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TEXAS A&M UNIVERSITY

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INTRODUCTION

Stormwater Permitting History

In 1948 the United States Congress enacted the Clean Water Act to maintain integrity of the Nation's waters. In 1972, the National Pollutant Discharge Elimination System (NPDES) program was established under the authority of the Clean Water Act. The Clean Water Act prohibited point-source discharge of pollutants to waters of the United States without a permit through the National Pollutant Discharge Elimination System (NPDES). Discharge permits limited pollution levels to best available technology achievable (BAT) standards where economically viable.

The Clean Water Act was amended in 1987 to regulate pollution conveyed by stormwater runoff. Storm sewers are established point sources subject to NPDES permitting requirements. In 1990 the Environmental Protection Agency (EPA) created the "Phase I Rule" which regulated stormwater pollution from major industrial facilities, large and medium municipal storm sewers; also called municipal separate storm sewer systems (MS4s), and construction sites that disturb five or more acres of land.

The EPA created the "Phase II Rule" in 1999 to expand the existing stormwater pollution reduction program, now regulating smaller municipalities and counties as well as construction sites that disturb land greater than one acre. Since its creation, the Phase II Rule has been the topic of legal scrutiny. In 2003 the Ninth Circuit Court of Appeals found that portions of the Phase II rule were not consistent with the Clean Water Act. The Texas Commission on Environmental Quality (TCEQ) revised and issued the general permit (TPDES general permit TXR040000) on August 13, 2007. Applications for coverage under the TPDES general permit are required to be submitted within 180 days following the effective date of the permit. Texas Commission on Environmental Quality approved this general permit on January 24, 2019.

TPDES General Permit TXR040000

To qualify for permit coverage the MS4s must develop a Stormwater Management Program (SWMP) that describes the actions and best management practices (BMPs) they have already implemented or will develop to minimize the discharge of pollutants from the MS4 to the maximum extent practicable.

The SWMP must address the following six subject areas or minimum control measures (MCMs):

1. Public Education, Outreach and Involvement
2. Illicit Discharge Detection and Elimination (IDDE)
3. Construction Site Stormwater Runoff Control
4. Post Construction Stormwater Management in New Development and Redevelopment
5. Pollution Prevention and Good Housekeeping
6. Industrial Stormwater Sources

The sixth measure *Industrial Stormwater Sources* is for Level 4 Small MS4s and is not applicable to Texas A&M therefore, will not be addressed in this SWMP. An optional seventh measure, *Authorization for Municipal Construction Activities*, allows construction activities operated by the municipality to be covered under the MS4 general permit rather than obtaining separate coverage under the construction stormwater permit TXR150000. This optional seventh measure will not be established at this time.

This document describes the five minimum control measures, actions to be taken by Texas A&M University staff, and BMPs for the Texas A&M University SWMP. The BMPs and measurable goals were selected based on the requirements of the general permit, as well as the needs and activities of this campus.

1. Public Education, Outreach and Involvement

1.1 Regulatory Requirement

(a) Public Education and Outreach

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

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

- (a) Define goals and objectives
 - (b) Identify target audiences
 - (c) Develop and utilize appropriate educational materials
 - (d) Determine cost effective/practical means for distribution of materials
- (2) Throughout the permit term, all permittees shall make the educational materials available to convey the program's message to the target audience(s) at least annually.
 - (3) If the permittee has a public website, the permittee shall post its SWMP and the annual reports required under Part IV.B.2 or a summary of the annual report on the permittee's website. The SWMP must be posted no later than 30 days after approval date, and the annual report no later than 30 days after approval date.
 - (4) All permittees shall annually review and update the SWMP and MCM implementation procedures required by Part III.A.2., as necessary. Any changes must be reflected in the annual report. Such written procedures must be maintained, either on site or in the SWMP and made available for inspection by the TCEQ.
 - (5) MS4 operators may partner with other MS4 operators to maximize the program and cost effectiveness of the required outreaches.

(b) Public Involvement

All permittees shall involve the public, and at minimum, comply with any state and local public notice requirements in the planning and implementation activities related

to developing and implementing the SWMP, except that correctional facilities are not required to implement this portion of the MCM.

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

- (1) Consider using public input (for example, the opportunity for public comment, or public meetings) in the implementation of the program;
- (2) Create opportunities for citizens to participate in the implementation of control measures, such a stream clean-ups, storm drain stenciling, volunteer monitoring, volunteer “Adopt-A-Highway” programs and educational activities
- (3) Ensure the public can easily find information about the SWMP.

1.2 Background

This measure serves to inform the public about the impacts polluted stormwater runoff can have on water quality, hazards associated with illegal discharges and improper disposal of waste and ways the public can minimize their impacts on stormwater quality. When the public is aware of their impacts on the environment, they gain a greater sense of responsibility for their actions. Public involvement and participation expedites the implementation of the SWMP and garners support for each of the BMPs. Through public forums and activities geared toward public participation, environmental stewardship and public awareness can be achieved.

The following groups must be reached by the public education and outreach program annually and have been deemed to have a potential adverse effect on stormwater quality:

- Residents,
- Visitors,
- Public service employees,
- Businesses,
- Commercial and industrial facilities,
- Construction site personnel, &
- Outsourced employees conducting facility management

Texas A&M University must document that a reasonable attempt was made to each of these groups through various public education and outreach programs.

1.3 Current Programs

Texas A&M University currently conducts stormwater quality employee education for many employees. Employees are trained through each department for job specific stormwater concerns in conjunction with standard new employee and continuing education programs.

University wide laboratory employees are instructed in proper disposal methods of chemicals and compounds. Care is taken to ensure that these items do not enter the storm drain system.

Solid waste operators are trained in correct collection procedures to ensure trash “lost” in the transfer process is picked up.

Golf course management and grounds keeping companies are informed of the need to educate employees in proper application, rate, and disposal of fertilizer and pesticide. These employees are also to be taught the proper maintenance of golf and grounds vehicles.

Texas A&M University bus operators are instructed in fueling procedures, as well as procedures to take if a fueling spill does occur.

Outsourced entities provide their own training for stormwater awareness. Those records are shared with Environmental Health and Safety quarterly. Records are maintained through SSC Services for Education.

Texas A&M Environmental Health and Safety conducts environmental and safety training for many campus employees. Training offered through this department include hazardous waste management, hazardous waste transportation, hazardous waste shipping, chemical and biological spill response, as well as laboratory training as discussed previously.

Texas A&M University Environmental Health and Safety is continually developing specific information and educational materials to be provided to the public (students, faculty, and staff) regarding stormwater management and protection.

