

Angelo State University



## Stormwater Management Program

**TPDES No. TXR040000**

**October 2014  
As Amended June 2017**

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**TABLE OF CHANGES**

<b>Date</b>	<b>Section</b>	<b>Type</b>	<b>Description</b>
05/24/2017	Section 1.02 Angelo State University description	Non-substantive: other similar administrative or nonsubstantive comments	Updated student population
05/24/2017	BMP 1.05 Public Participation and Involvement Programs	Non-substantive: minor clarification to existing BMPs	Amended Implementation Activities and Measurable Goals to list Earth Day and Texas Recycles Day as examples of recycling, water quality, and conservation events, consistent with the original intent of the BMP.
05/24/2017	MCM 2, Diagram 2: ASU Storm Sewer System Map	Non-substantive: correction of typographical errors; subtracting areas no longer part of MS4	Amend Diagram 2 to more correctly a pipe length and identify a portion of property that was traded to the City of San Angelo and is no longer part of ASU's MS4.
05/24/2017	BMP 2.04 Sanitary Sewer Discharge Prevention	Non-substantive: minor clarification to existing BMPs, correction of typographical error	Amend Implementation Activities, Measurable Goals, and Implementation Schedule to prioritize sewer lines for inspection and cleaning, inspect and clean sewer lines in a manner to prevent SSOs, and quantify the amount of lines inspected and cleaned in a manner more relevant to a campus environment (feet instead of miles), consistent with the original intent of the BMP.
05/24/2017	BMP 3.02 Construction Site Inventory	Non-substantive: minor clarification to existing BMPs, correction of typographical error	Amend Implementation Activities, Measurable Goals, and Implementation Schedule to record active construction sites as construction permits are not required for construction on ASU property, consistent with the original intent of the BMP.
05/25/2017	BMP 4.02 Post-Construction Development Procedures	Non-substantive: minor clarification to existing BMPs	Amend discussion, Implementation Plan, Measurable Goals, and Implementation Schedule to replace "Land Use Master Plan" with "Storm Water Master Plan" as ASU does not have zoning authority or a Comprehensive or General Plan, consistent with the original intent of the BMP.

Date	Section	Type	Description

## COMMONLY USED ACRONYMS

BMP	Best Management Practice
CFR	Code of Federal Regulations
CWA	Clean Water Act
DMR	Discharge Monitoring Report
EPA	Environmental Protection Agency
FR	Federal Register
IP	Implementation Procedures
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NOC	Notice of Change
NOD	Notice of Deficiency
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
SWMP	Storm Water Management Program
SWP3	Storm Water Pollution Prevention Plan
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TPDES	Texas Pollutant Discharge Elimination System
TWC	Texas Water Code

## 1. BACKGROUND

Through the requirements of the Public Law 92-500, the Clean Water Act (CWA), the U.S. Environmental Protection Agency (EPA) is required to protect the water quality for natural waters throughout the country. Working to reduce or eliminate the pollutants from the waters of the U.S., the EPA established the program known as the National Pollutant Discharge Elimination System (NPDES) to identify water pollution sources. The EPA has delegated responsibility for the NPDES program in Texas to the Texas Commission on Environmental Quality (TCEQ).

The TCEQ has issued requirements for minimizing stormwater pollution from construction sites and industrial facilities through the issuance of general permits. TCEQ has also developed a general permit with specific conditions to protect storm water quality from pollution entering municipal separate storm sewer systems (MS4s) in highly populated areas.

### 1.1 PURPOSE AND SCOPE

The EPA issued Phase II of the NPDES program December 8, 1999 requiring small MS4s with populations less than 100,000 residents within an Urbanized Area (UA) and construction activities disturbing between one and five acres of land to obtain a permit. In Texas, the TCEQ is delegated the responsibility for implementing the regulations, known as the *Phase II Stormwater Program* to protect stormwater quality in small cities and urbanized areas.

The EPA required the TCEQ to develop storm water quality permit conditions for regulated public entities that maintain municipal separate storm sewer systems (MS4). The first permit term for Texas Pollutant Discharge Elimination System (TPDES) ended on August 12, 2012. The new General Permit issued on December 13, 2013 applies to all cities and UAs based on populations as recorded in the 2010 Census. Angelo State University (ASU) is one of several entities in the City of San Angelo that is required to develop a program to protect stormwater quality under TPDES *General Permit No. TXR040000*. Phase II Small MS4s are categorized by population as follows:

- Level 1: Less than 10,000
- Level 2: 10,000 to 40,000 (*including not-traditional MS4s*)
- Level 3: 40,000 to 100,000
- Level 4: More than 100,000

Angelo State University is categorized as a non-traditional MS4, level 2 and is required to obtain a stormwater permit and develop a stormwater management program (SWMP) based on the following criteria. Level 2: Operators of traditional small MS4s that serve a population of at least 10,000 but less than 40,000 within a UA. This category also includes all non-traditional small MS4s such as counties, drainage districts, transportation entities, military bases, universities, colleges, correctional institutions, municipal utility districts and other special districts regardless of population served within the UA, unless the nontraditional MS4 can demonstrate that it meets the criteria for a waiver from permit coverage based on the population served.

The ASU Office of Environmental Health, Safety and Risk Management (EHSRM) coordinates the Small MS4 Phase II permit application requirements and prepares the SWMP. Angelo State has developed a SWMP that includes a list of Best Management Practices (BMPs) that will be implemented to reduce the university's stormwater pollution to the "maximum extent practicable" (MEP) and achieve the TPDES regulatory standard.

Measurable goals and an implementation schedule were developed for each of the BMPs in the SWMP. The BMPs, measurable goals, and implementation schedule were developed with input from the ASU Facilities Management Department and Texas Tech University Department of Environmental Health and Safety. They were also selected based upon a general assessment of BMP effectiveness; costs associated with implementation of the BMPs; and the City of San Angelo's water quality initiatives. Effectiveness of the selected BMPs and success in achieving the selected measurable goals will be reviewed annually.

## **1.2 ANGELO STATE UNIVERSITY**

Angelo State University was founded in 1928 in the center of San Angelo, a west Texas community of 100,000. The university is a member of the Texas Tech University System and has approximately 9,500 students and 700 employees.

