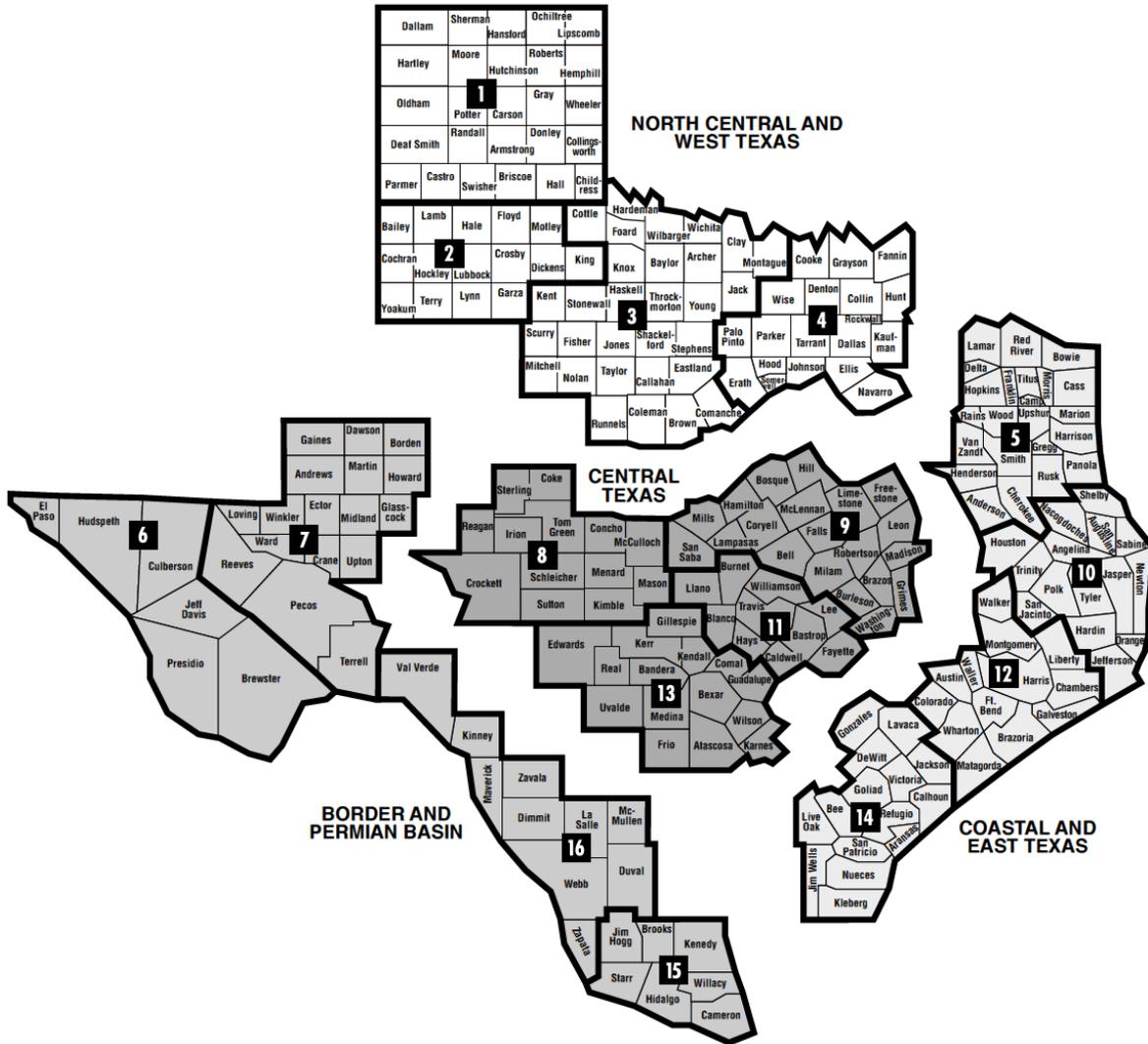
Audience	Maintenance MS4 Training Matrix		
	Training Course	Class Code	Course Description
Maintenance supervisors and specifically identified maintenance employees	Maintenance Section Supervisor Course	MNT 123	The course is designed to provide maintenance section supervisors and specifically identified maintenance employees with information, practical applications and resources to help them perform their jobs more efficiently, effectively and safely.
AEs, maintenance supervisors, de-icing applicators, Regional fleet and equipment managers	Anti-Icing/De-icing Equipment Training	MNT 149	Classroom training on anti-icing, de-icing materials and proper application rates and calibration techniques. Three hour equipment inspection and calibration with hands on training. Operators will be able to calibrate their equipment to insure more accurate applications on the roadways. They will have a thorough understanding of rates of materials to be applied, truck nozzle configurations and outputs of nozzles, and calibration of spray equipment being used.
Supervisors, assistants, applicators, and back-up applicators involved in the pesticide program.	Herbicide Certification	MNT 410	The current Agriculture Code requires TxDOT employees to possess a valid, non-commercial, pesticide applicator's license prior to applying herbicide on the transportation system right-of-way, or on the grounds of any TxDOT building.
Maintenance personnel with a Pesticide Applicators License	Herbicide Equipment Training	MNT 411	This hands-on training focuses on the proper operation and maintenance of herbicide equipment used by maintenance personnel who already possess a pesticide applicator's license. The course will ensure proper application of herbicide equipment and decrease down time for equipment repairs.

Audience	Maintenance MS4 Training Matrix		
	Training Course	Class Code	Course Description
TxDOT design, construction inspection and maintenance personnel	Revegetation Training	MNT 412	Designer training introduces roadway design engineers to the design concepts and tasks necessary to develop plans and specifications that lead to successful revegetation. Inspector training instructs construction inspectors how to effectively inspect and monitor the revegetation activities to ensure successful revegetation.
Maint. Supervisors, Asst. Maint. Supervisors, Equipment Operators, and section support staff	Winter Weather Operations	MNT 812	Winter weather operations are critical for the efficient movement of people and goods across the State of Texas. It is important that each District and its maintenance sections provide an acceptable level of service during snow and ice events that permit traffic movement to take place under varying weather conditions. This level of service is dependent on organizing State equipment and forces, maintaining lines of communication both within the department and with outside agencies, keeping the public informed of road conditions, making TxDOT staff and other agencies aware of the changing weather conditions and its effect on the roads. This course will assist and help personnel make those sound, reasonable decisions that provide for the safest operation possible of the highway system during inclement weather.

ATTACHMENT C

TCEQ REGIONAL OFFICES

TCEQ AREAS & REGIONS



TCEQ REGIONS			
1 AMARILLO	5 TYLER	9 WACO	13 SAN ANTONIO
2 LUBBOCK	6 EL PASO	10 BEAUMONT	14 CORPUS CHRISTI
3 ABILENE	7 MIDLAND	11 AUSTIN	15 HARLINGEN
4 DALLAS/FORT WORTH	8 SAN ANGELO	12 HOUSTON	16 LAREDO



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AREA & REGIONAL OFFICES

TCEQ AREA OFFICES

BORDER AND PERMIAN BASIN

Region 6, El Paso • Region 7, Midland • Region 15, Harlingen • Region 16, Laredo

Area Director: David A. Ramirez
 1804 W. Jefferson Ave. • Harlingen, TX 78550-5247
 956-425-6010 • FAX: 956-412-5059

CENTRAL TEXAS

Region 8, San Angelo • Region 9, Waco • Region 11, Austin • Region 13, San Antonio

Area Director: Susan Jablonski, P.E., MC 172
 P.O. Box 13087 • Austin, TX 78711-3087
 12100 Park 35 Circle • Austin, TX 78753
 512-239-6731 • FAX: 512-239-4390

COASTAL AND EAST TEXAS

Region 5, Tyler • Region 10, Beaumont • Region 12, Houston • Region 14, Corpus Christi

Area Director: Kelly Keel, MC 172
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 512-239-3607 • FAX: 512-239-4390

NORTH CENTRAL AND WEST TEXAS

Region 1, Amarillo • Region 2, Lubbock • Region 3, Abilene • Region 4, Dallas/Fort Worth

Area Director: Randy J. Ammons
 5012 50th St., Ste. 100 • Lubbock, TX 79414-3426
 806-796-7092 • FAX: 806-796-7107

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 Amarillo, TX 79109-4933
 806-353-9251 • FAX: 806-358-9545

2 – LUBBOCK

Regional Director: Jeff Bertl
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3 – ABILENE

Regional Director: Winona Henry
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4 – DALLAS/FORT WORTH

Regional Director: Tony Walker
 2309 Gravel Dr.
 Fort Worth, TX 76118-6951
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Stephenville Office

(Concentrated Animal Feeding Operations)
 580 W. Lingleville Rd., Ste. D
 Stephenville, TX 76401-2209
 254-965-9200 or 800-687-7078

5 – TYLER

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6 – EL PASO

Regional Director: Lorinda Gardner
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7 – MIDLAND

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 Midland, TX 79706
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8 – SAN ANGELO

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9 – WACO

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13 – SAN ANTONIO

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TCEQ rules, publications, agendas and highlights of commission meetings, and other environmental information are available on the TCEQ website at <www.tceq.texas.gov>. Additional region information is available at <www.tceq.texas.gov/goto/regions>.

ATTACHMENT D**ALLOWABLE NON-STORMWATER DISCHARGES**

1. Water line flushing (excluding discharges of hyper chlorinated 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, runoff 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.

ATTACHMENT E

ENV ITEM 303

MS4 Outfall Identification, Verification, Follow-up and Illicit Discharge Detection & Elimination (IDDE) Program

303.1 Description: A process to be utilized for identification, verification, recording, screening, classification, and tracking of TxDOT's Municipal Separate Storm Sewer System (MS4) outfalls located within the urbanized area of the right-of-way (ROW) for compatibility with TxDOT's Advanced Outfall Tracking System (AOTS).

303.2 Procedures for Outfall Identification, Verification, Follow-up and Illicit Discharge Detection & Elimination (IDDE) Program: Unless otherwise specified in the work authorization, a field team composed of an MS4 Environmental Technician and a GIS Technician shall perform field data collection. The Technical Expert shall perform the outfall mapping using the following steps:

- Perform research to determine numbers of potential new outfalls, unless the information has been provided to the Technical Expert by TxDOT.
- Perform research to determine outfalls that require verification or follow-up, unless the information has been provided to the Technical Expert by TxDOT.
- Generate a map, either hard copy or electronic file, to be utilized during field activities that includes TxDOT's MS4 regulated area boundaries; name and location of roadways subject to the MS4 permit requirements; name and location of the surface waters that intersect the roadways; name and location of surface water bodies to which the regulated MS4 discharges, name and boundary of the watersheds in which the regulated MS4 is located; and location of potential new outfalls.
- Perform a pre-field activity meeting among the field team and with the District POC or ENV PM to ensure communication of project goals and the required deliverables.
- Utilize a State-approved mobile Android or iOS device to identify, screen, classify, and record required data in accordance with the requirements stipulated in the Contract, and in the ENV Item 340 (relating to Do Forms Data Collection and Processing Procedures for Municipal Separate Storm Sewer System (MS4) Outfall Mapping). The Technical Expert shall perform the outfall mapping when there is no runoff from the last rain event.
- Map and record all of the external major and minor outfalls within the MS4 regulated areas. Mapping of the internal outfalls must be authorized by the ENV PM. Third-party outfalls shall be mapped only if the Technical Expert confirms a suspected or obvious illicit discharge or the outfall meets the TCEQ definition of major outfall.
- Perform quality assurance/quality control (QA/QC) of collected data. Correct, adjust and revise the spatial data as well as the detailed and specific information required in the ENV QA/QC Sheet provided in the DoForms Manual.