Currently Texas A&M Environmental Health and Safety works with numerous student organizations on stormwater related education and activities. EHS participates in and supports programs that enhance environmental education and awareness on campus. Such activities include Earth Day, Texas Recycles Day and Sustainability Day. EHS participates annually and hosts a stream clean event in the fall.

1.4 Selected BMPs for Public Education and Outreach

1.4.1 BMP 1—Stormwater Public Education Print Materials

Texas A&M University will distribute stormwater public education print materials to groups within the university community. Examples of printed material may be found in Appendix E.

Additional materials may be created, or found at the following website:

<https://www.epa.gov/environmental-topics/water-topics> and at <https://ehs.tamu.edu/programs/stormwater/>

These documents may be copied and distributed to groups within the community. Key audiences for Texas A&M University include:

- Students, faculty, and staff (*residents*)
- Visiting parents, visiting students, general visitors (*visitors*)
- Facilities Service employees, kitchen staff, golf course personnel, lab personnel (*public service employees to include outsourced groups*)
- Outside businesses at Texas A&M University, Research Park businesses other businesses that rent within Texas A&M Public Partnerships (*businesses*)
- Bus Operations, Transportation Services, Texas A&M University Hazardous Waste Storage Facility (commercial and industrial facilities)
- Construction site personnel

Educational print material may be distributed in the following ways:

- Flyer within new student packets
- Flyer within new employee packets
- Flyers stocked in visitor center within Rudder Tower
- Digital information or flyers through Texas A&M e-mail to current students, faculty and staff and digital advertising boards
- Flyer to businesses in Research Park
- Distribution during events EHS hosts or participates in.

1.4.1.1 Measurable Goals

The measurable goal for implementation of this BMP is to continue to develop and distribute the printed educational material in Years 1-5. Material will be evaluated annually and updated as appropriate. Printed material should be distributed to new employees, students, visitors, contracted workers and construction contractors on a yearly basis.

1.4.1.2 Schedule

Program	BMP	Activity	Due Date
Public Education and Outreach	Public Education Printed Materials	Evaluate/Distribute Educational Material to Target Audiences	Annually

1.4.1.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Public Education BMP1, Public Education Printed Materials to meet Measurable Goal 1.4.1.

1.4.2 BMP 2—Stormwater Information Website

Texas A&M University’s Environmental Health and Safety will use website <https://ehs.tamu.edu/programs/stormwater/> (projected completion date is December 2019) to relay stormwater information to the public. The website will be newly created specifically for stormwater at Texas A&M University and share information concerning stormwater management on campus and ways to report concerns or issues. Texas A&M Environmental Compliance also has a Facebook page, <https://www.facebook.com/TheEnvironmentAtTAMU/>. EHS Compliance staff use this page to disseminate information to the public about compliance and protection of Texas’s natural resources. Topics vary and often feature a focus on stormwater. The Texas Water Research Institute (TWRI) is a water education website offering additional resources on a wide variety of water related topics. Topics covered include general stormwater information, impacts the general public has on stormwater quality, regulations, and best management strategies. TWRI may be found at <http://twri.tamu.edu>. In addition, Texas A&M is part of a consortium that shares information and responsibilities concerning TxDOT, Brazos County, City of Bryan, City of College Station as well as Texas A&M. Information on Brazos Clean Water can be found at: <http://www.brazoscleanwater.org/>.

1.4.2.1 Measurable Goals

The measurable goal for implementation of this BMP is to develop an informational website and update existing stormwater education material for public permit years 1-5.

1.4.2.2 Schedule

Program	BMP	Activity	Due Date
Public Education and Outreach	Stormwater Information Website	Develop single stormwater information website to link all available information	year 1 and update 2-5

1.4.2.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Public Education BMP2, Stormwater Information Website to meet Measurable Goal 1.4.2.

1.4.3 BMP 3—Texas A&M Bus and Transportation Stormwater Advertisements

Texas A&M University will post stormwater pollution prevention advertisements through campus transit opportunities. Advertisements may be on various stormwater pollution prevention topics and display an address to the stormwater information website created with BMP2.

1.4.3.1 Measurable Goals

The measurable goal for implementation of this BMP is biannual transit advertisements for one month.

1.4.3.2 Schedule

<i>Program</i>	<i>BMP</i>	<i>Activity</i>	<i>Due Date</i>
Public Education and Outreach	Texas A&M Bus and Transportation Stormwater Advertisement	Biannual advertisements for a month long duration	Annually

1.4.3.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Public Education BMP3, Texas A&M Bus and Transportation Stormwater Advertisements to meet Measurable Goal 1.4.3.

1.4.4 BMP 4—Advisory Committee

Texas A&M will form an Advisory Committee as part of the SWMP. The committee should represent different groups within the University community that will be affected by or have an interest in the implementation of the SWMP. Different groups that may make up the committee include, but are not limited to:

- Students,
- Faculty,
- Staff,
- Environmental Health & Safety Department Representative,
- Utilities and Energy Services,
- Other University Related Agencies.

The committee shall review the SWMP and provide recommendations and comments on the document, as well as address any concerns with stormwater management at Texas A&M. The

committee shall meet annually to address the effectiveness of the programs contained within the SWMP and suggest the addition or removal of programs as necessary.

1.4.4.1 Measurable Goals

The measurable goal for implementation of this BMP is to meet annually to discuss the previous year and propose new plans or changes for the next year. These will be presented to the Sustainability and Environmental Management Committee (SEMC).

1.4.4.2 Schedule

Program	BMP	Activity	Due Date
Public Education and Outreach	Advisory Committee	Meet annually with Advisory committee to address advisory committee’s comments on SWMP and report.	Annually

1.4.4.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Public Involvement and Participation BMP4, Advisory Committee to meet Measurable Goal 1.4.4.

1.4.5 BMP 5—Stormwater Volunteer Activities

Texas A&M will identify suitable stormwater volunteer activities and will create or find and distribute support materials to interested groups. Volunteer groups may include, but are not limited to environmental student clubs, service organizations, sororities, fraternities, professional student associations, professional organizations and corporate sponsors.

1.4.5.1 Measurable Goals

The measurable goal for implementation of this BMP is to continue identifying volunteer groups, develop stormwater material to distribute, and assess effectiveness in the coming years.