The campus encompasses 268 acres situated in the center of the City of San Angelo which is located on the Concho River in the Central Great Plains eco-region. The annual average temperature is 65 degrees Fahrenheit with a total precipitation average of 20.5 inches per year.

### **1.2.1 Water Bodies**

The major bodies receiving storm water runoff from the university property include the Red Arroyo and the Concho River (Segment 1421). The Concho River Segment 1421 is an impaired waterbody without an approved TMDL; however the University does not directly discharge into this waterbody.



The University has not identified any significant sources of bacterial contribution from the campus. The University has testing data to support this statement and will continue to periodically test for any significant contributions of any bacterial contamination. The map (Diagram 1) below depicts information regarding campus storm water discharge and the receiving waterbodies.

**Diagram 1: ASU Stormwater Discharge Map**



### 1.3 STORM WATER MANAGEMENT PROGRAM REQUIREMENTS

The University is required to develop a SWMP that describes specific actions that will be taken over a five-year period to reduce pollutants and protect stormwater quality. The stormwater management plan and the BMPs may be tailored to fit the particular characteristics and needs of the University.

#### 1.3.1 TPDES Phase II Minimum Control Measures

The SWMP must describe the BMPs the University will implement to minimize the discharge of pollutants from the MS4 to the maximum extent practicable. The minimum control measures (MCMs) defined by the TCEQ that are applicable to Angelo State University are as follows:

- *Public Education, Outreach, and Involvement* – The MS4 is required to develop, implement, and maintain a public education and outreach program to distribute information to the community about impacts of stormwater discharges on water quality, the hazards associated with illegal discharges and the improper disposal of waste, and steps the public can take to reduce pollutants in stormwater runoff. In addition, the MS4 operator must implement a public involvement/participation program to include opportunities for constituents within the MS4 area to participate in the SWMP development and implementation.
- *Illicit Discharge Detection and Elimination* – The MS4 must develop, implement, and enforce a program to detect and eliminate illicit discharges. As part of this program, the MS4 must develop a storm sewer system map with locations of all outfalls, establish an ordinance (or other regulatory mechanism) prohibiting illicit discharges, establish enforcement procedures and actions, detect and address illicit discharges (including illegal dumping), and inform employees, businesses, and the general public of the program.
- *Construction Site Stormwater Runoff Control* – The MS4 is required to develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the small MS4 from construction activities disturbing greater than or equal to one acre of land (including smaller sites that are part of a larger common plan of development), through the development of an ordinance (or other regulatory mechanism) to require erosion and sediment controls, as well as sanctions to ensure compliance, and procedures for site plan and public comment review. The MS4 must also require construction site operators to implement erosion and sediment control BMPs and to control waste.

- *Post-construction Stormwater Management in New Development and Redevelopment* – The MS4 is required to develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre of land (including smaller sites that are part of a larger common plan of development), through the development of an ordinance (or other regulatory mechanism) to address post-construction runoff, the development and implementation of structural and non-structural BMPs appropriate to the community, and procedures to ensure adequate long-term operation and maintenance.
- *Pollution Prevention and Good Housekeeping for Municipal Operations* – The MS4 is required to develop and implement an operation and maintenance program that has the goal of preventing or reducing pollutant runoff from municipal operations.

The following MCMs are not applicable to the University:

- *Industrial Stormwater Sources* – is required only of Level 4 MS4s.
- *Authorization for Municipal Construction Activities* – As an optional MCM, the MS4 may develop a MCM for municipal construction activities as an alternative to the MS4 operator seeking coverage under TPDES general permit TXR150000 for each municipal construction activity performed. The university has opted not to participate in this MCM.

In the SWMP, the permittee must identify the BMPs, a schedule for the implementation of the selected BMPs, the responsible persons accountable for implementing the BMPs, and the measurable goals by which the permittee will self-report progress in an Annual Report to the TCEQ. Existing programs or BMPs may be used to fulfill the requirements of the general permit.

In order to achieve permit requirements, the University has evaluated their previous planning activities and current practices to develop a SWMP detailing a series of selected BMPs for each of the five required MCMs. As outlined throughout the SWMP, each of the selected BMPs utilizes a series of measurable goals and evaluation techniques to ensure appropriate program implementation, and an implementation schedule details program development throughout the five-year permit term.

### **1.3.2 Legal Authority**

Under the terms of the general permit, the University must develop a standard operating procedure to respond to violations to the extent allowable under state and local law. Angelo State University implements operating policies, as approved by the President, to govern the campus. There are several policies/procedures that support the enforcement of the SWMP (Table 1).

**Table 1: Current ASU Operating Policies**

<b>OP</b>	<b>Subject</b>
34.03	Hazardous Material Spills
34.28	Storm Water Compliance Program
40.01	Construction and Renovation Projects

The University will undertake a process to review and revise (if necessary) relevant policies that provide authority to control pollutant discharges into the MS4 beginning on the effective date of the TCEQ acceptance of the University's NOI and SWMP. Progress in the review of existing policies will be reported in the Annual Reports and will be completed within the first two years of the SWMP.

The EHSRM office is responsible for implementing the SWMP and has the authority to enforce university policies regarding the following to satisfy the CWA water quality requirements.

- Prohibit illicit discharges.
- Respond to and contain the discharge of spills and prohibit dumping or disposal of materials other than stormwater in the storm sewer system.
- Ensure compliance with conditions in the University's permits, contracts, or directives.
- Require installation, implementation, and maintenance of control measures.
- Receive and collect information from construction site operator, such as stormwater plans and inspection reports, to assess compliance with the general permit.
- Inspect facilities, equipment, practices, or operations related to stormwater discharges to the City's MS4.
- Respond to non-compliance with BMPs required by the University.

The University Police Department is staffed with State of Texas certified peace officers who respond to and investigate illegal activities and assists in enforcing various aspects of the University's SWMP.