303.3 Procedures for Illicit Discharge Detection & Elimination (IDDE) Program.

The Technical Expert shall perform the IDDE program using the following steps:

- Perform the illicit discharge detection of the outfalls only if a dry weather qualifying event occurs during the outfall mapping event or during the IDDE event, unless authorized by the TxDOT Project Manager.
- Use TxDOT's Outfall Field Inspection Work Flow Diagram and Classification Scheme and Associated Tables for the Flow Diagram (Table 1, 2, and 3), provided in the DoForms Manual to screen for an illicit discharge. Outfall classifications must be recorded in the TxDOT- approved unit.
- Perform Field Screening using the Work Flow Diagram and the Technical Expert's expertise to identify if an outfall shall be classified as Unlikely Illicit Discharge, Potential Illicit Discharge, or Obvious Illicit Discharge.
- Classify an outfall as Unlikely Illicit Discharge using physical parameters listed in the Associated Table 1 and other appropriate field observation.
- Classify an outfall as Potential Illicit Discharge using physical parameters observation or in conjunction with the field water chemistry described in the Associated Table 2.
- Using an appropriate consumable test kit for field water chemistry (e.g., Lamotte or other prior-approved field test kit) to screen for the following potential pollutants and/or characteristics: Ammonia_Nitrogen, Total Chlorine, Detergent, pH, Total Copper, and Phenols
- Results of the physical parameters and field water chemistry analyses must be recorded in the State approved unit.
- Classify an outfall as Obvious Illicit Discharge by physical observations and by collecting field water chemistry data according to the Associated Table 3.
- Verify if an outfall should be classified as Obvious Illicit Discharge by collecting a water sample and submitting the sample to a National Environmental Laboratory Accreditation Conference (NELAC)-accredited laboratory for the appropriate chemical analyses in accordance with the Associated Table 3. Results of the lab water chemistry analyses shall be recorded in the State provided spreadsheet. Any pertinent details regarding the possible origin(s) of the discharge shall be documented in the state provided spreadsheet and in a Field Logbook. The Field Logbook is only required for field sampling and laboratory data collection.

303.4 Procedures for Report an Obvious Illicit Discharge:

Notify the District POC and ENV PM of the Obvious Illicit Discharge using electronic mail, after an obvious illicit discharge is observed and confirmed with laboratory water chemistry analysis, within one (1) day of confirmation of the laboratory results or by 9:00 a.m. of the first business day following the confirmation of the laboratory results. A Letter Report including all laboratory results, suitable for submission to EPA, the Texas Commission on Environmental Quality (TCEQ), or the receiving MS4, shall also be submitted via email to

both the District POC and the ENV PM within 48 hours of completion of the laboratory analysis.

303.5 Data Submittal:

All collected outfall field data, when complete, must be transferred to a TxDOT FTP site that will be specified by the State. The Technical Expert shall submit the data in accordance with the requirements stipulated in the Contract, and in the ENV Item 340 (relating to DoForms Data Collection and Processing Procedures for Municipal Separate Storm Sewer System (MS4) Outfall Mapping) and must coordinate with the State to modify or correct the data until successful upload of the data into AOTS has been achieved.

ATTACHMENT F

ENV ITEM 340

DoForms Data Collection and Processing Procedures for Municipal Separate Storm Sewer System (MS4) Outfall Mapping

340.1 DESCRIPTION: DoForms is an interface that allows for real time sharing of field collected data. Field crews collect data, sync information to the “cloud,” and a desktop user downloads the information for subsequent quality assurance/quality control (QA/QC) review for later submission to TxDOT.

DoForms shall be used to map, conduct dry-weather screening, and classify outfalls within TxDOT MS4 regulated areas. Consideration shall be given to a combination of visual observations, physical observations, and field-measured water chemistry results in order to classify each outfall as following:

- Unlikely Illicit Discharge
- Potential Illicit Discharge
- Obvious Illicit Discharge

340.2 EQUIPMENT AND REFERENCES: The Technical Expert shall use a mobile Android or iOS device that has both a data connection and a true GPS receiver. The DoForms application must be installed in the State-approved Android or iOS device prior to field activities and must be used to collect and process the field data.

340.3 PROCEDURES: The Technical Expert shall use the State-approved device and the DoForms application to collect data, classify outfalls, and submit the processed data to the State using a State-provided file-transfer protocol (FTP) site (TxDOT Drop Box). The Technical Expert shall create a DoForms account to manage the data collected. The TxDOT GIS Coordinator must be included as a user (READ-ONLY) of the Technical Expert’s DoForms account. Details associated with procedures for the data collection effort are presented below.

340.3.1 Setup a DoForms Account and Import a DoForms Application

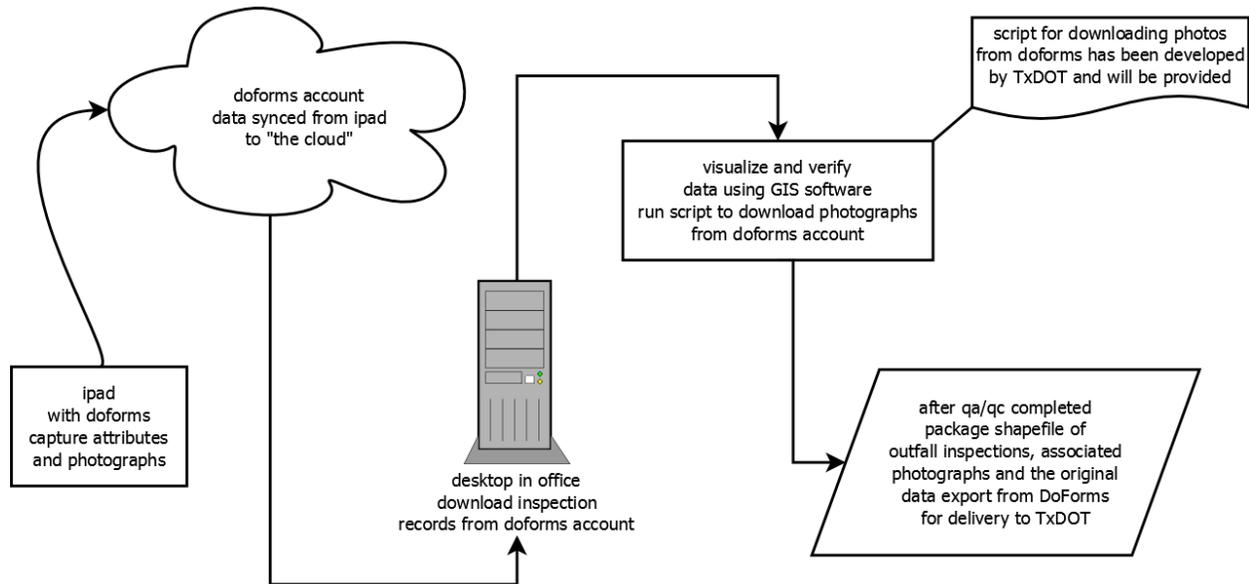
The Technical Expert shall setup the DoForms website account and then setup the mobile application based on the website information (Refer to user guides for further clarification). The Technical Expert must utilize the State-provided DoForms manual together with this ENV ITEM. The Technical Expert shall review the following documents and websites:

- <http://www.doforms.com/support/iPhone-user-guide.pdf>
- <http://www.doforms.com/support/website-user-guide.pdf>
- <http://www.doforms.com/blog/quick-tips/post/loading-forms-from-the-doforms-public-library/>

The Technical Expert shall download and install the DoForms Application from the AppStore (iOS) or the Play Store (Android) to the State-approved devices as well as import the TxDOT AOTS DoForms, into their account without modification.

The following diagram presents the general process.

OVERVIEW OF WORKFLOW



340.3.2 Field Activity and Field Documentation

Prior to mobilizing a field crew to the site to conduct outfall mapping/screening, the Technical Expert shall perform the following:

- Verify that TxDOT AOTS DoForms application is loaded into the device;
- Verify that the MS4 regulated boundaries are loaded into the device or marked on survey maps;
- Verify that surface waters to be mapped, which include NHD files (i.e., water bodies) and relevant NWI files (i.e., playa), are loaded into the device or marked on survey maps;
- Verify that TxDOT ROW center lines for the assigned District are loaded into the device or marked on survey maps;
- Verify that the device has the required data and is functioning normally;
- Verify with TxDOT Project Manager the outfall numbering for the first outfall;
- Verify with the District point of contact (POC) or TxDOT Project Manager the locations of the relevant ROWs and associated outfalls to be surveyed; and,
- If requested, develop and submit an electronic map that shows the assigned roadways with the ROW and potential new outfalls.

The Technical Expert shall perform, at a minimum, the following for field documentation:

- Become familiar with the DoForms application and TxDOT's data dictionary (e.g., features and attributes) and the purpose of each entry or field.
- Complete each field shown in the DoForms application. Note: Fields with a red asterisk are required to be completed. Some fields have default values populated, which may need to be revised as necessary by following the hints provided in the form.
- Label or name the outfall using the following naming convention:

Three-letter TxDOT District abbreviation_County abbreviation, the last number of the previous outfall, plus one (e.g., an outfall in the TxDOT Dallas District, in Denton County, for which the previous outfall mapped was assigned the number 00398, the next outfall name in sequence would be DAL_DN_00399). If in doubt, contact TxDOT Project Manager prior to field activity.

Note: The numerical portion of the outfall nomenclature must be consecutive for a District regardless whether crossing county boundaries (*e.g., there should not be both DAL_DN_00399 and DAL_CO_00399 recorded*).

- Record all relevant outfalls and associated characteristics, including both physical and field chemical observations, in the State-approved device. All non-specific entries in the device (e.g., "other," "unknown," etc.) shall be explained in the comment field.
- Take two (2) photographs with the State-approved device when prompted in the DoForms application. The first photograph shall be an "upstream" view (Photo 1) capturing the outfall with the above watershed, if possible. The second photograph (Photo 2) shall capture the outfall point and the "downstream" receiving water or discharge route. If the outfall has an obvious illicit discharge, at least one photograph shall illustrate the factor(s) that caused the Technical Expert to suspect an illicit discharge. For both photographs, the outfall name should be written on a dry erase board in each photograph. Perform quality assurance/quality control (QA/QC) procedures for each photograph and retake the photograph, if necessary.
- Record all field analytical results in the State-approved device using the instructions provided in the DoForms or the Data Dictionary QC document.

340.3.3 Post-Processing the Collected Data

The Technical Expert shall perform the following tasks to post process all of the field-collected data *prior to submittal to TxDOT* via a State-provided FTP site:

- Field data from the approved device is submitted to the Technical Expert's DoForms account.
- When back in the office, the Technical Expert will download inspection records from the DoForms account for QA/QC daily.
- Notify the TxDOT GIS Coordinator at the end of the first inspection day for preliminary QA/QC of the first set of collected data.
- Data will be downloaded in a tabular format (.xls) and before creating a shapefile, the order of the fields will be arranged to match the order defined in the data dictionary QC document, which can be found as Attachment A in the manual. Note: Do not change/revise the attribute abbreviation name. Do not include any fields that are not listed in the data dictionary document.
- Once the inspection data schema is verified, visualize and verify data using GIS software (see Section 340.3.4 below or page 18 of the manual).
- With the data now in ArcGIS execute the AOTS_DoForms script to download photographs for each record (see Section 340.3.4 below or page 18 of the manual).
- Two additional fields must be added during post processing: i) a field for "County" [*Name: County, Type: String, Length: Default*]; and ii) a field for "City Name" [*Name: City, Type: String, Length: 100*], and populate with the correct data.
- The metadata file must be completely filled out.
- The State-provided data dictionary QC document (see Manual Attachment A) must be used to verify the accuracy of the data collected in addition to the Technical Expert's QA/QC procedures.
- All errors and/or discrepancies must be corrected before submittal to the State.
- After completing 100% QA/QC of the data, package shapefile of outfall inspections, associated photographs and original export from DoForms (original .xls) for delivery to TxDOT via method described in Section 340.3.5.

340.3.4 DoForms Shapefile Creation and Photograph Downloader Instructions

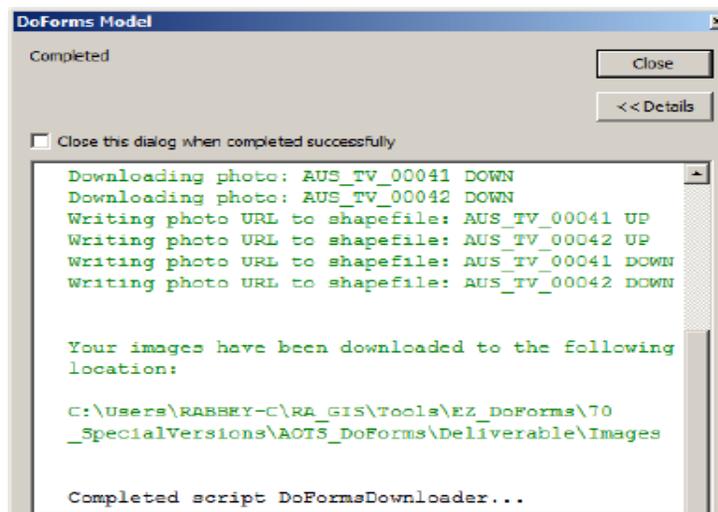
STEP 1: Unzip the tool

Unzip the Shapefile Creation and Photograph Downloader tool to an easy-to-find location such as C:\ or whatever path makes sense within your organization's network.