1.4.5.2 Schedule

Program	BMP	Activity	Due Date
Public Education and Outreach	Stormwater Volunteer Activities	<ol style="list-style-type: none"> 1. Identify possible volunteer groups 2. Create or update stormwater volunteer support material 3. Distribute materials to volunteer groups 4. Assess effectiveness of volunteer activities 	Annually

1.4.5.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Public Involvement and Participation BMP5, Stormwater Volunteer Activities to meet Measurable Goal 1.4.5.

1.4.6 BMP 6—Public Input, Notification and Comment

Texas A&M University will notify the public of intent for compliance with state and local requirements of this permit. Texas A&M University will publish the notice through several outlets in both English and Spanish for citizens to have the opportunity for a public review and comment period.

1.4.6.1 Measurable Goals

The measurable goal for implementation of this BMP is to identify multilingual populations within the community, and provide dual language notification of renewal of the SWMP within a 30-day comment and public review period.

1.4.6.2 Schedule

Program	BMP	Activity	Due Date
Public Education and Outreach	Public Notification and Comment Period	Identify affected groups and publish in both English and Spanish the updated permit.	Begin of permit term as specified by TCEQ
	Stormwater outreach and training target new businesses within TAMU’s fence line	Ensure business and restaurant owners/managers are aware of MS4’s requirements, the potential effect on stormwater and regulations regarding stormwater.	December 2021 Within 6 months of the opening new sites after that.

1.4.6.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Public Involvement and Participation BMP6, Public Input, Notification and Comment to meet Measurable Goal 1.4.6

2. Illicit Discharge Detection and Elimination (IDDE) Minimum Control Measures (MCM)

2.1 Regulatory Requirement

(a) Program Development

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

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

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

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

practicable, then the permittee shall notify the appropriate TCEQ Regional Office of the possible illicit connection or discharge.

- (3) If another MS4 notifies the permittee of an illegal connection or illicit discharge to the small MS4, then the permittee shall follow the requirements specified in Part II.B.2.(c)(3).
- (4) All Permittees shall review and update the necessary, SWMP and MCM implementation procedures required by Part III.A.2. Changes must be reflected in the annual report. Such written procedures must be maintained, either onsite or in the SWMP and made available for inspection by TCEQ.

(b) Allowable Non-Stormwater Discharges

Non-stormwater flows listed in Part IIC do not need to be considered by the permittee as illicit discharges unless the permittee or TCEQ identify the flow as a significant source of pollutants to the small MS4.

(c) Requirements for all Permittees

All permittees shall include the requirements below in Parts III.B.2(c)(1)-(6):

1. MS4 Mapping: Shall be maintained and up to date and include:

- a. The location of all small MS4 outfalls that are operated by the permittee and discharge into waters of the U.S.;
- b. The location and name of all surface waters receiving discharges from the small MS4 outfalls; and
- c. Priority areas identified under Part III.B.2.(e)(1) if applicable.

2. Education and Training:

All permittees shall implement a method for informing or training all the permittee's field staff that may come into contact with or otherwise observe an illicit discharge or illicit connection to the small MS4 as part of their normal job responsibilities. Training program materials and attendance lists must be maintained on site and made available for review by the TCEQ.

3. Public Reporting of Illicit Discharges and Spills:

All permittees shall publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from the small MS4. The permittee shall provide a central contact point to receive reports; for example, by including a phone number for complaints and spill reporting.

4. All permittees shall develop and maintain onsite procedures for responding to illicit discharges and spills.

5. Source Investigation and Elimination:

a. Minimum Investigation Requirements: Upon becoming aware of an illicit discharge, all permittees shall conduct an investigation to identify and locate the source of such illicit discharges as soon as practicable.

(i) All permittees shall prioritize the investigation of discharges based on their relative risk of pollution. For example, sanitary sewage may be considered a high priority discharge.

(ii) All permittees shall report to TCEQ immediately upon becoming aware of the occurrence of any illicit flows believed to be an immediate threat to human health or the environment.

(iii) All permittees shall track all investigations and document, at a minimum date(s) discharged was observed; the results of the investigation; any follow-up and date investigation was closed.

b. Identification and Investigation of the Source of the Illicit Discharge

All permittees shall investigate and document the source of illicit discharges where the permittees have jurisdiction to complete such an investigation. If the source of illicit discharge extends outside the permittee's boundary, all permittees shall notify the adjacent permitted MS4 operator or TCEQ's Regional Office according to Part III.A.3.b.

c. Corrective Action to Eliminate Illicit Discharge

If and when the source of the illicit discharge has been determined, all permittees shall immediately notify the responsible party of the problem, and shall require the responsible party to perform all necessary corrective actions to eliminate the illicit discharge.

6. Inspections

The permittee shall conduct inspections, 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. The permittee shall develop written procedures describing the basis for conducting inspections in response to complaints and conducting follow-up inspections.

d. Additional Requirements for Level 3 and 4 small MS4s are not applicable.

e. Additional Requirements for Level 4 small MS4s are not applicable.

2.2 Background

Illicit connections are common and are usually an undetected source of pollutants to water bodies. Illicit discharges, as defined by TPDES General Permit TXR040000 Part I, are any discharge to a MS4 that is not entirely composed of stormwater, except discharges authorized under this general permit (TPDES General Permit TXR040000) or a separate TPDES permit and discharges resulting from firefighting activities. The goal of this MCM is to raise awareness within the small MS4 to determine the types and sources of existing illicit discharges, and establish the measures needed to remove the illicit connections. Illicit discharges are best discovered by checking outfalls for dry-weather flows.

Examples Sources of Illicit Discharges:

- Sanitary wastewater
- Effluent from septic tanks
- Car wash wastewaters
- Mobile power washing
- Mobile carpet cleaning
- Improper oil disposal
- Radiator flushing disposal
- Laundry wastewaters
- Spills from roadway accidents
- Improper disposal of auto and household toxics
- Improper connections to storm drain system (floor drains, sanitary sewer lines, etc.)

The following non-stormwater discharges are permissible discharges, per TPDES General Permit TXR040000 Part II.B., unless they are identified as significant contributors of pollutants within the MS4:

- Water line flushing (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life);
- Runoff or return flow from landscape irrigation, lawn irrigation, and the other irrigation utilizing potable water, groundwater, or surface water sources;
- Discharges from potable water sources that do not violate Texas Surface Water Quality Standards;
- Diverted stream flows;
- Rising ground waters and springs;
- Uncontaminated ground water infiltration;
- Uncontaminated pumped ground water;
- Foundation and footing drains;
- Air conditioning condensation;
- Water from crawl space pumps;

- Individual residential vehicle washing;
- Flows from wetlands and riparian habitats;
- Street wash water excluding street sweeper waste water;
- Discharges or flows from emergency firefighting activities (firefighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems and similar activities);
- Other allowable non-stormwater discharges listed in 40 CFR §122.26(d)(2)(iv)(B)(1);
- Non-stormwater discharges that are specifically listed in the TPDES Multi-Sector General Permit (MSGP) TXR050000 or the TPDES Construction General Permit (CGP) TXR150000;
- Discharges that are authorized by the TPDES or NPDES permit or that are not required to be permitted; and
- Other similar occasional incidental non-stormwater discharges such as spray park water; unless TCEQ develops permits or regulations addressing these discharges.