## **2. PLAN DEVELOPMENT PROCESS**

### **2.1 BMP SELECTION**

The Office of Environmental Health, Safety and Risk Management provided guidance in the selection of BMPs and the development of Angelo State's SWMP. The ASU Facilities Management Department and the Texas Tech University Department of Environmental Health and Safety was involved in the identification and assessment of existing and proposed BMPs. Various structural and non-structural BMPs will be implemented throughout the five-year period as authorized under the general permit.

The University has historically been conscientious about pollution prevention and been proactive in developing and implementing measures intended to protect water quality. An important aspect of developing an effective, compliant, and cost efficient SWMP is to acknowledge these on-going programs and identify how each is related to the MCMs of the general permit. Several of the University's existing programs meet specific general permit requirements and contribute toward fulfilling the general permit requirement to reduce pollutants to the maximum extent practicable. Additional BMPs were selected to supplement the University's existing programs and to fulfill the requirements of the general permit. BMPs were evaluated for each of the five MCMs.

Alternative or future BMPs should be assessed relative to the following criteria:

- Does the BMP fulfill general permit requirements?
- What is the perceived effectiveness of the BMP?
- Is the BMP appropriate for Angelo State?
- What is the estimated cost of implementing the BMP?

#### **2.1.1 Measurable Goals and Implementation Schedule**

Selection of the BMPs, measurable goals, and the implementation schedule is based on the necessary and achievable by those University departments who will be responsible for accomplishing the activities supporting the BMPs. Consideration was also given to whether or not inclusion of the activities in the SWMP would meet the permit requirements. Obviously, costs associated with implementing the various BMPs and measurable goals will be evaluated on an annual basis. Implementation of each BMP will be tracked as required during each year of the permit. Adjustments to the BMPs and implementation schedules will be made as necessary according to permit requirements.

## 2.2 DEVELOPMENT AND REVIEW PROCESS

The University departments involved in the implementation, tracking, enforcement, and assessment of the SWMP include:

- Environmental Health, Safety and Risk Management
- Facilities Management
- Facilities Planning and Construction
- Communications and Marketing

### **Public Notice Process for SWMP and NOI Submittal**

Following the public review and comment period for the draft SWMP, the NOI will be prepared for submission to TCEQ along with the final SWMP. The University will then publish notice of the preliminary decision on the NOI and SWMP in accordance with TCEQ instructions. Public access to both the draft and final SWMP will be maintained through the University's website.

As an applicant under the TPDES General Permit No.TXR040000, the University must adhere with the following public notice procedures described in Part II, Section E (12) of the general permit.

- The University must submit an NOI and SWMP to the executive director of TCEQ.
- The University must publish notice of the executive director's preliminary decision on the NOI and SWMP after receiving written instructions from the TCEQ's Office of Chief Clerk.
  - This notice must be published at least once in a newspaper of general circulation in the municipality or county containing the largest resident population where the University is located.
  - This notice must provide opportunity for the public to submit comments on the NOI and SWMP.
  - The University will file with the Chief Clerk a copy and an affidavit of the publication of notice(s) within 60 days of receiving the written instructions from the Chief Clerk.
- The executive director, after considering public comment, will either; approve, approve with conditions, or deny the NOI based on whether the NOI and SWMP meet the requirements of this general permit.

### **3. MINIMUM CONTROL MEASURES (MCMS)**

#### **3.1 MCM 1: PUBLIC EDUCATION, OUTREACH, AND INVOLVEMENT**

*General Permit Requirement: Part B.1.(a)*

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

##### **Public Education and Outreach**

Angelo State University will develop and implement stormwater education and outreach programs that are based on high priority community-wide issues. Educational materials will be provided to the identified target audiences at least once a year throughout the permit term.

##### **Target Audiences**

Angelo State University's best management practices for public education, outreach, and involvement are focused on its faculty, staff, students, visitors, and the local community. Public involvement efforts are designed to engage these constituents in ongoing stormwater programs supported by the University and the San Angelo community.

##### **Public Involvement/Participation**

Angelo State University will comply with state and local public notice requirements in the planning and implementation activities related to developing and implementing the SWMP. The university will ensure information pertaining to the SWMP is accessible to the public and when feasible, will consider opportunities for the public to participate in implementation of control measures such as, storm drain marking, recycling events, and educational activities.

##### **3.1.1 Best Management Practices**

The following are the specific BMPs, which include implementation activities, measureable goals, and implementation schedule. It should be noted that some BMPs are new programs, while some BMPs are existing programs that the University will continue to support.

##### **BMP 1.01 STORMWATER EDUCATION MATERIALS**

The University will develop a variety of educational materials to inform the campus and surrounding community of the effects polluted stormwater runoff may have on water quality and how individuals can minimize the impacts they have on the environment.

**Implementation Activities:**

- Develop a stormwater fact sheet and brochure.
- Distribute printed materials throughout the campus and local community, as appropriate, to inform employees, students, visitors, and businesses on the importance of stormwater management activities.
- Provide education and awareness on recycling, reducing stormwater pollutants, and water conservation and quality initiatives to University employees and students.
- Host recycling, waste disposal, and water quality information on the University's website.

**Measureable Goals:**

- Publish a stormwater fact sheet and brochure.
- Record and report the quantity of materials distributed on campus and in the local community.
- Record and report the number of education and awareness activities hosted and the number of attendees and include the data in the annual report.
- Current recycling, waste disposal, and water quality information displayed on the University's website.

**Implementation Schedule:**

- Year 1: Update University's website, implement education and awareness programs, and develop stormwater fact sheet and brochure.
- Years 2, 3, 4, and 5: Distribute materials, maintain education and awareness programs, evaluate annually, and revise information and programs as needed.

**BMP 1.02 PET WASTE MANAGEMENT**

The Facilities Management Department will install and maintain pet waste collection dispensers on the campus to promote proper owner disposal of pet wastes. The dispensers will include informative signage that encourages pet owners to make use of the dispensers regularly.

**Implementation Activities:**

- Install four (4) pet waste collection dispensers along the campus mall area.

**Measurable Goals:**

- Record and report the number of pet waste collection bags distributed annually.

**Implementation Schedule:**

- Year 1: Install four (4) pet waste collection dispensers in along the campus mall area.
- Years 2, 3, 4, and 5: Record and report the number of pet waste collection bags distributed annually and evaluate the need to install additional pet waste collection dispensers.