STEP 2: Create a shapefile

- Open a new ArcMap document and ensure that the dataframe is set to a geographic coordinate system (WGS 84).
- Add your project data downloaded from DoForms as an .xls formatted file.

- Right click on the table you just added and choose “display XY data”.
- You should now have a point layer stored in memory in your MXD document.
- Right click on this layer and choose Data -> Export Data in order to record data in memory layer to disk.
- Export as a shapefile to `{path_where_you_unzipped_the_script_tool}\AOTS_DoForms\Deliverable\Shapefile\`.
- In ArcMap open the Catalog window and navigate to the location where you unzipped the tool. Expand the “DoForms Toolbox” and double-click on the “DoForms Model”
- Select the shapefile that you just created and hit ok to run the tool.



- When the tool is finished you should see similar messages to this screen shot:
- Zip the “Deliverable” folder and send it to TxDOT via the FTP link TxDOT will provide you for data delivery following 340.3.5.

340.3.5 Transfer of Post-processed Data to the TxDOT FTP Site

The Technical Expert shall transfer post-processed outfall data and the associated photographs to the TxDOT FTP site. The Technical Expert shall also send notification of the data transfer to the TxDOT ENV Project Manager via email. The Technical Expert shall transfer the following:

- a. The "Deliverable" folder found in the AOTS_DoForms folder. This folder includes two subfolders: "Images" and "Shapefile".
- b. In addition to the post-processed data, include the original downloaded excel file from DoForms.
- c. Compress the "Deliverable" folder to a zip-file and name the zip-file "**District Abbreviation_Outfall_Date of submittal (YY-MM-DD)**" Ex:
AUS_Outfall_14_06_06
- d. Include the original excel file that was downloaded from DoForms in this zip-file.

Data package will be transferred to TxDOT via the State-provided file-transfer protocol (FTP) site (TxDOT Drop Box

ATTACHMENT G



Utility Installation Request

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(Rev. 12/09)
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PERMIT NUMBER		
GLOBAL POSITIONING SYSTEM COORDINATES (GPS) NORTH AMERICAN DATUM 1983, (1993 ADJUSTMENT) IN DECIMAL DEGREES(DD)		
	LATITUDE (DD)	LONGITUDE (DD)
BEGIN		
END		

To the Texas Transportation Commission
c/o District Engineer Texas Department of Transportation _____ Date _____
_____, Texas

Formal notice is hereby given that _____
proposes to place a _____
line within the right of way of _____, RM _____, Displ. _____, to RM _____ Displ. _____ in
_____ County Texas, MNT Sec. No. _____ as follows: (give location, length, general design, etc.
Use additional sheet as needed)

We will construct and maintain the line on the highway right of way as shown on the attached drawing and in accordance with the rules, regulations and policies of the Texas Department of Transportation (TxDOT), and all governing laws, including, but not limited to, the "Texas Engineering Practice Act," "Federal Clean Water Act," the "National Endangered Species Act," "Americans with Disabilities Act," and the "Federal Historic Preservation Act." Upon request by TxDOT at any time, we will submit to TxDOT proof of compliance with all governing laws, rules and regulations before commencement of construction. Plans shall include the design, proposed location, vertical elevations, and horizontal alignments of the facility based on the department's survey datum, the relationship to existing highway facilities and the right of way line, traffic safety and access procedures, and location of existing utilities that may be affected by the proposed utility facility. The location and description of the proposed line and appurtenances is more fully shown by a complete set of drawings attached to this Utility Installation Request (Request). We will give plans to TxDOT for each future proposed modification or expansion to our facility and TxDOT will have 30 days to review and approve the plans prior to commencement of the work. A new Request may be required as a condition of approval.

Our organization will use Best Management Practices to minimize erosion and sedimentation resulting from the proposed installation, and we will revegetate the project area as indicated under "Revegetation Special Provisions." We will also ensure that traffic control measures complying with applicable portions of the *Texas Manual of Uniform Traffic Control Devices* will be installed and maintained for the duration of this installation.

When installing, modifying or maintaining our utility on controlled access facilities, we shall conform to the Texas Transportation Code, Title 6 Roadways, Chapter 203, Subchapter C, Control of Access, §203.031 (<http://www.statutes.legis.state.tx.us/>). We shall limit access for servicing this installation to access via (a) frontage roads where provided, (b) nearby or adjacent public roads or streets, (c) trails along or near the highway right of way lines, connecting only to an intersecting road; from any one or all of which entry may be made to the outer portion of the highway right of way for normal service and maintenance operations. Our rights of access to the through traffic roadways and ramps shall be subject to the same rules and regulations that apply to the general public.

It is expressly understood that TxDOT does not purport hereby to grant any right, claim, title or easement in or upon highway right of way. TxDOT may require us to relocate this line, subject to the provisions of governing laws, by giving us at least 30 days written notice. We understand a new Request will be required for the relocation. We will notify TxDOT prior to commencement of any operation which requires pruning of trees so that TxDOT may provide specifications to govern performance of work, including trimming, topping, tree balance, type of cuts, painting cuts and clean up. We understand that these specifications are intended to preserve TxDOT's considerable investment in highway beautification plantings and by reducing damage due to trimming and to protect known endangered species.

Our installation shall not damage any part of the roadway structure or associated appurtenances. We will make adequate provisions to cause minimum inconveniences to the traveling public and adjacent property owners. We will not open-cut driveways or intersecting roadways without specific written permission from the owner.

Following approval, we will begin construction on or after _____
Month/Day/Year

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Page 2 of 2

We understand TxDOT may place additional provisions and requirements as listed below, based upon, but not limited to, the type of utility being installed, local site conditions, soil types and traffic.

Additional Provisions and Requirements (for TxDOT input only)	
• General Special Provisions:	
<input type="checkbox"/>	Are attached.
<input type="checkbox"/>	Are not attached.
• As-built Plans/Certifications of Construction:	
<input type="checkbox"/>	Are required and shall be certified as accurate by an authorized representative of the company.
<input type="checkbox"/>	Are required and shall be signed and sealed by a State of Texas Licensed Professional Engineer.
<input type="checkbox"/>	Are not required
<input type="checkbox"/>	Certification that utility was installed as approved
• Re-vegetation Special Provisions: In order to minimize erosion and sedimentation resulting from the proposed installation, the project area will be re-vegetated:	
<input type="checkbox"/>	in accordance with TxDOT's Standard Specification Item 164 which specifies the appropriate grass seed mix to be used, or:
<input type="checkbox"/>	as indicated on the attachment.
TxDOT Representative to be notified 48 hours prior to beginning construction:	

If approved, we understand we will assume all risks associated with this installation within the TxDOT right of way. These risks include injuries to our workers, damage to contiguous utility lines that may be in the area and injuries or damage resulting from our failure to properly install and maintain the line.

If the character, use or function of our installation is materially changed from that approved under this Request, we will notify TxDOT within 30 days after the change. In the event of a voluntary or involuntary loss of public utility status, or other legal authority for longitudinal placement of the utility facility in the highway, or there is an abandonment of the facility without the approval of TxDOT, we will at our expense remove the unauthorized portion of the facility from the right of way.

If installation of the line is not begun prior to the 91st calendar day from date of issuance, we acknowledge that, unless otherwise extended, TxDOT's approval of this Request will automatically **expire**, and we will be required to resubmit our Request. All Request submissions, whether due to expiration of approval under this paragraph or new Requests for modifications and relocations shall be in accordance with the governing laws, rules, regulations and policies existing at the time of submission. In the event we fail to comply with any or all of the requirements as set forth in this Request, the State may take such action as it deems appropriate to compel our compliance.

By signing as/for the requestor below, I certify that I am authorized to represent the requestor, that I agree to the provisions and requirements included in this Utility Installation Request, and our commencement of construction will further attest to our review and acceptance of said additional provisions and requirements.

REQUESTOR			APPROVED BY TxDOT		
Date:			Date:		
By:			By:		
Signature:			Signature:		
Title:			Title:		
Address:			Address:		
City	State	Zip Code	City	State	Zip Code
()			()		
Area Code	Telephone Number		Area Code	Telephone Number	

ATTACHMENT H
EMS STAGE GATE CHECKLIST

Instructions/Purpose

[Hide](#)

Construction Stage Gate Checklist (CSGC)

Purpose

The CSGC is intended to be a construction project inspection and communication tool. It should be completed with both designated TxDOT and Contractor personnel present to help facilitate communication between project personnel. The CSGC helps ensure that TxDOT and the Contractor meet their commitment to environmental compliance by providing a comprehensive overview of all environmental requirements and identifying areas where improvements, additional attention and/or actions are needed.

Suggested Usage

Each District will be responsible for determining their representative for completing the CSGC, preferably, an experienced employee such as the DEQC, Project Engineer, Project Manager or Chief Inspector. TxDOT and Contractor should present their representatives at the pre-construction meeting. It is recommended that these representatives communicate with project managers, construction inspectors and contractor personnel during the completion of the CSGC to communicate findings. It is expected that needed action(s) should occur early in the process for any issue including those which could be potentially noncompliant. Input and/or action(s) may be needed by other parties (i.e. AE, DEQC, AP&D, ENV Coordinator, etc.) to resolve issue(s).

Applicability

The CSGC should be completed on construction and maintenance contracts that have soil disturbing activities and/or environmental permit requirements. Types of projects include new location, existing pavement rehabilitations/widening, culvert work, bridge rehabilitation/ replacement. Districts should determine whether the CSGC should be completed on minimal soil disturbance type projects such as MBGF upgrade, landscaping, or ACP overlays. Typical projects not requiring the CSGC would be signal installation, crack sealing, retrace striping, seal coating, bridge joint repair.

Frequency

The initial CSGC inspection should occur within one month of beginning initial construction activities and at minimum annually, or if project is less than one year when 50% of work has been completed. Annual DEQC inspections cannot be used in place of this inspection requirement unless the TxDOT inspector and Contractor representative are present and involved during inspection. Frequency for completing additional CSGC inspections by TxDOT and Contractor CRPE will be determined at the pre-construction. Factors influencing frequency include permit requirements, duration/complexity of the project. It is recommended that completed CSGC be reviewed by another TxDOT representative for quality monitoring of the environmental process.

Documentation and Record Retention

The completed CSGC must be kept with project files and retained according to file retention requirements.

Acronyms:

MS4: Municipal Separate Storm Sewer System
 DSHS: Department of State Health Service
 CSN: Construction Site Notice
 NOI: Notice of Intent
 USACE: United States Army Corp of Engineers
 BMP: Best Management Practice
 PS&E: Plans Specifications and Estimate

Note for Projects let after January 1, 2016:

When required by TPDES CGP TXR150000 - both the Contractor with Day to Day Operational Control and TxDOT with Operational Control over Plans and Specifications must post Large or Small Construction site notices. When an NOI is required, [Contact/Help](#)



Environmental Management System

Construction Stage Gate Checklist (CSGC)

Form 2448
(Rev. 5/17)

Highway	Project Number	Project CCSJ	County	Area Office
Project Personnel Completing CSGC (Joint Inspection)				
TxDOT Representative			Contractor Representative	
Print Name:			Print Name:	
Signature/Date:			Signature/Date:	
CSGC Inspection Period				
From	Date of beginning initial construction activities, or Date of previous CSGC Inspection	To	Date of this CSGC Inspection	
Stormwater Resources				
<input type="checkbox"/> Yes <input type="checkbox"/> No			1. Does the project require a Construction Site Notice (CSN)?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			2. Does the project require the Contractor and TxDOT Construction Site Notice (CSN)?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			3. Is the CSN(s) posted in a publicly accessible location near where the construction activity is underway?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			4. Does the CSN(s) contain all required information?	
<input type="checkbox"/> Yes <input type="checkbox"/> No			5. Does the project require a Notice of Intent(s) (NOI)?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			6. Has the Contractor's NOI been received and placed in the Stormwater Pollution Prevention Plan (SWP3)?	
<input type="checkbox"/> Yes <input type="checkbox"/> No			7. Does the project have a (SWP3)?	
<input type="checkbox"/> Yes <input type="checkbox"/> No			8. Is there a copy of the TCEQ Construction General Permit onsite or with the SWP3?	
<input type="checkbox"/> Yes <input type="checkbox"/> No			9. Is there a copy of a Delegation of Authority Letter authorizing the signing of inspection reports in the SWP3 file?	
<input type="checkbox"/> Yes <input type="checkbox"/> No			10. Is the SWP3 retained and available for inspection at the work site that generates the stormwater? If no, where is the SW3P located? Insert location here:	
<input type="checkbox"/> Yes <input type="checkbox"/> No			11. Are the SWP3 drawings updated for changes to BMPs based on site conditions, and are those measures installed properly? (i.e. type, location and install/remove dates)	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			12. Is the description of construction and waste materials stored on-site updated with the Contractor?	
<input type="checkbox"/> Yes <input type="checkbox"/> No			13. Are the dates when major grading activities occur updated on SWP3?	
<input type="checkbox"/> Yes <input type="checkbox"/> No			14. Are the dates when construction activities temporarily or permanently ceased on a portion of the site updated on SWP3?	
<input type="checkbox"/> Yes <input type="checkbox"/> No			15. Have construction activities permanently ceased, or temporarily ceased and are not expected to resume for 14 or more days, on a disturbed portion of the site?	
<input type="checkbox"/> Yes <input type="checkbox"/> No			16. Have erosion control and stabilization measures been initiated immediately, except as allowed by Part III.F.2 (b) (iii) (A) through (D) of the CGP (page 28)?	