The EPA recommends that the following four areas be covered by the SWMP:

1. Procedures for locating illicit discharge priority areas
2. Tracing procedures for illicit discharge sources
3. Illicit discharge removal procedures
4. Procedures for evaluation and assessment of illicit discharge program

2.3 Current Programs

Texas A&M University has developed a storm sewer map outlined in the TPDES General Permit TXR04000 Part III.A.3.c. Currently the map identifies all outfalls (defined in section 2.4.1), outlet drainage basin and creek information, and the storm sewer pipe system. All outfalls have received a unique identifier code. Further storm sewer map work is outlined in BMP1, Storm Sewer Map. The existing storm sewer mapping may be found in Appendix B.

All Texas A&M industrial sites, including Bus Operations and Transportation Services have been investigated for illicit discharges and illicit connections. All offending discharges and connections have been removed. These industrial sites are covered under TPDES TXR05000 general permits for industrial stormwater discharge.

Texas A&M University in conjunction with other municipalities and local agencies are in collaboration with Texas Water Resource Institute and Texas Commission on Environmental Quality to implement an I-plan for impaired water bodies of Carters Creek Watershed for Total Maximum Daily Loads on segments 1209C, 1209D and 1209L.

Endangered Species: As a participating partner of the TMDL I-Plan, Texas A&M University has reviewed TCEQ's *Procedures to Implement the Texas Surface Water Quality Standards, June 2010 (TCEQRG-194)* which identifies the Houston Toad as an endangered or threatened species for stream segment number 1209 (Leon County). Brazos County is not identified as a county of concern for this stream segment in TCEQ's current 2010 Implementation Procedures or draft of

2012 Implementation Procedures. Texas A&M University’s MS4 discharge to stream segment 1209 will not adversely impact the water quality or habitat associated with the Houston Toad upstream of the university.

2.4 Selected BMPs for Illicit Discharge Detection and Elimination

2.4.1 BMP 1—Storm Sewer Map Updates

Texas A&M University will update the existing storm sewer maps after biannual inspections. By definition, the map must show the waters of the U.S. and the location of storm sewer pipes, ditches, and other conveyances owned by the University. The map must also include the locations of all outfalls, and be updated as new outfalls are added. Outfalls (TPDES General Permit TXR040000 Part I) are defined by TCEQ as:

- A point source at the point where a small MS4 discharges to waters of the U.S. and does not include open conveyances connecting two municipal separate storm sewers, 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 a linear transportation system without 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 on an adjacent property, or otherwise not actually discharging into water of the US are not considered outfalls.

Each new outfall will receive a unique identifier code. Field visits will be performed to determine the location of the new storm sewer infrastructure annually.

2.4.1.2 Measurable Goals

The measurable goal for implementation of this BMP is to map and field-verify all new storm sewer infrastructure annually.

2.4.1.3 Schedule

<i>Program</i>	<i>BMP</i>	<i>Activity</i>	<i>Due Date</i>
Illicit Discharge Detection and Elimination	Storm Sewer Map Updates	Map & Field Verify All New Texas A&M Storm Sewer Infrastructure	Biannual

2.4.1.4 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Illicit Discharge, Detection and Elimination BMP1, Storm Sewer Map Updates to meet Measurable Goal 2.4.1.

2.4.2 BMP 2—Illicit Discharge Reporting

In order to report spills or illicit discharges, one may contact EHS by phone or e-mail. Calls made to Communication Center are forwarded to the EHS Spill Response team 24 hours a day. In conjunction with MCM 1 EHS has added the phone number and reporting e-mail to all information given to the public to inform them of how to report any illicit discharge.

2.4.2.1 Measurable Goals

The measurable goal for implementation of this BMP is to continue educating of the students and businesses in the area on what to do if they see an illicit discharge.

2.4.2.2 Schedule

<i>Program</i>	<i>BMP</i>	<i>Activity</i>	<i>Due Date</i>
Illicit Discharge Detection and Elimination	Illicit Discharge/Illegal Dumping Hotline	In conjunction with MCM1 make the public aware of our hotline phone number and reporting e-mail address. This information is provided to EHS Response Team	Ongoing

2.4.2.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Illicit Discharge, Detection, and Elimination BMP2 Illicit Discharge Reporting to meet Measurable Goal 2.4.2.

2.4.3 BMP 3—Illicit Discharge Detection and Elimination Program

All outfalls, as defined in the Storm Sewer Map (BMP1), will be visually screened twice a year for suspect discharge. Suspect discharge includes any discharge that seems an unusual color, has an oily sheen, contains a high concentration of debris or sediment, or has a noticeable odor. If suspect discharge is found through visual monitoring, the source is immediately investigated and samples are obtained if necessary. Reports will be maintained for each screening visit, noting weather conditions for the previous week, the condition of the discharge, and the actions taken to remove the illicit discharge source.

Once a suspect discharge is identified through visual or water quality testing, the source will be eliminated or removed. This task may be completed by visiting sites within each outfall drainage basin as defined by the Storm Sewer Map. Once the source is identified, Texas A&M will report issue to proper maintenance group for correction.

2.4.3.1 Measurable Goals

The measurable goal for implementation of this BMP is to screen all outfalls twice a year as defined by the Storm Sewer Outfall Maps (Appendix B) and report any illicit discharges found within that inspection period.

2.4.3.2 Schedule

Program	BMP	Activity	Due Date
Illicit Discharge Detection and Elimination	Illicit Discharge Detection and Elimination Program (IDDE)	1. Screen outfalls twice a year for any evidence of illicit discharge. 2. Report issue(s) found during the inspections to proper maintenance group.	Biannual

2.4.3.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Illicit Discharge and Detection and Elimination BMP3, Illicit Discharge Detection and Elimination (IDDE) Program to meet Measurable Goal 2.4.3.