### **BMP 1.03 STORM DRAIN MARKING**

The University will mark storm sewer manhole covers and stormwater inlet drain covers throughout the campus to increase pollution prevention awareness. The marked manhole and inlet drain covers will be incorporated into new installations with new construction projects.

#### **Implementation Activities:**

- Mark storm sewer manhole covers.
- Mark stormwater inlet drain covers.
- Include storm sewer manhole and stormwater inlet drain cover information on website.

#### **Measurable Goals:**

- Track and report number of stormwater inlet drain covers marked each year.
- Track and report number of storm sewer manhole covers marked each year.
- Current storm sewer manhole and stormwater inlet drain cover information posted on website.

#### **Implementation Schedule:**

- Year 1: Identify all of the campus stormwater inlet drain and storm sewer manhole covers and include information on University's website.
- Year 2: Record and report all of the campus stormwater inlet drain and storm sewer manhole covers that have been marked annually.
- Years 3, 4, and 5: Evaluate the campus for additional covers requiring marking and update University's website annually.

### **BMP 1.04 PUBLIC NOTICE FOR STORMWATER MANAGEMENT PROGRAM DEVELOPMENT**

Notice of the TCEQ executive director's preliminary determination of the NOI and SWMP will be published in the *San Angelo Standard-Times* newspaper.

#### **Implementation Activities:**

- Publish the notice provided by TCEQ and submit an affidavit of publication.

#### **Measureable Goals:**

- Publish the SWMP in the *San Angelo Standard-Times* newspaper.

### **BMP 1.05 PUBLIC PARTICIPATION AND INVOLVEMENT PROGRAMS**

The EHSRM office with the assistance of other University departments and community partners will develop a variety of venues to facilitate public involvement in programs that promote water quality and conservation.

**Implementation Activities:**

- Continue to provide recycling and water quality and conservation education, such as Earth Day.
- Continue participation in the annual events, such as Texas Recycles Day event.
- Continue to coordinate the University recycling program with employees and students.

**Measureable Goals:**

- Record and report the number of people that participated in public events, such as Earth Day and Texas Recycles Day, annually.
- Record and report the number of employees and students that participated in the University Recycling Program annually.

**Implementation Schedule:**

- Years 1, 2, 3, 4, and 5: Continue to facilitate the University recycling program; participate in Earth Day, Texas Recycles Day, and other annual programs/events; and coordinate employee and student involvement. Record and report the number of participants annually.

### **3.2 MCM 2: ILLICIT DISCHARGE DETECTION AND ELIMINATION**

*General Permit Requirement: Part B.2.(a)*

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

**Detection, Reporting, and Response Procedures**

Angelo State University has implemented a chemical spill plan which includes response procedures for illicit discharges and spills. Any instance of an illicit discharge or spill into the City's storm sewer system is reported to the University Police Department who in turn notifies the EHSRM office. The City of San Angelo and/or the TCEQ will be notified, as appropriate.

The campus is patrolled 24/7 by University police officers who assist in detecting and responding to illegal dumping on campus property. University employees report these incidents to the University Police Department and/or Facilities Management who in turn notifies the EHSRM office.

Field staff are aware of their responsibility to assist in detecting and reporting any illicit discharge, spill, or illegal dumping they observe.

The EHSRM office is notified of any illicit discharge, spill, or illegal dumping activity and coordinates University response to include; incident mitigation, investigation, documentation, and reporting.

### **Source Investigation and Elimination Procedures**

An indication of an illicit discharge is immediately reported to the EHSRM office which is responsible for coordinating an investigation that will include the following:

- Investigate the source of the illicit discharge (where the University has jurisdiction).
- Identify and locate the source of the discharge as soon as practicable.
- Notify the City of San Angelo if the source of the illicit discharge extends outside the University's boundary.
- Document the source of the illicit discharge.

The University will immediately cease illicit discharges upon notice of such discharge. The EHSRM office has the authority to require an immediate cessation of activities. A work order will be issued as soon as possible to correct illicit connections within 60 days of discovery. If correction cannot be accomplished within 60 days, an expeditious schedule will be established to correct the problem.

### **Inspection Procedures**

The University conducts routine inspections to identify illicit discharges to the storm sewer system on the campus and visually identifies the nature of the discharge. To help prevent infiltration of seepage between sanitary sewers and the storm sewer system, the University has implemented an annual program to inspect, clean, and repair or replace sewer lines. Sewer line blockages are given high priority and problem areas receive more frequent cleaning to prevent sewer discharges.

### **Education and Training**

The University provides initial and annual refresher training for all field staff. The training includes information on how to detect illicit discharges and spills and their responsibility and the procedures to report any illicit discharge, spill, or illegal dumping they come into contact with or observe while performing their duties. The EHSRM office is responsible for coordinating and documenting the training.

### **Storm Sewer System Mapping**





The University has developed a map of the storm sewer system, including the location of all campus outfalls. The storm sewer system was verified by using existing architect's plans and the outfall locations were physically viewed. As previously stated, the major bodies receiving storm water runoff from the university property include the Red Arroyo and the Concho River; however the University does not directly discharge into the Concho River.

The map (Diagram 2) below depicts the University's storm sewer system to include the location of all campus outfalls, detention basins, and receiving waterbodies.