Environmental Management System Construction Stage Gate Checklist (CSGC)

Highway	Project Number	Project CCSJ	County	Area Office
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	46. Is migratory bird nesting requirements being followed?			
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	47. Is the work compliant with the plans and/or mitigation requirements for protection of threatened or endangered species/habitats?			
Noise				
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	48. If there are any proposed noise impacts is the work being performed in accordance with the noise mitigation plan?			
Air Quality				
<input type="checkbox"/> Yes <input type="checkbox"/> No	49. Are controls being practiced and are they effective for minimizing dust?			
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	50. Were the procedures for the Texas Emission Reduction Plan or other incentive measures met and documented? (i.e. contractor is using the highest tier level equipment and best fuel grade)			
<input type="checkbox"/> Yes <input type="checkbox"/> No	51. Are measures being taken for reducing idling of equipment and vehicles?			
Cultural Resources				
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	52. Are known historical and archeological properties being protected and preserved in accordance with the plans?			
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	53. If historical and archeological properties have been encountered during construction, were the historical and archeological properties protected and were TxDOT Emergency Discovery Guidelines followed?			
DSHS Notification				
<input type="checkbox"/> Yes <input type="checkbox"/> No	54. Is DSHS notification(s) required? (if yes, complete questions 55-57)			
<input type="checkbox"/> Yes <input type="checkbox"/> No	55. Has DSHS notification(s) been electronically submitted or mailed?			
<input type="checkbox"/> Yes <input type="checkbox"/> No	56. Was the DSHS verification number received on-line or if mailed postmarked at least 10 working days prior to initiating demolition or renovation?			
<input type="checkbox"/> Yes <input type="checkbox"/> No	57. Were there any amendments to the DSHS notification(s)?			
Hazardous Materials				
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	58. If any hazardous materials (identified or unknown) are encountered during construction, have the proper TxDOT and agency contacts been made?			
<input type="checkbox"/> Yes <input type="checkbox"/> No	59. Are hazardous materials mitigation and abatement procedures being followed?			
<input type="checkbox"/> Yes <input type="checkbox"/> No	60. Do the project plans include a soil and/or groundwater management plan? (If yes, is the abatement/mitigation plan being adhered to?)			
<input type="checkbox"/> Yes <input type="checkbox"/> No	61. Has a spill of less than reportable quantity occurred? (If yes, answer question 62) (Amount: _____)			
<input type="checkbox"/> Yes <input type="checkbox"/> No	62. Has a spill of reportable quantity occurred? (If yes, answer question 63) (Amount: _____)			
<input type="checkbox"/> Yes <input type="checkbox"/> No	63. Were Spill Response Plan procedures followed for reporting and cleanup?			
Navigable Waters - Leave blank if this does not apply				
<input type="checkbox"/> Yes <input type="checkbox"/> No	64. Is a US Coast Guard Section 9 permit applicable? (If yes, answer questions 65 - 66)			
<input type="checkbox"/> Yes <input type="checkbox"/> No	65. Is the US Coast Guard Section 9 permit maintained and accessible (e.g. Area Office)?			
<input type="checkbox"/> Yes <input type="checkbox"/> No	66. Are construction activities meeting US Coast Guard Section 9 permit conditions?			
<input type="checkbox"/> Yes <input type="checkbox"/> No	67. Is a USACE Section 10 permit applicable? (If yes, answer questions 68 - 69)			
<input type="checkbox"/> Yes <input type="checkbox"/> No	68. Is the USACE Section 10 permit maintained and accessible (e.g. Area Office)?			
<input type="checkbox"/> Yes <input type="checkbox"/> No	69. Are construction activities meeting USACE Section 10 permit conditions?			

Environmental Management System Construction Stage Gate Checklist (CSGC)

Highway	Project Number	Project CCSJ	County	Area Office
Edwards Aquifer- Leave blank if this does not apply				
<input type="checkbox"/> Yes <input type="checkbox"/> No				70. Does the project require an Edwards Aquifer Protection Plan? (If yes, complete questions 71 - 74)
<input type="checkbox"/> Yes <input type="checkbox"/> No				71. Is a copy of the Water Pollution Abatement Plan (WPAP) kept on-site?
<input type="checkbox"/> Yes <input type="checkbox"/> No				72. Is a copy of the Contributing Zone Plan kept on-site?
<input type="checkbox"/> Yes <input type="checkbox"/> No				73. Are project requirements met for groundwater protection? (i.e. Item 103 Disposal of Wells, staging requirements from WPAP, etc.)
<input type="checkbox"/> Yes <input type="checkbox"/> No				74. Are construction activities meeting permit conditions?
International Boundary Water Commission (IBWC)- Leave blank if this does not apply				
<input type="checkbox"/> Yes <input type="checkbox"/> No				75. Is an IBWC License applicable? (If yes, complete questions 76 - 77)
<input type="checkbox"/> Yes <input type="checkbox"/> No				76. Is the IBWC maintained and accessible (e.g. Area Office)?
<input type="checkbox"/> Yes <input type="checkbox"/> No				77. Are construction activities meeting IBWC License conditions?
Change Orders - Supervision/Record Keeper Assistance				
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A				78. Is the SWP3 updated for any changes in design or project change orders?
<input type="checkbox"/> Yes <input type="checkbox"/> No				79. Are change orders being processed per the "Construction Contract Administration Manual" (Chapter 7, Section 1) that may have environmental impacts on this project? (If yes, answer questions 80 - 81)
<input type="checkbox"/> Yes <input type="checkbox"/> No				80. Are change orders assessed for NEPA re-evaluation and/or resource agency coordination?
<input type="checkbox"/> Yes <input type="checkbox"/> No				81. Has coordination with Advance Planning & Development occurred to ensure NEPA compliance?
<input type="checkbox"/> Yes <input type="checkbox"/> No				82. Have the project limits or scope changed? (If yes, answer question 83)
<input type="checkbox"/> Yes <input type="checkbox"/> No				83. Do the change orders require environmental mitigation, abatement, or clearance actions?
Contractor				
<input type="checkbox"/> Yes <input type="checkbox"/> No				84. Has the contractor CRPE provided a complete list of employee training?
<input type="checkbox"/> Yes <input type="checkbox"/> No				85. Is the contractor CRPE monitoring BMPs by completing daily monitoring reports and addressing issues?

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**Environmental Management System
Construction Stage Gate Checklist (CSGC)**

Highway	Project Number	Project CCSJ	County	Area Office

SUMMARY OF PROJECT INSPECTION

Reference Item Number	Finding	Person Responsible For Corrective Action (Print Name)	Date Corrective Action Expected To Be Completed	Date Corrective Action Completed	TxDOT Representative Verifying Completed Corrective Action
					Print Name: _____ Signature: _____
					Print Name: _____ Signature: _____
					Print Name: _____ Signature: _____
					Print Name: _____ Signature: _____

Comments

Reviewer (Optional)

Print Name:	Signature:	Title:	Date of
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ADVANCED PLANNING AND DEVELOPMENT (AP&D) STAGE GATE CHECKLIST

Instructions/Purpose
Advance Planning and Development (AP&D)
Stage Gate Checklist

The Advance Planning and Development (AP&D) Stage Gate Checklist is intended to be an awareness and communication tool. It should help facilitate communication between personnel developing projects during the AP&D process (including producing of schematic) and Environmental personnel, thereby addressing what is required in the Environmental Document and/or Permits as early as possible in project development.

It should also help to ensure Environmental Document and/or Permits are updated/obtained by identifying issues during project development.

It is recommended that the Project Manager, communicating with Environmental Coordinator, fill out this form at different stages of project development as described on the Checklist; however, the final decision on who fills out and signs the Checklist is left to each District. It is expected that not all questions can be answered appropriately, in the Initial Review; therefore, some questions may be left blank at that time. Questions that are left blank should be researched or communication with appropriate personnel should occur to appropriately address each issue as early in the process as possible. When Final Review is complete; all questions must be answered and appropriately addressed, unless otherwise noted by you at the end of the form, before proceeding to PS&E development.

This checklist is not intended to be a comprehensive list of all environmental issues that should be accounted for in the AP&D stage of project development. It is intended to identify some of the biggest issues or the issues that most often cause problems.

Completion of this form is required on all projects. On some simplistic projects, depending on type, only Final Review would be filled out. The completed form should be kept with project files and retained according to current file retention requirements.

Rev 3/23/11

TxDOT Environmental Management System
Advance Planning and Development (AP&D)
Stage Gate Checklist

Who is to fill out form? Recommended the Project Manager communicating with Environmental personnel. District decision.		
Except for Final Review, all questions may not be able to be filled in and can be left blank. To complete Final Review and proceed to PS&E stage, all questions must be answered and addressed appropriately unless otherwise noted by you at end of form.		
CSJ #:	Highway:	Report Date:
District:	Construction Limits:	County:
Responsible TxDOT Office:	Consultant:	
Wichita Falls District Design		
Type of Permits/approvals required: <input type="checkbox"/> TPDES (402) <input checked="" type="checkbox"/> 404 <input type="checkbox"/> Section 106 <input type="checkbox"/> Section 4(f) <input type="checkbox"/> Section 6 (f) <input type="checkbox"/> _____		
Note: Write in any that are required.		
Type of Review: <input checked="" type="checkbox"/> Initial Review <input type="checkbox"/> Second Review (Approximately 50% of schematic process) <input type="checkbox"/> Final Review		
Note: Number of reviews will be determined by complexity of project. Final Review must be done on all projects in order to advance to PS&E development.		
Description of Project: Replace Bridge and Approaches		
Schematic:		
<input type="checkbox"/> Yes <input type="checkbox"/> No		1. Is a Schematic required for the project?
Environmental Documentation, Community Impacts and Environmental Justice:		
<input type="checkbox"/> Yes <input type="checkbox"/> No		2. Is an Environmental document required for the project?
		Type of document <input type="checkbox"/> BCE <input checked="" type="checkbox"/> PCE <input type="checkbox"/> CE <input type="checkbox"/> EA <input type="checkbox"/> EIS
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		3. Has the FHWA given approval for further processing the NEPA document?
<input type="checkbox"/> Yes <input type="checkbox"/> No		4. Is public involvement required?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		5. Have public involvement requirements been satisfied for this project?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		6. Have pertinent public concerns or comments been addressed in the environmental analysis? (Note: This is not referring to providing a response to comments, but to make sure that pertinent issues are acknowledged and analyzed).
<input type="checkbox"/> Yes <input type="checkbox"/> No		7. Will ROW be acquired that includes the relocation of homes, businesses, community areas, etc.?
<input type="checkbox"/> Yes <input type="checkbox"/> No		8a. Will project activities lead to changes in access or travel patterns for any mode?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		8b. Has 8a been properly addressed?
<input type="checkbox"/> Yes <input type="checkbox"/> No		9. Will project impacts be disproportionately borne by Environmental Justice Population(s)?
Storm Water		
<input type="checkbox"/> Yes <input type="checkbox"/> No		10. Will the project be covered under the Construction General Permit?
<input type="checkbox"/> Yes <input type="checkbox"/> No		11. Is less than one acre to be disturbed by the project?
<input type="checkbox"/> Yes <input type="checkbox"/> No		12. Will one (1) acre or more be disturbed by the project?
<input type="checkbox"/> Yes <input type="checkbox"/> No		13. Will five (5) acres or more be disturbed by the project?
<input type="checkbox"/> Yes <input type="checkbox"/> No		14. Is the project within a regulated/Phase I or II (Home Rule) MS4 area?
Water Resources		
<input type="checkbox"/> Yes <input type="checkbox"/> No		15. Will an Edwards Aquifer Abatement Plan be required?
		Type of Edwards Aquifer Plan? <input type="checkbox"/> Water Pollution Abatement Plan <input type="checkbox"/> Contributing Zone Plan
<input type="checkbox"/> Yes <input type="checkbox"/> No		16. Will a Groundwater Conservation District be potentially impacted by the project?
<input type="checkbox"/> Yes <input type="checkbox"/> No		17. Will filling, dredging, or excavating in any water body, river, creek, stream, wetland, or wet area be conducted?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		18. Will 401 Water Quality Certification be addressed?
<input type="checkbox"/> Yes <input type="checkbox"/> No		19a. Will a 404 permit be required?
		19b. Type of Section 404 Permit <input type="checkbox"/> #3a <input type="checkbox"/> #3b <input type="checkbox"/> #3c <input type="checkbox"/> #14 <input checked="" type="checkbox"/> #15 <input type="checkbox"/> #23 <input type="checkbox"/> #25 <input type="checkbox"/> #33 <input type="checkbox"/> _____
<input type="checkbox"/> Yes <input type="checkbox"/> No		20. Is construction to be performed within the 100-year flood zone?
<input type="checkbox"/> Yes <input type="checkbox"/> No		21. Will a USACE Section 10 permit be required?