2.4.4 BMP 4—Illicit Discharge Public Education

Texas A&M University will distribute illicit discharge public education print materials to groups within the community, in conjunction with Public Education and Outreach BMP1, *Public Outreach, Education and Involvement*. These materials should inform the public about the hazards associated with illegal discharges and improper disposal of waste.

2.4.4.1 Measurable Goals

The measurable goal for implementation of this BMP is to continue developing and distributing printed illicit discharge educational materials in Permit Years 1-5. Groups given the materials should be those covered in 1.4.1. Print material should be distributed to new employees, students, and contractors on a yearly basis.

2.4.4.2 Schedule

Program	BMP	Activity	Due Date
Illicit Discharge Detection and Elimination	Illicit Discharge Public Education	Distribute Print Material to Target Audiences	Annually

2.4.4.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Illicit Discharge and Detection and Elimination BMP4, Illicit Discharge Public Education to meet Measurable Goal 2.4.4.

3. Construction Site Stormwater Runoff Control

3.1 Regulatory Requirement

TPDES General Permit TXR040000 Part III(B)(3)

(a) Requirements and Control Measures

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

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

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

(b) Requirements for all Permittees

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

- (1) All permittees shall review and update as necessary, the SWMP and MCM implementation procedures required by Part II.A.2. Any changes must be included in the annual report. Such written procedures must be maintained on site or in the SWMP and made available for inspection by TCEQ.
- (2) All permittees shall require that construction site operators implement appropriate erosion and sediment control BMPs. The permittee's construction program must ensure

the following minimum requirements are effectively implemented for all small and large construction activities discharging to its small MS4.

- a. Erosion and Sediment Controls-Design: Install and maintain effective erosion and sediment controls to minimize the discharge of pollutants.
- b. Soil Stabilization: Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization must be completed as soon as practicable, but no more than 14 calendar days after the initiation of soil stabilization measures. The permittee shall develop written procedures that describes initiating and completing stabilization measures for construction sites.
- c. BMPs: Design, install, implement, and maintain effective BMPs to minimize the discharge of pollutants to the small MS4. At a minimum, such BMPs, must be designed, installed, implemented and maintained to:
 - (i). Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters;
 - (ii). Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and stormwater; and
 - (iii). Minimize the discharge of pollutants from spills and leaks.
- d. As an alternative to (a)-(c) above, all permittees shall ensure that all small and large construction activities that discharge to the small MS4 have developed and implemented a stormwater pollution prevention plan (SWP3) in accordance with the TPDES CGP TXR150000.

(3) Prohibited Discharges-the following is prohibited:

- a. Wastewater from washout concrete and wastewater from water well drilling operations, unless managed by the appropriate control;
- b. Wastewater from washout and cleanout of stucco, paint, from release oils, and other construction materials;
- c. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
- d. Soaps or solvents used in vehicle and equipment washing; and

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

(4) Construction Plan Review Procedures

To the extent allowable by state, federal, and local law, all permittees shall maintain and implement site plan review procedures that describe which plans will be reviewed as well as when an operator may begin construction. For those permittees without legal authority to enforce site plan reviews, this requirement is limited to those sites operated by the permittee and its contractors and located within the permittee's regulated area. The site plan procedures must meet the following minimum requirements:

- a. The site plan review procedures must incorporate consideration of potential water quality impacts.
- b. The permittee may not approve any plans unless the plans contain appropriate site specific construction site controls 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 CGP, TXR150000.

(5) Construction Site Inspections and Enforcement

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

- a. 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.
- b. Inspections must occur during the active construction phase.
 - (i). All permittees shall develop, implement, and revise as necessary, written procedures outlining the inspection and enforcement requirements. These procedures must be maintained on site or in the SWMP and be made available to TCEQ.
 - (ii). Inspections of construction sites must, at a minimum:

1. Determine whether the site has appropriate coverage under the TPDES CGP, TXR150000. If no coverage exists, notify the permittee of the need for permit coverage;
 2. Conduct a site inspection to determine if control measures have been selected, installed, implemented, and maintained according to the small MS4's requirements.
 3. Assess compliance with the permittee's ordinance and other regulations.
 4. Provide a written or electronic inspection report.
- c. Based on site inspection findings, all permittees shall take all necessary follow-up actions (for example, follow-up-inspections for enforcement) to ensure compliance with permit requirements and the SWMP. These follow-up and enforcement actions must be tracked and maintained for review by TCEQ.

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

(6) Information Submitted by the Public

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

(7) MS4 Staff Training

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

(c) Additional Requirements for Level 3 and 4 small MS4s is not applicable.

3.2 Background

Although construction sites are temporary, each site can add more sediment to streams than can be deposited naturally during several decades. The sediment load and other construction related pollutants can cause physical, chemical, and biological harm to our nation's waters. This MCM addresses stormwater pollution prevention at construction sites what the MS4 can do to help construction sites comply, and establish authority to correct sites if a violation does occur.

3.3 Current Programs

All construction sites that disturb more than five acres of land are required to file for a TCEQ General Permit Number TXR150000 relating to discharges from construction activities. This permit requires the creation of a stormwater pollution prevention plan and a narrative detailing the appropriate controls and measures to reduce erosion and discharge of pollutants in stormwater runoff from the construction site. Generally these plans and narratives explain the temporary structural controls the construction site will implement for the removal of sediment from stormwater and controls for the prevention of the release of contaminated stormwater to the storm sewer system. Texas A&M University currently reviews construction plans to assess environmental impact and ensure minimal negative effects from stormwater runoff.

3.4 Selected BMPs for Construction Site Stormwater Runoff Control

3.4.1 BMP 1— Construction Site Inspection Program

Texas A&M University Environmental Health and Safety (EHS) has developed procedures for a construction site inspection program and enforcement of controls. Inspection of construction sites, including construction activities that are part of a larger common plan of development, will ensure that contractors are following state guidelines for construction site stormwater pollution prevention. Texas A&M University Environmental Health and Safety has dedicated staff to address stormwater pollution prevention issues. Training materials may be obtained from both the Texas Commission on Environmental Quality (TCEQ) and the Environmental Protection Agency (EPA).

Construction site inspections should address the following items:

- Does the construction site have a stormwater permit, is a permit or a stormwater pollution prevention plan necessary?
- Is a notice posted with the permit number/NOI, contact information, and a location of the Stormwater Pollution Prevention Plan (SWPPP)?
- Is the SWPPP in compliance with the terms of the TPDES general permit, signed, and retained on-site?
- Inspection should be conducted at areas of the construction site that have not final stabilization, areas used for storage of exposed materials, structural controls, and locations where vehicles enter or exit the site. The inspector should look for:
 - Evidence of, or potential for, pollutants entering the street system, drainage system, or local waterways
 - Structural controls are working properly
- The SWPPP should be modified within one week of inspection if violations were found.