**Diagram 2: ASU Storm Sewer System Map**



## MAP LEGEND

Detention Basin	
Stormwater Sewer System	
Outfall	
Campus Boundary	

### **Allowable Non-Storm Water Discharges**

The City of San Angelo has not identified any types of discharges listed in 40 CFR Part 122.26(d) (2) (IV) (B) (1) as sources of pollution. Therefore, the following non-storm water discharges are allowable to the extent that they are not otherwise determined by the University or the City to be contributing significant amounts of pollutants to the municipal separate storm sewer system:

- A discharge authorized by, and in full compliance with an NPDES permit.
- A discharge or flow resulting from fire fighting by the City's Fire Department.
- Agricultural storm water runoff.
- A discharge or flow from water line flushing or fire hydrant testing, but not including a discharge from water line disinfection by super chlorination, or other means unless it contains no harmful quantity of chlorine or any other chemical used in line disinfection.
- A discharge or flow from uncontaminated pumped groundwater or rising groundwater.
- A discharge or flow from a diverted stream flow or natural spring.
- Uncontaminated ground water infiltration (as defined in 40 CFR Part 35.2005(20) to the MS4.
- A discharge or flow from air conditioning condensation that is unmixed with water from a cooling tower, emissions scrubber, emissions filter, or any other source of pollutant.
- A discharge or flow from water used in street washing that is not contaminated with any soap, detergent, degreaser, solvent, emulsifier, dispersant or any other harmful cleaning substance.
- Storm water runoff that is not contaminated by any runoff or discharge from an emissions scrubber or filter, or any other source of pollutant.
- Other similar occasional incidental non-storm water discharges, unless the TCEQ develops permits or regulations addressing these discharges.

The University is currently allowing the discharge of these non-storm water discharges into the storm sewer system.

### **3.2.1 Best Management Practices**

The following are the specific BMPs, which include implementation activities, measurable goals, and implementation schedule. It should be noted that some BMPs are new programs, while some BMPs are existing programs that the University will continue to support.

#### **BMP 2.01 STORM SEWER SYSTEM MAPPING**

The University has developed a map of the storm sewer system which will be reviewed annually and updated on an as-need basis by the EHSRM office.

##### **Implementation Activities:**

- Develop procedures to update the storm sewer system map annually.
- Update the map with new, altered or newly discovered storm sewer features.

##### **Measurable Goals:**

- Update storm sewer system map annually.
- Maintain an annual log of changes to the map.

##### **Implementation Schedule:**

- Year 1: Develop procedures to update the storm sewer system map annually.
- Years 2, 3, 4, and 5: Track changes and update storm sewer system map annually.

#### **BMP 2.02 DETECTION AND ELIMINATION PROGRAM**

The University has developed a program to detect and eliminate illicit discharges into the City's MS4.

##### **Implementation Activities:**

- Identify areas with the most potential for illicit discharges with a focus on bacteria.
- Develop and implement a screening and detection program.
- Develop and implement procedures for tracking and elimination.

##### **Measurable Goals:**

- Implement a screening and detection program that entails: site selection, detection, and elimination procedures.
- Assess status of the program and record and report the number of illicit discharges detected, eliminated, and results of follow up actions annually.

##### **Implementation Schedule:**

- Years 1 and 2: Develop illicit discharge detection and elimination procedures. Evaluate areas with the highest potential for illicit discharges and high bacteria concerns.
- Years 3, 4, and 5: Maintain detection and elimination program and record results annually.

### **BMP 2.03 ILLICIT DISCHARGE AND SPILL REPORTING**

The University will develop, implement, and maintain a method of reporting illicit discharges and spills to and from the public.

#### **Implementation Activities:**

- Develop, implement, and maintain a public reporting method of reporting illicit discharges and spills to and from the public.
- Provide annual summary reports on the illicit discharges and spills on the University's website.

#### **Measurable Goals:**

- Public reporting method posted on University's website.
- Track the number of illicit discharges and spills reported.
- Track number of public reports received and the resolution/closure with the associated reports.

#### **Implementation Schedule:**

- Year 1: Develop a public reporting method of reporting illicit discharges and spills to and from the public and record and report the number of illicit discharges and spills reported annually.
- Years 2, 3, 4, and 5: Implement and maintain the illicit discharges and spills public reporting program, record and report the number of illicit discharges and spills reported, and record public report resolution/closure annually.

### **BMP 2.04 SANITARY SEWER DISCHARGE PREVENTION**

The University has implemented a program to inspect, clean, repair, or replace sewer lines to prevent sanitary sewer discharges.

#### **Implementation Activities:**

- Identify lines that require more frequent cleaning and implement a priority response protocol.
- Clean and inspect sanitary sewer lines annually as necessary to prevent SSOs.
- Evaluate need to repair or replace sewer lines.

#### **Measurable Goals:**

- Record the number of feet of sanitary sewer lines inspected and cleaned.
- Record the number of line breaks and discharges associated with blockages annually.
- Track the number of lines repaired or replaced annually.

#### **Implementation Schedule:**

- Year 1: Identify lines subject to blockage, and develop a priority response protocol.
- Years 2, 3, 4, and 5: record the number of feet of sanitary sewer lines inspected, cleaned, and repaired or replaced annually.

### **BMP 2.05 GREASE MANAGEMENT PROGRAM**

The University has implemented a grease management program to reduce sewer line stoppages and overflows. The program components include installation of grease traps and grease recycling bins at all food service areas.

#### **Implementation Activities:**

- Develop and implement a grease trap inspection and service schedule.
- Maintain grease traps in all food service areas.
- Continue the grease recycling program.

#### **Measurable Goals:**

- Implement a grease trap inspection and service program.
- Record the number of grease traps inspected/serviced/repaired/replaced annually.
- Record the amount of grease recycled annually.

#### **Implementation Schedule:**

- Year 1: Develop and implement a grease trap inspection and service schedule.
- Years 2, 3, 4, and 5: Record the number of traps inspected/serviced/repaired/replaced and the amount of grease recycled annually.

### **BMP 2.06 FIELD STAFF TRAINING**

The University will develop and provide training to field staff who may potentially encounter or respond to illicit discharges.

#### **Implementation Activities:**

- Identify staff that may potentially encounter or respond to illicit discharges.
- Develop and implement initial and annual refresher illicit discharge detection and elimination training.

#### **Measurable Goals:**

- Develop a list of job positions that may potentially encounter or respond to illicit discharges.
- Implement initial and annual refresher illicit discharge detection and elimination training
- Record and report the number of employees trained annually.

#### **Implementation Schedule:**

- Year 1: Identify staff positions that require training and develop training program.
- Years 2, 3, 4, and 5: Implement training program and record results annually.



### 3.3 MCM 3: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

*General Permit Requirement: Part B.3.(a)*

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

#### **Construction Stormwater Management**

The University will develop and enforce a program to reduce pollutants in any stormwater runoff to the City's MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. The program will include but is not necessarily limited to, the following components.