CCSJ: _____ DATE: _____

<input type="checkbox"/> Yes	<input type="checkbox"/> No		22. Will a US Coast Guard Section 9 permit be required?
Cultural Resources:			
<input type="checkbox"/> Yes	<input type="checkbox"/> No		23. Will an archeological site located within existing or proposed ROW be impacted?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		24. Will an archeological impact assessment be required?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		25. Will a historic structure or district be impacted by the project?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		26. Will the project impact a Depression-era Roadside resource such as a culvert, etc. with masonry features?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		27. Will publically owned parks and recreational areas be potentially impacted by the project?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		28. Are historical markers present in or adjacent to the project?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		29. Is a cemetery present in or adjacent to the project area?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		30. Is an irrigation canal or other feature present or adjacent to the project area?
Biological Resources:			
<input type="checkbox"/> Yes	<input type="checkbox"/> No		31. Will trees be removed during the project construction?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		32. Will construction activities impact protected/endangered species or their habitat?
			Type of Habitat? <input type="checkbox"/> Fish <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____
<input type="checkbox"/> Yes	<input type="checkbox"/> No		33. Could migratory bird(s) be affected by the project including habitat? (e.g. will nests/trees/ bridges be removed during the nesting season?)
<input type="checkbox"/> Yes	<input type="checkbox"/> No		34. Will the project impact a protected/endangered species?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		35. Will the project impact wildlife refuges or other managed lands?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		36. Will farmland be impacted?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		37. Will mitigation be required for Biological Resources?
Air & Noise:			
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	38. Is the project included in and consistent with the applicable transportation plan?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	39. Is the project included in and consistent with the MTP and TIP?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	40. Is the project included in and consistent with the applicable STIP?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		41. Is a Traffic Air Quality Analysis (TAQA) (qualitative) required?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		42. Is a Traffic Air Quality Analysis (TAQA) (quantitative) required?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		43. Is a Mobil Source Air Toxins (MSAT) analysis required?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		44. Is a noise analysis required?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		45. Will construction noise mitigation be required?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		46. Will operating noise mitigation be required?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		47. Will air quality control measures be required during construction?
Hazardous Materials:			
<input type="checkbox"/> Yes	<input type="checkbox"/> No		48a. Are hazardous materials potentially present in the project ROW?
			48b. Hazardous material: Media(s) <input type="checkbox"/> soil <input type="checkbox"/> groundwater <input type="checkbox"/> vapor <input type="checkbox"/> particulate/air Substance(s): <input type="checkbox"/> gasoline <input type="checkbox"/> lead based paint <input type="checkbox"/> NRM <input type="checkbox"/> asbestos <input type="checkbox"/> oil and gas wastes <input type="checkbox"/> crude <input type="checkbox"/> _____
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	49. Have potential hazardous material been identified on adjacent properties?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		50. Will a bridge structure be demolished in the project?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		51. Will construction activities require abatement of asbestos at the project site?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		52. Will construction activities require abatement of lead-based paint at the project site?
Ensuring Environmental Document Compliance:			
<input type="checkbox"/> Yes	<input type="checkbox"/> No		53a. Has anything been identified during AP&D process that would require Environmental Document to be updated?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	53b. If yes, has Environmental Document been updated appropriately?
Final Schematic:			
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	54. Have all environmental requirements/commitments, etc. been addressed in Schematic?

CCSJ: _____ DATE: _____

List all environmental commitments identified to date:

List any issues that have not been completed in AP&D that will be completed by AP&D concurrently with PS&E development but must be completed prior to letting:

- 1.
- 2.

Comments or special direction to Designers:

<input type="checkbox"/>	Initial Review	Signed: _____	Date: _____
<input type="checkbox"/>	Second Review	Signed: _____	Date: _____
<input type="checkbox"/>	Final Review	Signed: _____	Date: _____
<input type="checkbox"/>	Advance to PS&E Stage Gate	Signed: _____	Date: _____

PLANS, SPECIFICATIONS AND ESTIMATES (PS&E) STAGE GATE CHECKLIST

Instructions/Purpose**Plans, Specifications and Estimates (PS&E) Stage Gate Checklist**

The Plans, Specifications and Estimates (PS&E) Stage Gate Checklist is intended to be an awareness and communication tool. It should help facilitate communication between personnel developing projects during the PS&E process with AP&D and Environmental personnel, thereby addressing what is required in the Environmental Document and/or Permits as early as possible in the design process. It should also help to ensure Environmental Document and/or Permits are updated/obtained by identifying issues during project development and then proper direction be given to the contractor in the PS&E package to ensure environmental requirements/commitments are met. It is recommended that the Project Manager communicate with AP&D and Environmental personnel to fill out this form at different stages of project development as described on the Checklist; however, the final decision on who fills out and signs the checklist is left to each District. It is expected that not all questions can be answered appropriately, especially in the Initial Review; therefore, some questions may be left blank at that time. Questions that are left blank should be researched or communication with appropriate personnel should occur to appropriately address each issue as early in the process as possible. When Final Review is complete; all questions must be answered and appropriately addressed, unless otherwise noted by you at the end of the form, before proceeding to letting.

This checklist is not intended to be a comprehensive list of all environmental issues that should be accounted for in the PS&E stage of project development. It is intended to identify some of the biggest issues or the issues that most often cause problems.

Completion of this form is required on all projects. On some simplistic projects, depending on type, only Final Review would be filled out. The completed form should be kept with project files and retained according to file retention requirements.

Rev 3/23/11

TxDOT Environmental Management System
Plans, Specifications and Estimates (PS&E)
Stage Gate Checklist

Who is to fill out form? Recommended Project Manager communicating with AP&D and/or Environmental personnel. District decision.			
Except for Final Review, all questions may not be able to be filled in and can be left blank. To complete Final Review and proceed to Construction stage, all questions must be answered and addressed appropriately unless otherwise noted by you at end of form.			
CSJ #:	Highway Name:	Report Date:	
District:	Construction Limits:	County:	
Responsible TxDOT Office:	Consultant:		
Type of Permits/Commitments: (Populated from AP&D Stage Gate Checklist) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
Type of Review: <input type="checkbox"/> Initial Review <input type="checkbox"/> 30% Review <input type="checkbox"/> 60% Review <input type="checkbox"/> Final Review			
Note: Number of reviews will be determined by complexity of project. Final Review must be done on all projects in order to advance to letting.			
Description of Project:			
AP&D STAGE GATE CHECKLIST:			
<input type="checkbox"/> Yes <input type="checkbox"/> No		1. Has the AP&D Stage Gate Checklist been approved for Advancement to PS&E?	
<input type="checkbox"/> Yes <input type="checkbox"/> No		2. Has the AP&D Stage Gate Checklist been reviewed by Designer?	
NEPA:			
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		3. Has the project received NEPA clearance?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		4. Has the project obtained the required environmental permits and approvals from State and Federal Agencies?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		5a. If NEPA clearance was received have the project limits or scope changed?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		5b. If the project limits or scope have changed per 5a, has the designer coordinated with AP&D to ensure NEPA compliance?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		5c. If additional permits and/or other approvals have been obtained, is the project consistent with the additional permits and/or approvals?	
Storm Water Management & SWP3:			
<input type="checkbox"/> Yes <input type="checkbox"/> No		6. Has a SWP3 been developed in accordance with the Construction General Permit (CGP)?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		7. Do the plans and specifications have sedimentation basins depicted on the plans in accordance with the CGP or if not, has justification (impracticable) for not doing so been provided?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		8. Do the plans and specifications detail which BMPs will be used to control erosion and sedimentation?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		9. Do the plans and specifications have SWP3 Layout Sheets having each BMP numbered with label for installation and removal dates available to be filled in during construction?	
<input type="checkbox"/> Yes <input type="checkbox"/> No		10. Has the SWP3 Sheet been completely filled out appropriately??	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		11. Do the plans and specifications detail timelines or milestones when construction activities will temporarily or permanently cease due to environmental concerns on a portion of the site?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		12. Do the plans and specifications detail when and what stabilization measures are to be initiated?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		13. Do the plans and specifications detail velocity dissipation devices if they are utilized?	
<input type="checkbox"/> Yes <input type="checkbox"/> No		14. Do the plans and specifications include control of construction debris and chemicals exposed to storm water?	
Water Resource (including: rivers, streams, wetlands, navigable waterways, aquifer, and coastal protection):			
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		15. Do the plans identify wetlands and provide for wetland protection and mitigation?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		16a. Do the plans address protection of navigable streams and waters of the U.S. and is consistent with the permit obtained (USACE Section 10 or Section 404 Permit or US Coast Guard Section 9 Permit).	
		16b. Type of Section 404 permit(s) obtained?	

CCSJ:

DATE:

			16c. Other Permits obtained: <input type="checkbox"/> USACE Section 10 <input type="checkbox"/> US Coast Guard Section 9 Permit Note: Permits required should be identified in AP&D Stage Gate Checklist. If additional are needed, ensure they are included and addressed appropriately.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	17. Will work that could result in solid materials, including building materials, becoming a discharge into the waters of the U.S. covered by a Section 404 Permit for this project?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	18. Has a construction technique been included for work in wetland areas?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	19. Has a Section 401 Water Quality Certification Tier 1 Checklist been completed for this project and have mitigation measures been included in the plans?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	20. Are any applicable Section 401 Water Quality BMP's included in plans?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	21a. If required by the Edwards Aquifer Protection Plan, do the plans and specifications show protected areas and mitigation for this project?
			21b. Type of Edwards Aquifer Plan?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	22. Do the plans show project requirements for groundwater protection (e.g. Conservation District requirements)?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	23. Do the plans show requirements for the Texas Coastal Management Plan for this project, if required?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	24. Do the plans show mitigation requirements for the impacts to the waters of the U.S.?
Biological Resources:			
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	25. Do the plans show vegetation protection areas, including trees?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	26. Do the plans show and specify protection of threatened or endangered species/habitats?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	27. Do the plans and specifications depict any provisions pertaining to endangered species and/or migratory bird areas and protective measures?
Cultural Resources:			
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	28. Does PS&E incorporate archeology permits and commitments in the EPIC sheet?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	29. Does PS&E incorporate historical permits and commitments in the EPIC sheet?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	30. Do the plans protect known archeological sites?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	31. Do the plans protect historical property and markers?
Air & Noise:			
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	32. Do the plans and specifications detail dust control measures to be used during construction?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	33. Do the plans/specifications include the Texas Emission Reduction Plan or other emission reduction incentive measures?
			34. Do the plans/specifications include measures for reducing idling of equipment and vehicles?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	35. Do the project plans detail noise control measures to be used during construction, if required?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	36. Do the plans include noise mitigation for post construction operations?
Hazardous Materials:			
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	37. Do the plans show potential hazardous material and are abatement measures included?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	Hazardous material media(s) and/or substance(s) identified in AP&D or PS&E Stage: <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	Or is the coordination requirement included when abatement is addressed through a separate contract?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	38. Do the plans address handling special waste disposal? Waste media(s) and/or substance(s) identified in AP&D or PS&E stage: <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	39. Do the plans address bridge demolition notification requirements?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	40. Does the PS&E include a soil and groundwater management plans, if required?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	41. Has District Office approval been obtained for including the handling of hazardous materials in the PS&E?
Ensuring Environmental Document Compliance:			
<input type="checkbox"/> Yes	<input type="checkbox"/> No		42a. Has anything been identified during PS&E process that would require AP&D and/or Environmental personnel to be notified?