- The inspector should prepare an inspection report. A report must also be prepared if the site is found to be in compliance, noting on the report that no problems were found. The report should address the following items:
 - Did the facility have adequate, and working, stormwater controls?
 - Are best management practices (BMPs) being used?
 - Is construction debris, including discarded building material, concrete truck washout water, chemicals, litter, and sanitary waste contained and/or covered?
 - Are sediment controls used for all side-slope and down-slope boundaries at disturbed areas?
 - Are all erosion and sediment control measures and other protective measures identified in the SWPPP maintained and in working condition?

3.4.1.1 Measurable Goals

The measurable goal for implementation of this BMP is to continue the construction site inspection program in permit years 1-5, and inspect 100% of construction sites.

3.4.1.2 Schedule

<i>Program</i>	<i>BMP</i>	<i>Activity</i>	<i>Due Date</i>
Construction Site Stormwater Runoff Control	Construction Site Inspection Program	Inspect 100% of construction sites.	Annually

3.4.1.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Construction Site Stormwater Runoff Control BMP1, Construction Site Inspection Program to meet Measurable Goal 3.4.1.

3.4.2 BMP 2 – SWPPP for Construction Sites

Texas A&M University will inform all parties that are responsible for construction on University property that any construction projects that will disturb one or more acres will have a SWPPP in place and have it readily available for review by TAMU EHS. All SWPPPs will be submitted to EHS for review prior to any construction.

3.4.2.1 Measurable Goals

The measurable goal for this MCM is to ensure all parties involved understand that when a construction site disturbs the topsoil that there is a SWPPP in place and inspections will be conducted.

3.4.2.2 Schedule

<i>Program</i>	<i>BMP</i>	<i>Activity</i>	<i>Due Date</i>
Construction Site Stormwater Runoff Control	Require SWPPP For All Construction Which Disturbs Topsoil.	All construction sites within the MS4 that disturb topsoil will be required to have a written SWPPP.	1 st quarter 2020

3.4.2.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Construction Site Stormwater Runoff Control BMP2, Require SWPPP For All Construction That Disturbs Topsoil to meet Measurable Goal 3.4.2.

3.4.3 BMP 3— Stormwater Reporting

Texas A&M University will develop procedures for investigating information submitted by the public regarding construction site stormwater pollution prevention. Complaints can be made by the public by calling the Texas A&M Communications Center at 979-845-4311 or reporting via e-mail to theenvironment@tamu.edu. The Communications Center number and purpose should be advertised to the public regularly. Additional measures for reporting via e-mail shall also be advertised to the public regularly.

Complaints will be investigated by personnel familiar with the construction site inspections developed in BMP1, within 24 hours of the time the complaint is received. If a site is found to be polluting, the contractor will have 48 hours to remedy the problem.

The hotline phone number should be posted and made available to the public. Advertisements for the hotline may be posted on buses and digital media boards in conjunction with section 1.4.4, Bus Stormwater and Digital Media Advertisements.

3.4.3.1 Measurable Goals

The measurable goal for this MCM is to respond to public complaints and documents findings to determine if program is effective.

3.4.3.2 Schedule

<i>Program</i>	<i>BMP</i>	<i>Activity</i>	<i>Due Date</i>
Construction Site Stormwater Runoff Control	Stormwater Reporting	Respond to all public complaints	Within 24 hours of receiving the complaint

3.4.3.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Construction Site Stormwater Runoff Control BMP3, Stormwater Reporting to meet Measurable Goal 3.4.3.

4. Post-Construction Stormwater Management in New Development and Redevelopment Minimum Control Measure (MCM)

4.1 Regulatory Requirement

(a) Post-Construction Stormwater Management Program

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

Existing permittees 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 must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented the end of the permit term.

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

(b) Requirements for all permittees

All permittees shall include the requirements described below in Parts III.B.4.

(b)(1)-(3)

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

All Permittees shall, to the extent allowable under state, federal and local law, ensure the long-term operation and maintenance of structural stormwater control measures installed through one or both of the following approaches.

- a. Maintenance performed by the permittee. See Part II.B.5
- b. Maintenance performed by the owner or operator of a new development or redeveloped site under a maintenance plan. The maintenance plan must be filed in the real property records of the county in which the property is located. The permittee shall require the owner or operator of any new development or redeveloped site to develop and implement a maintenance plan addressing maintenance requirements for any structural control measures installed on site. The permittee shall require operation and maintenance performed is documented and retained on site, such as at the offices of the owner or operator, and made available for review by the small MS4.
- c. Additional Requirements for Level 4 small MS4s is not applicable.

4.2 Background

New development and redevelopment affects stormwater quality beyond construction site stormwater pollution. Receiving waters may become contaminated from an increase of pollutants from the new development or from additional stormwater runoff due to the increase in impervious cover. Studies have shown designs regarding minimization of stormwater quality effects by new development and redevelopment is much more cost effective than treatment of water bodies or retrofitting facilities once a problem occurs. This minimum control measure addresses new development and redevelopment stormwater quality ordinances plus BMPs.

4.3 Current Programs

Current construction plans, projects and new construction development, as well as reconstruction are reviewed for post construction run off control for activities that are part of a

larger common plan of development, that addresses post-construction stormwater quality through structural and/or nonstructural controls.

4.4 Selected BMPs for Post-Construction Stormwater Management in New Development and Redevelopment

4.4.1 BMP 1— Future Development and Redevelopment Stormwater Quality Structural & Nonstructural Requirements

Texas A&M University will draft regulations that will require any future development or redevelopment, including related activities that are part of a larger common plan of development, to address post-construction stormwater quality through structural and/or nonstructural controls. Controls may be, but are not limited to, vegetated swales, “green” parking, and inlet contained water treatment devices. Regulations should also contain a section concerning enforcement for non-compliance.

4.4.1.1 Measurable Goals

The measurable goal for implementation of this BMP is to establish guidelines addressing post construction stormwater quality for future development and redevelopment on Texas A&M property.

4.4.1.2 Schedule

<i>Program</i>	<i>BMP</i>	<i>Activity</i>	<i>Due Date</i>
Post Construction Stormwater Management in New Development and Redevelopment	Future Development/ Redevelopment Stormwater Quality Structural/ Nonstructural Requirements	1. Establish low impact and green infrastructure with university architecture office. 2. Review future projects based on established low impact and green infrastructure guidelines established with university architect.	Year one of permit then annually

4.4.1.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Post-Construction Stormwater Management in New Development and Redevelopment BMP1, Future Development and Redevelopment Stormwater Quality Structural/Nonstructural Requirements to meet Measurable Goal 4.4.1.