- The University will:
  - Maintain authority/policy to ensure program compliance and enact sanctions to the extent allowable under state, federal, and local law.
  - Continue to hire companies to review construction plans and assess potential water quality adverse impacts.
  - Develop and implement procedures for receipt and consideration from the public.
  - Implement appropriate erosion and sediment control BMPs.
  - Develop and implement construction site inspection and enforcement procedures.
  - Provide information and training to field staff designated to perform construction site inspections or respond to construction related stormwater quality complaints.
- The construction site contractor will:
  - Ensure existing vegetation is preserved where feasible and that disturbed portions of the sites are stabilized as soon as practicable through temporary seeding, permanent seeding, mulching, geotextile, sod stabilization, preservation of mature vegetation, and other appropriate measures.

- Use structural practices to divert or store stormwater flows or otherwise limit runoff and pollutants from the site to the extent feasible.
- Prepare a Storm Water Pollution Prevention Plan (SWP3) for the site if the site is greater than one acre.
- Design and implement effective BMPs to prevent the discharge of building materials, including cement, concrete, and mortar, to the City's MS4.
- Implement general good housekeeping measures to prevent and contain spills of paints, solvents, fuels, septic waste, and other hazardous chemicals and pollutants associated with construction.
- Implement proper waste management and disposal techniques which include covering waste materials and minimizing ground contact with hazardous chemicals and trash.

### **Construction Site Inspection and Enforcement**

The University Office of Facilities Planning and Construction (FP&C) oversees construction and ensures that all components of the TPDES construction guidelines are met. Construction details are reviewed by the FP&C office and contractor to determine if erosion, sedimentation, and pollution controls meet all the requirements of the TPDES construction guidelines.

The University currently has an inspector that routinely visits construction sites to monitor compliance with building codes and project specifications. During these routine visits, which may vary in frequency, the inspector will observe conditions that appear to be impacting the quality of stormwater runoff and may take one or more of the following actions to resolve the conditions.

- Note the conditions and discuss concerns and possible mitigation steps with the construction site operator.
- Verify that the construction site operator has prepared a Storm Water Pollution Prevention Plan (SWP3) for the site if the site is greater than one acre.
- If a SWP3 is required, determine whether the construction site operator is implementing the SWP3 as written.
- If it is determined that a required SWP3 was not prepared or implemented appropriately, notification of the deficiencies will be given. If after the allowed time corrective measures are not taken, the construction site will be shut down until all corrective measures have been implemented.

### **3.3.1 Best Management Practices**

The following are the specific BMPs, which include implementation activities, measureable goals, and implementation schedule. It should be noted that some BMPs are new programs, while some BMPs are existing programs that the University will continue to support.

#### **BMP 3.01 CONSTRUCTION SITE INSPECTION PROGRAM**

The University will continue its construction site inspection program that will address erosion and sediment controls, soil stabilization, selection of appropriate BMPs, and development of a SWP3. The University will conduct site inspections during all active construction and provide annual training to employees that perform the inspections. Enforcement will be conducted in accordance with adopted stormwater construction policies, and all non-compliance issues will be resolved in a timely manner. The University will develop, implement, and maintain procedures for receipt and consideration from the public.

##### **Implementation Activities:**

- Develop an inventory of all active construction sites.
- Develop an annual inspection schedule.
- Develop inspection procedures.
- Develop inspection training program for employees and construction contractors.
- Develop procedures for receipt and input from public.

##### **Measurable Goals:**

- Document an active construction site inventory annually.
- Implement an annual inspection schedule.
- Document active construction site inspections.
- Document the inspection training program to include; sign-in sheets, training materials, the number of training sessions conducted, and the number of employees and construction contractors that received training.
- Provide procedures for receipt and input from the public on the University website.

##### **Implementation Schedule:**

- Year 1: Complete the active construction site inventory and inspection schedule.
- Year 2: Complete the inspection procedures and annual schedule, implement the inspection training program, and maintain the construction site inventory.
- Year 3: Implement the inspection program and document and report results annually and maintain the construction site inventory.
- Years 4 and 5: Maintain construction site inventory and document and report inspection results annually. Maintain and document the inspection training program annually.

### **BMP 3.02 CONSTRUCTION SITE INVENTORY**

The University will develop and maintain an inventory of all active construction sites greater than one acre for its use regarding construction site stormwater runoff control.

#### **Implementation Activities:**

- Develop an inventory and map of all active construction sites.
- Track active construction projects and Notices of Intent (NOIs).

#### **Measurable Goals:**

- Document the site inventory annually.
- Compile, document, and record construction projects and NOIs and final resolution annually.

#### **Implementation Schedule:**

- Year 1: Complete inventory of active construction sites.
- Years 2, 3, 4, and 5: Maintain the construction site inventory. Report the number of active construction projects and NOIs and final resolution annually.

### **BMP 3.03 CONSTRUCTION SITE RUNOFF CONTROL**

The University will develop procedures to regulate construction activities that disturb a minimum of one acre, require a SWP3 for land disturbing activities, set up inspection procedures, and establish penalties for violations. The existing Stormwater Compliance Program policy will be review to ensure inclusion of these procedures.

#### **Implementation Activities:**

- Review the existing policy(s) for inclusion of construction site runoff control procedures and include enforcement powers.
- Reissue the policy(s) and post on University website.
- Educate and inform the campus and contractors on the policy changes.

#### **Measurable Goals:**

- Incorporate Construction Site Runoff Control procedures into existing stormwater policy.
- Post revised policy on University website.
- Implement policy.

#### **Implementation Schedule:**

- Year 1: Complete policy revisions and submit for approval.
- Year 2: Complete policy approval process, reissue for implementation, and post on website.
- Years 3, 4 and 5: Implement the policy and revise as needed.

### **BMP 3.04 CONSTRUCTION SITE WASTE CONTROL**

The University will review its existing Stormwater Compliance Program policy to include construction site waste control and modify accordingly. Construction site operators are required to control and dispose of on-site waste materials such as discarded building materials, concrete truck washout water, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality.