CCSJ: _____

DATE: _____

<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	42b. If yes, has AP&D and/or Environmental personnel been notified?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		43a. Has anything been identified during PS&E process that would require the Environmental Document to be updated?
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	44b. If yes, has the Environmental Document been updated?
PS&E Requirements:			
<input type="checkbox"/> Yes	<input type="checkbox"/> No		45. Has the EPIC plan sheet been completed and included in plans to include all environmental requirements including what is in the NEPA document?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		46. Are all commitments identified on the AP&D checklist and any other commitments identified in the PS&E process been noted in the plan set appropriately?
<input type="checkbox"/> Yes	<input type="checkbox"/> No		47. Does the PS&E communicate the environmental requirements and environmental work requirements to the contractor?

Outstanding issues:

<input type="checkbox"/>	Initial Review	Signed: _____	Date: _____
<input type="checkbox"/>	30% Review	Signed: _____	Date: _____
<input type="checkbox"/>	60% Review	Signed: _____	Date: _____
<input type="checkbox"/>	Final Review	Signed: _____	Date: _____
<input type="checkbox"/>	Advance to Letting and Construction Stage Gate Checklist		
	Signed: _____	Date: _____	

ATTACHMENT I

AGENDA FOR PRE-CONSTRUCTION CONFERENCE

Date: _____

Project: _____
Control: _____
Highway: _____
County: _____
Contractor: _____

I. Opening Discussions

- A. Welcome and introductions.
- B. Purpose of meeting: This meeting is held in accordance with departmental policy in order for personnel of the TxDOT, Contractor, Utility Companies, Law Enforcement Agencies, etc., to discuss the schedule and methods of operation. To acquaint all concerned with the lines of authority and communication, and determine the responsibilities and duties of contractor and department personnel.
- C. TxDOT Ethics Policy

II. Review of Project - Area Engineer

- A. Location of project _____
- B. Nature of project _____
- C. Workweek Type _____ and Number of days allowed _____
- D. Length and limits _____
- E. Contractor and Contract Amount _____
- F. Utility reports and discussion _____
- G. Third Parties involved _____

III. Construction Plans - Contractor

- A. Estimated date of start _____ and completion _____
- B. Contractor’s Monthly Progress Schedule (Furnished to the Area Engineer per Item 8.2)
- C. DSHS Demolition / Renovation Form requirements – bridge projects only
- D. Contractor’s sources of materials (Form CIS.36)
- E. Storage site(s) of materials and equipment
- F. Railroad Insurance requirements
- G. Shop Drawing submittals (email to WFS_BRG-ShopPlanReview@txdot.gov)

IV. Environmental Issues

- A. Compliance with project PS&E, Environmental Permits, Issues and Commitments (EPIC) Sheet, including (when applicable):
 - Clean Water Act, Section 402, Texas Discharge Elimination System (TPDES)
 - Clean Water Act, Section 401 and 404 Compliance
 - Cultural Resources
 - Hazardous Materials or Contamination Issues
 - Federal listed, proposed threatened, endangered species, critical habitat, state listed species, candidate species, and Migratory Bird Treaty Act (MBTA)
 - Vegetation Resources
 - Other environmental issues

AGENDA FOR PRE-CONSTRUCTION CONFERENCE

- B. Storm Water Pollution Prevention Plan (SWP3 2118)
 - C. Construction Stage Gate Checklist: Determine who is responsible for conducting inspections and defines the frequency for conducting joint inspections
 - D. SW3P Bulletin Board Requirements - Posting of TCEQ Notice-of-Intent and/or TCEQ Construction Site Notice
 - E. Designation of Contractor Responsible Person for Environmental Requirements (CRPe) and Departmental Responsible Person (DRPe):
 - CRPe Name: _____ Cell: _____
 - DRPe Name: _____ Cell: _____
 - Frequency of Inspections: _____
 - F. Discussion of Phasing to minimize soil disturbance
 - G. Housekeeping
 - H. If there will be off ROW PSL's, communicate contractor's responsibilities
- V. Traffic Control Plan**
- A. Locations, conditions and protection of barricades and lights
 - B. Signs
 - C. Speed zoning
 - D. Contractor's Temporary Traffic Signal Maintenance Plan (if applicable)
 - E. Flagging (stress the importance of proper procedures)
 - F. Contractor's responsible person (CRP) (In letter form)
 - G. TxDOT responsible person (DRP) (In letter form)
 - H. Project's TCP for handling traffic
 - I. Detours _____
 - J. Limitations on working hours _____
- VI. Police Supervision Available**
- A. Department(s) affected _____
 - B. Determine how traffic-related information will be handled (accidents, hazards, etc.)
- VII. Contract Administration**
- A. Approval of subcontractors
 - B. Submit complete copies of all subcontracts
 - C. Bulletin Board Requirements (ensure all forms have Contact Names and Numbers)
 - D. Estimate review method
 - E. Material On-Hand accessibility, inventory, and request deadline
 - F. Prompt Payment certification (Form 2177)
 - G. Weekly payroll submissions and wage rate interviews (Federal-Aid projects only)
 - H. On-the-Job Training, if applicable
- VIII. DBE Issues**
- A. DBE/SBE Goal _____ %
 - B. DBE/SBE Special Provision requirements
 - C. DBE/SBE Progress reports due the 15th of the month to Area Engineer
 - D. Contact the DCO regarding changes, disputes, or inability to meet to the DBE/SBE commitment.
 - E. Coordination for Commercially Useful Function (CUF) Review
 - F. Contractor should request CUF review of Race-Neutral DBE if there appears to be any potential for DBE shortfall
 - G. Discussion of procedures for DBE hauling firms, if applicable. Contact DDC for assistance.

AGENDA FOR PRE-CONSTRUCTION CONFERENCE**IX. Project Safety Procedures**

- A. The contractual obligation of the contractor for complying with State and Federal construction safety standards. (See Safety Review Form)
- B. The Accident Prevention Program of the contractor - organization, staff, names of responsible individuals, meetings, training, reports, etc. (Attach to Safety Review Form)
- C. Contractor responsibility for seeing that subcontractors comply with safety regulations.
- D. The contractor's plans for meeting specific safety requirements and for eliminating potentially critical hazards on the project. (A written record of specific safety measures discussed should be placed in the project files).

X. EEO, Training, and Labor Compliance

Equal Employment Opportunities (EEO) Compliance Program requirements are contained in the following special provisions:

- Required Contract Provisions Federal-Aid Construction Contracts (Form FHWA 1273)
- Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)
 - Including Form FHWA 1391 – Certification of Nondiscrimination in Employment and Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246). In addition, the applicable wage determination, the DBE or SBE special provision, and the prompt payment requirement must be included in subcontract agreements. Form FHWA 1273 must be physically attached to all federally assisted contracts, subcontracts, and purchase orders of \$10,000.00 or more.

On-the-Job Training:

Special Provision 000 --- 807 – On-the-Job Training (OJT) Program, incorporated into all federal-aid highway improvement contracts, was made effective with the January 2007 state letting. The TxDOT Office of Civil Rights – Contract Compliance Section (OCR-CCS) will notify every contractor selected for participation in the program at the beginning of each calendar year and advise them of the number of trainees they are expected to supported. Participating contractors must enroll, train and graduate a number of trainees sufficient to meet their assigned annual trainee goal.

Prevailing wage rate requirements:

Contractors and subcontractors must pay employees, at a minimum, the classification wage rates specified in the contract. The minimum wage rates must also be conspicuously posted and accessible on the project site.

Payroll Records:

- Payroll records certifying compliance with the contract's minimum wage rates, overtime and payroll deduction requirements must be submitted within 7 calendar days on federal-aid construction projects. On 100% state funded construction contracts, the contractor or subcontractor must keep the payroll records and make them available for review by the department.

Bulletin Board Requirements:

The U.S. Department of Labor, Federal Highway Administration, and U.S. Department of Transportation require certain posters to be posted on bulletin boards in places accessible to the employees on a job site. The bulletin board requirements only apply to federal-aid construction contracts. Ensure all forms have Contact Names and Numbers.

AGENDA FOR PRE-CONSTRUCTION CONFERENCE*EEO Meeting Requirements:*

EEO meetings with supervisory and personnel office employees must be conducted before the start of work and then at least once every six months. EEO meetings with non-supervisory employees must be conducted at least annually.

XI. Partnering

- A. Use of partnering application
- B. Identify individual for issue escalation ladder
- C. Establish escalation deadlines
- D. Rocks in the road (review of potential problems)

ITEMS OF DISCUSSION ON ARRA CONTRACTS

At this point and time, the below items should also be included on the State and Local Let Pre-Construction Agenda and Minutes where applicable:

ARRA Special Provisions:

- SP 000 000-1580 - Federal Government right to review and interview
- SP 000 000-1555 - Project Employment Data
- SP 000 000-1001 and 000 000-1592 (State OJT) – are **NOT** to be included in local administered Projects ARRA Special Provisions
- At least one of the Quarter Labor Interview recipients must be an OJT if assigned on Project, use Form 2220 Labor Standards Review.

DBE requirements:

- DBE Reporting and Forms - Initial, Monthly, Progress

FHWA requirements:

Submission of data manually (paper) vs. electronically (CD, email or through TxDOT EPRS)

- FHWA-1585 (Local Let - Project Status)
- FHWA-1586 (Project Listing - District)
- FHWA-1587 (Employment Summary)
- FHWA-1589 (Contractor and Local Entity Employment - Contractor and District) (Is required to collect employment data for direct employment created by the project.)

MOH process:

- Fraud, Waste and Abuse process (may use OIG guidance)

Bulletin Board:

- Whistle Blowing Protection Poster

Local Entity In-House only:

- Single Audit Act 133 - annual Schedule of Expenditures of Federal Awards (SEFA)
- ARRA designated separation of funding source from normal financial streaming process.