4.4.2 BMP 2— Future Development and Redevelopment Project Inspection

Texas A&M University will develop guidelines for new and redevelopment water quality structural/nonstructural control site inspection. Inspection of new sites will ensure that the development will have post-construction stormwater quality structural and/or nonstructural controls. Texas A&M University already has a construction inspection department and will train staff to check that post-construction structural controls are present. For long-term operation and maintenance of structural controls, please reference Pollution Prevention and Good Housekeeping for Municipal Operations MCM5, Structural Control Maintenance.

Site inspections should address the following items:

- Do the plans indicate the facility will have stormwater quality structural and/or nonstructural controls?
- Are stormwater quality structural and nonstructural controls (not related to construction stormwater quality) being maintained and in working order?

4.4.2.1 Measurable Goals

The measurable goal for implementation of this BMP is to review all new construction or redevelopment following the adoption of stormwater structural control guidelines formed in Post-Construction BMP 1, Post Construction Stormwater Management in New Development and Redevelopment.

4.4.2.2 Schedule

<i>Program</i>	<i>BMP</i>	<i>Activity</i>	<i>Due Date</i>
Post Construction Stormwater Management in New Development and Redevelopment	Future Development and Redevelopment Project Inspection	Inspect new development and redevelopment following adoption of guidelines formed in BMP 1	Annually

4.4.2.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Post Construction Stormwater Management in New Development and Redevelopment BMP2, Future Development and Redevelopment Project Inspections to meet Measurable Goal 4.4.2.

4.4.3 BMP 3— Incorporate Stormwater Quality for Future Detention Facilities

Texas A&M University will incorporate stormwater quality features such as dry basins, wet basins, or wetland facilities into the design of future stormwater detention. Stormwater quality may be addressed by holding stormwater for a specified amount of time. This allows solids and sediment to settle from runoff within detention areas.

4.4.3.1 Measurable Goals

The measurable goal for implementation of this BMP is to add stormwater quality features as a design requirement for any future detention associated with Texas A&M University starting in Permit Year 3.

4.4.3.2 Schedule

Program	BMP	Activity	Due Date
Post Construction Stormwater Management in New Development and Redevelopment	Incorporate Stormwater Quality for Future Detention Facilities	Add stormwater quality features to future detention design requirements.	Fall 2022

4.4.4.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Post Construction Stormwater Management in New Development and Redevelopment BMP3, Incorporate Stormwater Quality for Future Detention Facilities to meet Measurable Goal 4.4.3.

5. Pollution Prevention and Good Housekeeping for Municipal Operations Minimum Control Measure (MCM)

5.1 Regulatory Requirement

(a) Program development

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

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

regulated permittees shall have the program fully implemented by the end of this permit term. See also Part III.A.1.(c))

(b) Requirements for all Permittees

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

(1) Permittee-owned Facilities and Control Inventory.

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

- a. Composting facilities;
- b. Equipment storage and maintenance facilities;
- c. Fuel storage facilities;
- d. Hazardous waste disposal facilities;
- e. Hazardous waste handling and transfer facilities;
- f. Incinerators;
- g. Landfills;
- h. Materials storage yards;
- i. Pesticide storage facilities;
- j. Buildings, including schools, libraries, police stations, fire stations, and office buildings;
- k. Parking lots;
- l. Golf courses;
- m. Swimming pools;
- n. Public works yards;
- o. Recycling facilities;
- p. Salt storage facilities;
- q. Solid waste handling and transfer facilities;
- r. Street repair and maintenance sites;
- s. Vehicle storage and maintenance yards; and
- t. Structural stormwater controls.

(2) Training and Education

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

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

(4) Contractor Requirements and Oversight

- a. Any contractors hired by the permittee to perform maintenance activities on permittee-owned facilities must be contractually required to comply with all of the stormwater control measures, good housekeeping practices, and facility-specific stormwater management operating procedures described in Parts III B.5.(2)-(6).
- b. All permittees shall provide oversight of contractor activities to ensure that contractors are using appropriate control measures and SOPs. Oversight procedures must be developed before the end of the permit term and maintained on site and made available for inspection by TCEQ.

(5) Municipal Operation and Maintenance Activities

- a. Assessment of permittee-owned operations.

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

- (i) Road and parking lot maintenance may include such areas as pothole repair, pavement marking, sealing, and re-paving;
- (ii) Bridge maintenance may include such areas as re-chipping, grinding, and saw cutting;
- (iii) Cold weather operations, including plowing, sanding, and application of deicing and anti-icing compounds and maintenance of snow disposal areas; and
- (iv) Right-of-way maintenance, including mowing, herbicide and pesticide application, and planting vegetation.

- b. All permittees shall identify pollutants of concern that could be discharged from the above O&M activities (for example, metals; chlorides; hydrocarbons such as benzene, toluene, ethyl benzene, and xylenes; sediment; and trash).
- c. All permittees shall develop and implement a set of pollution prevention measures that will reduce the discharge of pollutants in stormwater from the above activities. These pollution prevention measures may include the following examples:
 - (i) Replacing materials and chemicals with more environmentally benign materials or methods;
 - (ii) Changing operations to minimize the exposure or mobilization of

pollutants to prevent them from entering surface waters; and
(iii) Placing barriers around or conducting runoff away from deicing chemical storage areas to prevent discharge into surface waters.

d. Inspection of pollution prevention measures-All pollution prevention measures implemented at permittee-owned facilities must be visually inspected at a frequency determined by the permittee to ensure they are working properly. A log of inspections must be maintained and made available for review by the TCEQ upon request.

(6) Structural Control Maintenance

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

c. Additional requirements for Levels 3 and 4 small MS4s is not applicable.

5.2 Background

This minimum control measure emphasizes the operation and maintenance of MS4s and stormwater pollution prevention training for municipal employees. The manner in which general municipal activities are conducted can directly affect stormwater quality. Increased environmental awareness by municipal employees can reduce the risk of water quality problems. Typical municipal operations that are affected by this MCM include, parks and golf course maintenance, road maintenance, fleet maintenance, and stormwater system maintenance.

5.3 Current Programs

Texas A&M University currently conducts many municipal operations that directly affect stormwater quality.