#### **Implementation Activities:**

- Review the existing policy(s) for inclusion of construction site waste control procedures and include enforcement powers.
- Reissue the policy(s) and post on University website.
- Educate and inform the campus and contractors on the policy changes.

#### **Measurable Goals:**

- Incorporate Construction Site Waste Control procedures into existing stormwater policy.
- Post revised policy on University website.
- Implement policy.

#### **Implementation Schedule:**

- Year 1: Complete policy revisions and submit for approval.
- Year 2: Complete policy approval process, reissue for implementation, and post on website.
- Years 3, 4, and 5: Implement and evaluate policy for potential revisions annually.

## **3.4 MCM 4: POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT**

#### *General Permit Requirement: **Part B.4.(a)***

*All permittees shall develop, implement and enforce a program, to the extent allowable under state, federal, and local law, to control stormwater discharges from new development and redeveloped sites that discharge into the small MS4 that disturb one acre or more, including projects that disturb less than one acre that are part of a larger common plan of development or sale. The program must be established for private and public development sites.*

#### **Post-Construction Stormwater Management**

The University will develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre that discharge to the City's MS4. The program will ensure controls are in place to prevent or minimize water quality impacts. The University will meet the following program requirements:

- Develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for the campus.
- Review and revise University policy/procedures to address post-construction runoff from new development and re-development projects to the extent allowable under state and local law.
- Ensure adequate long-term operation and maintenance of BMPs and document activities.

### **University BMPs**

The University will continue existing practices and develop new strategies to prevent or minimize water quality impacts which include, but are not limited to, the following:

- Continue to install and maintain Xeriscape and native vegetation.
- Continue to install stormwater cisterns.
- Continue to create natural vegetative areas/green spaces.
- Create additional low impact development (LID) stormwater designs.

### **Erosion, Sediment, and Pollution Control**

The University operates and maintains a limited stormwater conveyance system with subsurface storm sewer pipes, inlets, and catch basins. Due to the limited topographic relief available within the campus, stormwater conveyance is comprised primarily by surface drainage (streets, parking lots, and culverts) which carry the stormwater to the nearest storm sewer inlet. Storm sewer conveyance is provided by systems maintained by the City of San Angelo to the nearest outfall water source.

The University will develop a Land Use Master Plan that will not significantly impact water quality in the receiving water due to constraints associated with both new development and redevelopment. The flat topography of the campus discourages excessive re-grading of sites and encourages the use of surface flow of runoff rather than the use of storm sewers. The University additionally involves sheet flow across grassy areas between developments and the conveyance systems.

The Land Use Master Plan will include drainage guidelines with design specifications for construction of drainage facilities serving new or substantially redeveloped areas will primarily address the site specific application of quantity issues as they relate to flood protection. They include information concerning various erosion and sedimentation control and their applicability to conditions commonly found on the grounds of the University. Although there is no anticipated impact to storm water runoff, redevelopment will follow the same guidelines with respect to erosion, sediment, and pollution controls as new development.

The University will continue to maintain existing structural flood controls, assess water quality impacts, and cooperate with the City in the implementation of additional design standards and practices regarding specific storm water quality concerns.

#### **Post-Construction Inspection Program**

The University will identify and train staff personnel designated to inspect post-construction stormwater management structures. Inspections will be conducted annually and the results will be documented and maintained for the length of the permit term.

### **3.4.1 Best Management Practices**

The following are the specific BMPs, which include implementation activities, measureable goals, and implementation schedule. It should be noted that some BMPs are new programs, while some BMPs are existing programs that the University will continue to support.

#### **BMP 4.01 POST-CONSTRUCTION STORMWATER MANAGEMENT STRUCTURES TRAINING**

The University will train applicable staff members for the purpose of performing annual inspections of post-construction stormwater management structures as part of the University's long term maintenance program.

##### **Implementation Activities:**

- Develop a post-construction stormwater management structures inspection program.
- Identify and train applicable staff to perform inspections.

##### **Measurable Goals:**

- Record and report the number of employees trained annually.
- Implement the inspection program and document and report results annually.

##### **Implementation Schedule:**

- Year 1: Complete the inspection training program.
- Year 2: Implement and document the inspection training program and include in annual report.
- Years 3, 4, and 5: Implement and maintain the inspection program and document and report results annually.

#### **BMP 4.02 POST-CONSTRUCTION DEVELOPMENT PROCEDURES**

The University will review and revise its existing pollution prevention review procedures as needed and intends to create Stormwater Master Plan. The plan will incorporate drainage guidelines for development which could include structural controls for enhanced stormwater quality.

**Implementation Activities:**

- Develop pollution prevention review procedures to address water quality for new development across the entire campus.
- Develop a water quality checklist for ensuring water quality controls are being addressed.
- Develop a Stormwater Master Plan to include campus drainage guidelines and structural controls.

**Measurable Goals:**

- Implement pollution prevention review procedures.
- Implement a water quality checklist.
- Implement and maintain a Stormwater Master Plan.
- Implement campus drainage guidelines and controls.

**Implementation Schedule:**

- Year 2: Complete pollution prevention review procedures and a water quality checklist.
- Year 3: Complete the Stormwater Master Plan to include campus drainage guidelines and structural controls.
- Years 4 and 5: Implement and maintain Stormwater Master Plan.

**BMP 4.03 BMP LONG-TERM OPERATION AND MAINTENANCE**

Routine maintenance of stormwater structural controls assist in the identification and repair of problems associated with the system before the problems become serious. The University will develop a formal BMP inspection program to inspect all BMPs to ensure the effectiveness of post-construction control measures and maintenance of stormwater control measures.

- Timely maintenance of erosion and sediment control measures and other best management practices in good and effective operating condition.
- Installation of structural measures during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed.

**Implementation Activities:**

- Develop a formal BMP inspection program.
- Maintain University stormwater structural controls.

**Measurable Goals:**

- Develop BMPs inspection and review process.
- Perform annual compliance inspection of all BMPs and structural controls.



**Implementation Schedule:**

- Year 3: Develop formal BMP inspection program and implement inspections.
- Years 4 and 5: Continue inspections, evaluating annually and revising as needed.