ATTACHMENT J

TxDOT Facility Environmental Compliance Survey Form

Date: _____
 District: _____
 Facility: _____

District Contact: _____
 ENV Contact: _____

No.	Category	Verification Method	Area Reviewed	NI	NA	Yes	No	Action	Standard	Reference
SW10	Solid/Hazardous Waste Management	Interview Paperwork	If the facility uses a recycling service to reclaim parts washer solvent, are copies of contracts/manifests with the service available at the facility for review?	X				BMP	A generator of hazardous waste must keep records of all hazardous waste activities to support the hazardous waste generator status. Recycled materials do not count toward the facilities hazardous waste generator status.	30 TAC 335.62/40CFR 262.11 Hazardous Waste Determination and Classification
SW6	Solid Waste Stormwater Housekeeping	Visual	Are work areas generally leak and spill free? Are spill kits located near oil/fuel/waste storage areas and are they appropriately stocked with sorbents and spill degradation products?	X				BMP	Initiate the cleanup of spilled materials or wastes in a timely manner to prevent continued migration of contamination that could result in a more costly cleanup. Locate appropriately stocked spill kits in areas where spills may occur.	Guidance for Compliance at TxDOT facilities Ch. 5 Small Spill Response
SW8	Solid Waste Stormwater Housekeeping	Visual Interview	Are clean up wastes (absorbents and shop rags) properly disposed of?	X				BMP	Cleanup waste from small spills should be containerized, properly stored on site and disposed of in a timely manner. Absorbents and rags can be disposed of into the dumpster in small amounts, as long as there is no sign of free-flowing oil. Cleanup of large spills must be handled by a cleanup contractor and should be containerized and analyzed prior to disposal.	Guidance for Compliance at TxDOT facilities Ch. 5 Small Spill Response
SW7	Solid Waste Stormwater Housekeeping	Visual Interview	Do work practices keep potentially contaminated runoff from migrating off-site? Is there no evidence of contaminated runoff leaving the property? Is the outfall(s) clean of debris and staining?	X				ROD	Modify existing work practices to prevent polluted runoff from leaving TxDOT property. For example, salt piles should be located and bermed as necessary to preclude offsite migration of runoff.	Texas Water Code Section 26.121 - Unauthorized Discharge Prohibited
SW9	Solid Waste Stormwater Housekeeping	Visual Interview	Is trash managed on the facility accumulated in a quantity or manner to not be considered a nuisance?	X				BMP	Municipal Solid Waste should not be stored in a manner to cause a nuisance.	30 TAC 330.15(a)(2) General Prohibitions
SW11	Solid Waste Management		Comment Section Solid Waste/Hazardous Waste Management:							

If the facility is regulated under SPCC rules, answer the following:

No.	Category	Verification Method	Area Reviewed	NI	NA	Yes	No	Action	Standard	Reference
If the facility is regulated under SPCC rules, answer the following:				X						
SP1	SPCC	Paperwork	Is a SPCC plan located at the facility? Does the plan have a PE seal?	X				ROD	A written SPCC plan is required at facilities with above ground oil storage capacity of 1320 gallons or greater. Only containers with a capacity of 55 gallons or greater are counted toward this volume. Hot mix asphalt containers are excluded but not emulsion tanks.	40 CFR §112.1(d)(2)(i) – General Applicability
SP2	SPCC	Paperwork	Is the SPCC plan less than 5 years old?	X				ROD	A complete review and evaluation of the SPCC Plan is required at least once every five years.	40 CFR §112.5(b) – Amendment of SPCC by owner
SP3	SPCC	Paperwork	Is the facility in compliance with the written SPCC Plan and have all amendments in the plan been implemented?	X				ROD	Amendments to the SPCC plan should be implemented as soon as possible, but no later than 6 months following preparation of any amendment.	40 CFR §112.5(b) – Amendment of SPCC by owner
SP4	SPCC	Paperwork	Does the facility document monthly inspections of 1) tanks, valves and controls, and 2) dikes on the appropriate forms in the SPCC plan?	X				ROD	Documentation of monthly inspections for 1) tanks, valves, and controls and 2) dikes should be documented on appropriate forms and retained in the back of the facility's SPCC plan. Documentation should be included in the plan for a minimum of 3 years.	40 CFR §112.7(a) - General requirements SPCC Site Specific SPCC Plan
SP5	SPCC Stormwater	Paperwork	If they occurred, are spill cleanup reports and discharge from secondary containment reports documented in the SPCC plan? If reportable quantities of spills were exceeded were regulatory agencies notified and the notification documented? Are discharges from diked areas documented on the appropriate form in the SPCC plan?	X				ROD	Cleanup from spills should be containerized and disposed of in a timely manner. Absorbents and rags can be disposed of into the dumpster in small amounts, as long as there are no signs of free-flowing oil. Cleanup waste from larger spills must be containerized. Discharge of stormwater from secondary containment is permissible as long as there is not a visible sheen on the water. When drainage of the dike is required, this should also be documented on the appropriate form. A record of spills, reporting and cleanup activities should be included in the plan and communicated to regulatory agencies when reportable quantities are exceeded. Retain records for 3 years.	40 CFR §112.7(a) - General requirements SPCC
SP6	SPCC	Paperwork	Is documentation of annual training included in the SPCC plan? Is the person responsible for implementation of the plan included in the training?	X				ROD	At a minimum, facility personnel should be trained annually. Training records should be maintained in the SPCC plan for at least 3 years. (See PPA website for SPCC training)	40 CFR §112.7(f) - General requirements SPCC Plans
SP7	SPCC	Paperwork	Is each bulk storage container tested or inspected for integrity on a regular schedule and whenever repairs are made?	X				ROD	Perform integrity testing according to industry standards per SPCC plan. The owner or operator is required to conduct frequent inspection of the outside of the container for signs of deterioration, discharges, or accumulation of oil inside the diked area. Keep comparison records and include the supports and foundations in the inspection.	40 CFR §112.8(c)(5) – Bulk Storage Containers SPCC
UO1	Used Oil	Paperwork	Are the used oil storage tank(s) or storage drums included in the SPCC plan?	X				ROD	Used oil generators are subject to all applicable SPCC requirements included in 40 CFR part 112 (See SPCC Checklist).	40 CFR §279.22 - Used Oil Storage

No.	Category	Verification Method	Area Reviewed	NI	NA	Yes	No	Action	Standard	Reference
SP8	SPOC	Visual	Are high level alarms/cutoff devices or direct vision gauges on tanks working?	X				ROD	If used, audible high-level alarm or cutoff devices should be tested periodically.	40 CFR §112.8(c)(8) - SPCC Plan requirement onshore facilities
SP13	SPOC	Visual	Do tank loading and unloading areas follow signage requirements in the the SPCC Plan? This includes USTs.	X				ROD	Warning signs regarding disconnecting lines before vehicle departure should be in place for each loading and unloading area as specified in the SPCC plan. Personnel should be present during loading and unloading operations. Spill kits should be available. Driver should inspect lower most drain outlet before departing.	40 CFR §112.7(c) - General requirements SPCC TRC SPCC Plan
SP9	SPOC	Visual	Does the facility map in the SPCC plan accurately reflect the location of all regulated tanks and facility operations?	X				ROD	The layout of tanks and piping observed during the site walk through should match the facility map. Differences should be noted in the Comments Section below.	40 CFR §112.7(a)(3) - General requirements for SPCC Plans
SP10	SPOC	Visual	Are out-of-service unused tanks permanently closed? If not, are they included on the facility map?	X				ROD	Permanently closed requires that piping be disconnected from the container and blanked off. All valves (except for ventilation valves) must be closed and locked, and dated signs must be posted on the container stating that it is a permanently closed.	40 CFR §112.1(d)(2)(i) - General Applicability
SP11	SPOC	Visual	Are tanks and piping visually in good condition?	X				ROD	Assess the general condition of tanks and items, such as flange joints, expansion joints, valve guides and bodies, catch pans, pipeline supports, locking valves, and metal surfaces.	40 CFR §112.7(e) - General requirements SPCC
SP12	SPOC Stormwater	Visual	Are all tanks protected by secondary containment structures? Are containment structures maintained?	X				ROD	Secondary containment structures should be in place for each tank.	40 CFR §112.7(c) - General requirements SPCC
SP14	SPOC Stormwater	Visual	Are "mobile tanks" such as asphalt distributors and trailers stored in secondary containment structures?	X				ROD	Mobile or portable oil tanks should be located in secondary containment structures when not in use.	40 CFR §112.7(c) - General requirements SPCC and §112.8(1) mobile refuelers
SP16	SPOC Stormwater	Visual	Are diked storage area drain valves closed?	X				ROD	Drain valves for diked storage areas should remain closed to prevent a discharge into the drainage system. Stormwater with a sheen cannot be discharged.	40 CFR §112.8(b)(2)
SP17	SPOC Stormwater	Visual	Are diked storage area structures free of spills and accumulated liquids?	X				BMP	Secondary containment structures should be drained/cleaned out as soon as practical after spills or stormwater accumulation.	Guidance for Compliance at TXDOT facilities Ch. 3 SPCC Plan
SP15	SPOC	Visual	Are tank loading/unloading and drain valves closed and locked? Does security lighting comply with the SPCC Plan?	X				ROD	Tank valves should remain closed and locked when in non-operating status. The appropriateness of security lighting is addressed in the SPCC plan.	40 CFR §112.7(g) - Security
SP18	SPOC	Visual	Are tank pump starter controls on emulsion tanks/trailers in the "Off" position per SPCC Plan and accessible only to authorized personnel?	X				ROD	The starter controls on all oil pumps must be in a "Off" position.	40 CFR §112.7(g) - Security
SP19	SPOC		Comment Section SPCC:							
UO2	Used Oil/Filters	Paperwork	Does the section/district maintain records of recycling of used oil and filter shipments with a TCEQ/EPA registered transporter	X				ROD	Used oil generators are required to use EPA/TCEQ registered transporters, storage facilities and processors to recycle used oil and used oil filters. Facilities shipping used oil filters off-site must maintain a copy of the bills of lading. Records should be maintained for 3 years.	40 CFR 279.24 - Offsite Shipments 30 TAC 328.25 - Used Oil Filter Management and Recycling
UO3	Used Oil/Filters	Visual	Are there dedicated, separate, labeled containers used for storage of used oil and used oil filters?	X				ROD	Used oil and filters must be stored in separate dedicated tank or drum. The containers must be labeled USED OIL and USED OIL FILTERS respectively.	40 CFR 297.22(c) U293 Oil Storage 40 CFR 279.22(c)(1)(2) - Labels of Used Oil Storage Units
UO4	Used Oil/Filters Stormwater	Visual	Are the used oil and filter storage tanks/containers covered and in good condition (no severe rusting, apparent structural defects or deterioration) and not leaking? Are the used oil storage areas generally spill-free?	X				ROD	Containers and above ground tanks used to store used oil must be in good condition (no severe rusting, apparent structural defects or deterioration) and not leaking (no visible leaks).	40 CFR 279.22(b)(1),(2) - Condition of Used Oil Storage Units 30 TAC §324 - Used Oil Rules TX Water Code Section 26.121 Unauthorized discharge prohibited
UO6	Used Oil Stormwater	Visual	Is secondary containment in place for all new/used oil tanks/drums or grease containers?	X				BMP or ROD	Containment could include concrete berm, doublewalled construction or spill pallets.	40 CFR §112 - Oil Pollution Prevention (SPCC) Guidance for Environmental Compliance at TXDOT Facilities Ch. 4 Housekeeping
UO9	Used Oil Filters	Visual	Is oil drained from the used oil filters before storage?	X				ROD	All free flowing oil must be removed from used oil filters in order to be exempt from being hazardous waste.	30 TAC 328 - Used Oil Filter Management and Recycling 40 CFR §261.4(b)(13)