Parks, Golf, and Open Space Maintenance

Parks and open spaces are maintained by groundskeepers. Numerous trash receptacles keep debris to a minimum; litter left outside of a receptacle is picked up regularly by the groundskeepers. Staff is taught the proper application and storage of pesticides and fertilizers. These chemicals are stored inside a containment building and fertilizers are only ordered as needed to reduce the amount of chemicals that must be stored.

Care is taken so that accidental spills of pesticides and fertilizers are kept to a minimum. If a small spill does occur, dry fertilizer and pesticides are manually collected. Larger spills and disposal of waste chemicals is disposed of by the Texas A&M Environmental Health and Safety (EHS).

Streets and Roads

University owned streets and roads are maintained by the Texas A&M Facilities Services. Streets are swept once or twice a week on an “as needed” basis. The frequency of sweeping is increased in the fall when leaf litter increases.

Fleet Maintenance

University owned vehicles are fueled and maintained by Texas A&M Transportation Services and Bus Operations Department. Buses are stored at this facility. Other university vehicles are stored in various parking lots and garages around the Texas A&M campus. Vehicle maintenance occurs indoors, with no floor drains leading to the storm drainage system. Employees of these facilities are taught proper fuel and oil spill response procedures. Small spills are collected by using sorbent particles; large spills are addressed by the Environmental Health and Safety Spill Response Team.

The Texas A&M Transportation Services Building is considered an industrial facility and has a TPDES TXR05000 general permit for industrial stormwater discharge; a copy of the permit is attached to this SWMP. The bus/vehicle wash facility ensures that wash water enters only the sanitary sewer system. The existing covered fuel island has been retrofitted to include structural controls for accidental fuel spills. These controls include a “speed bump” like berm to stop accidental fuel spills from entering the storm drainage system and allow for better response time from the spill clean-up team. Other structural controls include oil and water separators to the storm sewer system.

Waste Disposal

Many measures are taken to ensure that waste is not lost in the trash collection process. Lids are closed on receptacles in the transfer to the landfill. If a receptacle does not have a lid, the trash is covered by a tarp during transit. Solid waste operators are trained in correct collection procedures, which ensures that trash “lost” in the transfer process is picked up.

Used food-oil is stored outdoors in closed receptacles. Vacuum trucks collect the used oil for disposal. No large food-oil spills have occurred at Texas A&M food facilities. Minor spills are stopped with Absorb-All, followed by a cleaning with soap and hot water, and a final cleaning with steam.

5.4 Pollution Prevention and Good Housekeeping for Municipal Operations

5.4.1 BMP 1— Litter Control

Texas A&M University has a program for removal of litter from streets, parking areas, parks, and open spaces. Numerous trash receptacles already keep debris to a minimum; litter left outside of a receptacle is picked up regularly by the groundskeepers. Recycling receptacles are located around campus for aluminum cans, plastic bottles, and paper. Volunteers or clubs may collect litter from area streets, parks, and public facilities to aid in collection efforts.

5.4.1.1 Measurable Goals

The measurable goal for implementation of this BMP is to continue with litter collection programs.

5.4.1.2 Schedule

<i>Program</i>	<i>BMP</i>	<i>Activity</i>	<i>Due Date</i>
Pollution Prevention and Good Housekeeping for Municipal Operations	Litter Control	1. Follow litter control program, including new measures as necessary 2. Identify and enlist volunteer groups for litter control	Annually

5.4.1.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Pollution Prevention and Good Housekeeping for Municipal Operations BMP1, Litter Control to meet Measurable Goal 5.4.1.

5.4.2 BMP 2— Spill Prevention, Control, and Countermeasure (SPCC) Plan

Texas A&M University has a university (controlled areas) Spill Prevention and Control and Countermeasures (SPCC Plan). Facilities covered under the SPCC include Texas A&M main campus, Texas A&M west campus, Research Park, RELLIS Campus, University Services, GERG, and Bus Fueling at the Bus Operations Facility. The plan identifies areas where oil is stored, as well as address spill clean-up and prevention procedures.

5.4.2.1 Measurable Goals

The measurable goal for implementation of this BMP is to maintain and update the SPCC Permit Years 1-5.

5.4.2.2 Schedule

Pollution Prevention and Good Housekeeping for Municipal Operations	SPCC Plan	Update information needed for the SPCC plan	Annually
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5.4.2.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Pollution Prevention and Good Housekeeping for Municipal Operations BMP2, SPCC Plan to meet Measurable Goal 5.4.2.

5.4.3 BMP 3— Structural Control Maintenance

As part of the updates to the storm sewer map, Texas A&M University has inventoried existing university-managed structural controls. An inspection and maintenance schedule for these structures will be created to promote full operations for stormwater conveyance and quality. Structures such as catch basins and pond outfalls should be checked regularly for debris and sediment buildup. All waste, including dredge spoil, accumulated sediment, and floatables, removed from catch basins and pond outfalls, will be properly disposed of in a permitted landfill. Records should be kept with the SWMP, which document the frequency of inspection, items removed and quantity of sediment removed.

5.4.3.1 Measurable Goals

The measurable goal for this BMP is to maintain an inventory of structural controls, Permit Years 1-5, and inspect/clean 25% of inventoried structures in Permit Years 1-5.

5.4.3.2 Schedule

Program	BMP	Activity	Due Date
Pollution Prevention and Good Housekeeping for Municipal Operations	Structural Control Maintenance	Inspect/Clean 25% of inventoried structures	Annually

5.4.3.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Pollution Prevention and Good Housekeeping for Municipal Operations BMP3, Structural Control Maintenance to meet Measurable Goal 5.4.3.

5.4.4 BMP 4— Training Program for Grounds Crews

SSC Services for Education employs crews which are responsible for all grounds maintenance, landscaping, as well as many other positions all across campus. EHS verifies quarterly training with SSC and maintains records of training.

5.4.4.1 Measurable Goals

Review existing training program by July 1st 2020 and provide SSC necessary updates for Texas A&M that will affect their annual training for their employees. EHS will continue to monitor and receive training records for SSC employees.

5.4.4.2 Schedule

Program	BMP	Activity	Due Date
Pollution Prevention and Good Housekeeping for Municipal Operations	Training Program for grounds crews	Review training program for ground crews within the first year and provide necessary updates to SSC. Maintain quarterly records of training for SSC staff.	July 1 st 2020 Annually after development

5.4.4.3 Responsible Persons

The Environmental Safety Manager has responsibility for implementation of Pollution Prevention and Good Housekeeping for Municipal Operations BMP4, Training Program for Grounds Crews to meet Measurable Goal 5.4.4.