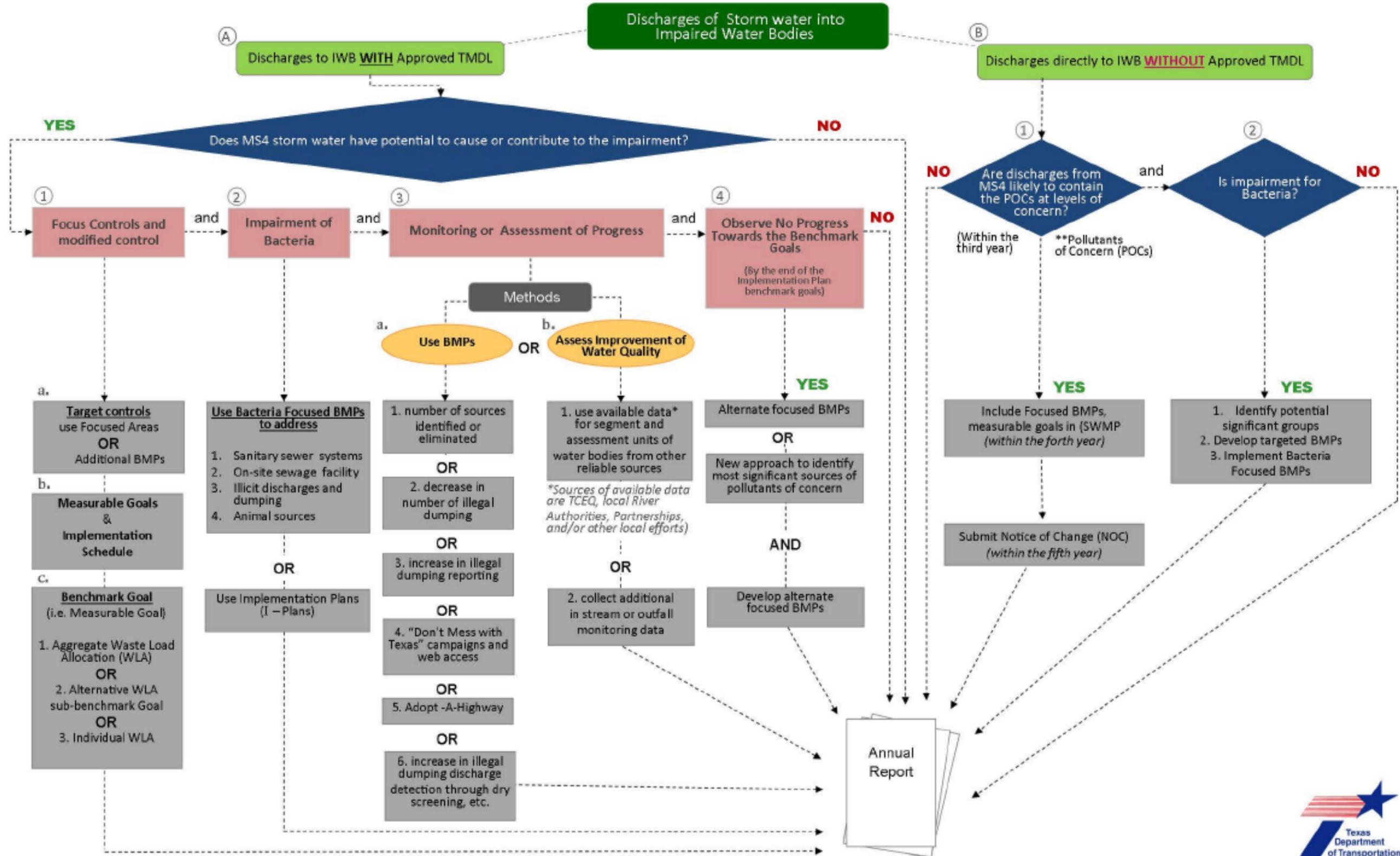
No.	Category	Verification Method	Area Reviewed	NI	NA	Yes	No	Action	Standard	Reference
UO10	Used Oil	Interview Process	Does the facility prevent the mixture of other waste fluids with the used oil?	X				BMP	Used Oil Mixed with Fuels: Mixtures of used oil with fuel or fuel products are subject to regulation as used oil under 40 CFR 279 if burned for energy recovery . Used Oil Mixed with Used Solvent or other Hazardous Waste: While certain mixtures of hazardous waste with used oil can be allowed, there is a risk that some mixtures will be classified as hazardous waste once mixed. Mixture of hazardous waste with used oil should be avoided.	40 CFR 279.10(b) & (d) and 40 CFR 261.5(j) Mixtures of used oil and hazardous waste and Mixtures of used oil with products
UO11	Used Oil/Filters		Comment Section Used Oil and Used Oil Filters:							
UT1	Scrap Tire Management	Visual Interview	Are whole or shredded scrap tires collected by a registered scrap tire transporter so no more than 500 tires or 10,000 lbs of tires are present at the facility?	X				ROD	Pickup of whole or shredded scrap tires can be obtained through an existing state wide term contract entitled USED AND SCRAP TIRE REMOVAL DISPOSAL/RECYCLING that can be accessed through the Comptrollers Office (Website: Windows on State Government, see Term Contracts). The state pays for tire recycling/disposal by the pound. If it is necessary to use another transporter they must be registered with the TCEQ. TXDOT cannot collect more than 500 scrap tires without registering with the TCEQ.	Management of Used Scrap Tires 30 TAC §328.54-55 Generator and Registration Requirements Guidance for Environmental Compliance Ch. 3 Waste Generated During Vehicle Maintenance.
UT3	Scrap Tire Management	Paperwork	Are scrap tires shipments recorded on manifests provided by the recycler and returned completed to TXDOT after the tires have been delivered?	X				ROD	A manifest is required for the transport and disposal of whole or shredded scrap tires with a registered transporter. The TXDOT representative and transporter should sign the manifest when tires are picked up. TXDOT should keep a copy of the partially completed manifest for each transported load. The actual weight of the tires may not be known at the time of pickup. However, the approximate number of tires or dimension of the tire pile should be noted and kept with the partially completed manifest. Within 60 days the tire recycler should return the completed manifest with the actual tire weight supported with empty and loaded weigh tickets. The completed manifest should be attached to the initial manifest. If the completed manifest is not received in 60 days, is altered, or appears to indicate a weight grossly different than the estimated no. of tires, contact ENV- PPA Austin. Keep all manifests for a period of three years.	Management of Used or Scrap Tires 30 TAC§328.55 Manifest system TXDOT memo Used Tires and Scrap Tire Management Supplemental Guidance (October 2005) ??update memo new process??
UT4	Scrap Tire Management		Comments Scrap Tire Management							
EW1	Equipment Washing	Interview Visual	Are wash racks, floor drains and sinks connected to an authorized disposal system and any untreated discharge eliminated from ditches or storm drains?	X				ROD	Confirm that washracks are connected to the local sanitary sewer system; or to an onsite containment system where water can be collected for disposal or evaporated, or authorized for discharge in accordance with TCEQ permit. Wash activities should be conducted so water does not leaves the facility.	Guidance for Environmental Compliance at TXDOT facilities Ch.7 Vehicle and Equipment Washing Texas Water Code Section 26.121 Unauthorized Discharge Prohibited
EW2	Equipment Washing/Solid Waste	Interview Paperwork	Are the wash rack grt traps periodically inspected and pumped out? Are analytical testing results and waste disposal manifests available?	X				ROD	Each grt trap/sump should be periodically cleaned out (recommended annually at a minimum). This can be done by facility personnel or contracted out to a qualified vendor. Grit trap waste is considered a Special Waste and requires a waste characterization profile. The manifest should be retained to document proper waste disposal.	TCEQ guidance RG-87 Disposal of Grit Trap Wastes attachment to Guidance for Environmental Compliance at TXDOT facilities
EW3	Equipment Washing	Visual Interview Paperwork	If equipment washing is performed on an Interim washpad or in an area not connected to an authorized disposal system are the requirements of the March 2001 Compliance Agreement met?	X				BMP	Wash water leaving an Interim wash pad must stay within the confines of the facility's boundaries. Each time the Interim wash pad is used the facility must keep a record of the date the wash pad is used and the number of vehicles washed.	TXDOT/TNRCC Compliance Agreement Implementation Guidance (See PPA Website)
EW4	Equipment Washing		Comment Section Equipment Washing:							
If the facility stores used antifreeze, answer the following:				X						
UA1	Used Antifreeze	Interview Paperwork	If antifreeze is collected for recycling are records available showing that the antifreeze is being recycled?	X				ROD	Antifreeze not collected for recycling is considered a solid waste, which must be analyzed for hazardous constituents prior to disposal. Records should be maintained documenting that used antifreeze is being recycled. If antifreeze is being recycled onsite, filters from this process may be hazardous waste, and should be managed accordingly.	30 TAC §335.62 - Hazardous Waste Determination 40 CFR §262.11 - Hazardous Waste Determination

No.	Category	Verification Method	Area Reviewed	NI	NA	Yes	No	Action	Standard	Reference
UA2	Used Antifreeze Stormwater	Visual	Is used antifreeze stored in a dedicated properly labeled drum or container in good condition with the lid fastened when not in use?	X				BMP	Label the contents of the container storing used antifreeze. Keep containers closed when not in use to minimize the potential for rainwater, solvents or other chemicals to be mixed with the used antifreeze.	Guidance for Environmental Compliance at TXDOT Facilities Ch. 4 Housekeeping
UA3	Used Antifreeze		Comment Section Used Antifreeze:							
If the facility stores used lead acid batteries, answer the following:				X						
LB1	Lead Acid Batteries	Interview	If used batteries are not exchanged with the purchase of a new battery, are they taken to a battery recycling facility, or to the district complex for recycling in the future?	X				RDD	Batteries are considered a hazardous waste unless collected for recycling. If batteries are not exchanged with a new one, the district should have a contract in place to have the batteries collected by a battery recycler registered with the TCEQ. Recycled batteries are not counted toward the hazardous waste generator status of the facility (e.g. CESQG).	30 TAC §328.13 - Disposal of Batteries 30 TAC §335.62 - Hazardous Waste Determination
LB2	Lead Acid Batteries	Paperwork	Does the facility maintain records when spent batteries are delivered for recycling, exchanged or delivered to the district?	X				BMP	The facility should maintain records of the date, amount of spent lead acid batteries delivered for recycling and the vendor that accepted the spent lead batteries.	Guidance for Environmental Compliance at TXDOT facilities Ch.3 Waste Generated During Vehicle Maintenance
LB3	Lead Acid Batteries Stormwater	Visual	If used batteries are stored on site are they located on pallets, covered and secured?	X				BMP	Store batteries on wooden pallets or spill pallets outside (or inside in a large open area). Used batteries should be stored in a covered area to minimize the mixing of rainwater and battery acid from leaking batteries. Used, damaged or leaking batteries should be collected for recycling as soon as practical.	Guidance for Environmental Compliance at TXDOT facilities Ch.3 Waste Generated During Vehicle Maintenance
LB4	Lead Acid Batteries		Comment Section Lead Acid Batteries:							
TA1	PST Management	Database Visual	Have all tanks been registered with the TCEQ of 1100 gallon or greater size, for both for ASTs (req'd once) and USTs (req'd annually)?	X				RDD	All PSTs in existence on or after September 1, 1987 must be registered with the TCEQ. New tanks installed at a registered facility must be registered within 30 days after the completion of the installation. ASTs are required once, and USTs are required annually.	30 TAC 334.7 - Registration for Underground Storage Tanks (USTs) and UST Systems
TA6	PST Management	Interview Paperwork	Are all UST or AST system records (installation, operation, and maintenance) readily accessible for review?	X				RDD	Owners and operators of PST systems are responsible for developing and maintaining records regarding the installation, operation, and maintenance of the system. These records must be readily accessible for reference and use by the PST system operator and readily accessible and available for inspection upon request by the TCEQ.	30 TAC 334.10(b) - Reporting and Recordkeeping & 30 TAC 334.130(b) - Reporting and Recordkeeping for Aboveground Storage Tanks (ASTs)
If the facility has USTs, answer the following:				X						
TA2	PST Management	Database Paperwork	Is the UST registration information filed with the TCEQ complete, accurate and up-to-date?	X				RDD	The owner or operator of a UST system must provide written notice to the TCEQ of any changes or additional information concerning such system, such as: change of address; authorized representative; system status; type of stored regulated substance; installation of additional tanks or ancillary equipment; change or installation of corrosion protection, spill and overflow prevention equipment, or release detection; or change in location of records. The notice must be filed with the TCEQ within 30 days from the change or within 30 days from the date on which the owner or operator first became aware of the change.	30 TAC §334.7(d) - Registration for Underground Storage Tanks (USTs) and UST Systems
TA3	PST Management	Paperwork	Has the UST system been self-certified with the TCEQ?	X				RDD	A tank owner / operator is required to complete and submit a self-certification form annually to the TCEQ. The form must be completed with all the applicable information requested on the agency's authorized form for all regulated USTs at the specified facility. The annual submission of the self-certification form is should be 30 days prior to the due date specified in rule (30 TAC 334.8).	30 TAC §334.8(c) - Certification for Underground Storage Tanks (USTs) and UST Systems
TA4	PST Management	Visual Paperwork	Is the Fuel Delivery Certificate displayed or available for inspection?	X				RDD	The current valid delivery certificate must be available to show the common carrier (prior to fuel delivery) or TCEQ staff. The certificate must be posted at the facility.	30 TAC §334.8(c)(5)(A) - Certification for Underground Storage Tanks (USTs) and UST Systems
TA5	PST Management	Paperwork	Are there certified Class A,B&C operators identified for the UST system with current training certificates?	X				RDD	During hours of operation, UST facilities must have at least one certified operator (either a Class A, Class B, or Class C operator) present at the UST facility, except when a UST facility is unmanned.	30 TAC §334.602- Designation and Training of Classes of Operators

NI - Not Investigated NA - Not Applicable RQD - Required BMP - Best Management Practice
Version: March 2017

ATTACHMENT K
TMDL BMP FLOW CHART

Impaired Water Bodies (IWB), Total Maximum Daily Load (TMDL) and Best Management Practice (BMP)



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