**3.5 MCM 5: POLLUTION PREVENTION AND GOOD HOUSEKEEPING  
FOR MUNICIPAL OPERATIONS**

*General Permit Requirement: Part B.5.(a)*

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

**Pollution Prevention and Good Housekeeping**

Angelo State University has developed policies, procedures, and programs designed to implement pollution prevention measures. Information regarding these guidelines and programs are applicable to all employees, students, and contractors. A variety of campus operations are affected by stormwater management policies and procedures. These operations include, but are not limited to, grounds maintenance, fleet and building maintenance, construction projects, and stormwater system maintenance.

**University Facilities and Control Inventory**

The University will develop and maintain an inventory of facilities and stormwater controls that it owns and operates within its regulated area.

**Training**

The University will develop and implement training for all employees responsible for campus operations that are subject to the pollution prevention/good housekeeping program. The program will include information directed at preventing and reducing storm water pollution.

**Waste Disposal**

Waste materials removed from the campus and waste that is collected as a result of maintenance of stormwater structural controls is removed by a licensed contractor and disposed in the City landfill.

## **Recycling**

The University maintains a recycling and waste management program consisting of the following components.

- University Oil Recycling – used motor oil, oil filters, and antifreeze are collected and properly stored to be recycled. These materials are picked up by a commercial recycler and reprocessed to the maximum extent allowed under federal regulations.
- University Hazardous Wastes – chemicals and other campus-generated hazardous materials are collected and properly stored pending disposal. These materials are picked up by a licensed commercial company and disposed of in accordance with state and federal laws.
- Household Hazardous Wastes – individuals are either instructed as to the procedures necessary for approved disposal in the sanitary landfill, given the location of the available drop-off sites, or directed to the EHSRM office for proper disposal procedures.

## **Pesticide, Herbicide, and Fertilizer Application**

The University's campus grounds are maintained by professional licensed staff personnel and supplemented by expert consultants when required. The application of pesticides and herbicides is regulated and licensed by the Texas Department of Agriculture and the Structural Pest Control Board. Fertilizer application rates and schedules are determined by the staff based on agronomic data and will be verified by soil sampling to determine long term effects. Nuisance conditions and complaints will continue to be monitored and investigated by the EHSRM office.

Vector control is accomplished by the University through a contract with a local pest control company and includes property and is primarily associated with mosquitoes.

## **Contractor Requirements and Oversight**

Contractors hired by the University to perform maintenance activities on university-owned facilities will be contractually required to comply with all of the storm water control measures, good housekeeping practices, and facility-specific stormwater management operating procedures. The University will provide oversight of contractor activities to ensure they are using appropriate control measures and complying with University policies/procedures.

## **Operations and Maintenance Activities**

The University will evaluate its operations and maintenance (O&M) activities for their potential to discharge pollutants in stormwater from their own operations and implement the following pollution prevention measures.

- Identify pollutants of concern that could be discharged from O&M activities.
- Develop and implement a set of pollution prevention measures that will reduce the discharge of pollutants in stormwater from O&M activities.
- Inspect pollution prevention measures.

### ***Operation of Streets and Parking Areas***

The University owns and operates street sweeping equipment and conducts a regular sweeping program. The University sweeping program includes all major thoroughfares and parking lots and is conducted on a quarterly basis and more frequently during periods of defoliation.

When snow removal or deicing activities are required, sanding of roads and intersections is evaluated on a site specific basis and is dependent upon the severity and duration of the event, but will be minimized from an economic standpoint in that no more material will be utilized than is absolutely necessary.

### ***Reduction of Floatables***

Litter control continues to be one of the major efforts of the Grounds Maintenance personnel. Litter is picked up throughout the campus on a daily basis. Street/Impervious cover sweeping is also used as a floatables control measure.

The University will also continue to provide and service cigarette butt disposal containers in the designated campus smoking areas.

### **Structural Control Maintenance**

The University operates and maintains a limited stormwater conveyance system with subsurface storm sewer pipes, inlets, and catch basins. Storm sewer conveyance is provided by systems maintained by the City of San Angelo to the nearest outfall water source.

The primary maintenance functions related to surface drainage include the routine sweeping of parking lots and streets; routine mowing and general grounds maintenance. This includes inspections of all surface drainage systems, swales, and detention basins within the University campus and the removal of trash and debris as necessary.

The primary maintenance function related to the subsurface storm sewer will be the routine cleaning of the curb inlet structures and catch basins. This includes inspections of all curb inlets and catch basins within the University campus and the removal of trash, debris, and silt from the inlets and catch basins as necessary.

The University will continue to maintain existing structural flood controls and cooperate with the City in the implementation of additional design standards and practices regarding specific storm water quality concerns.

### **Monitoring Stormwater Quality**

The University will continue to periodically collect and analyze stormwater discharge samples to monitor water quality. The campus topography provides a unique drainage issue. The City of San Angelo discharges large amounts of runoff from residential and businesses encompassing the campus from its MS4 possibly impacting sampling quality. Due to the limited number of outfalls Angelo State maintains, this could stand to be a potential problem during periods of heavy rainfall.

### **3.5.1 Best Management Practices**

The following are the specific BMPs, which include implementation activities, measureable goals, and implementation schedule. It should be noted that some BMPs are new programs, while some BMPs are existing programs that the University will continue to support.

#### **BMP 5.01 OPERATIONS AND MAINTENANCE: STREET SWEEPING**

The University owns and operates street sweeping equipment and will continue to conduct a regular sweeping program. The University sweeping program includes all major thoroughfares and parking lots and is conducted on a quarterly basis and but more frequently during periods of defoliation.

#### **Implementation Activities:**

- Continue the University street sweeping program.

#### **Measurable Goals:**

- Periodically evaluate street sweeping schedules and areas.
- Increase street sweeping in areas that have water quality concerns.
- Record and report the number of miles of roadway/parking areas swept annually.
- Estimate and report the amount of material removed annually.

#### **Implementation Schedule:**

- Year 1: Continue the sweeping program and evaluate sweeping schedules and areas.
- Years 2, 3, 4, and 5: Maintain sweeping program, record the number of miles swept and amount of material removed annually, and revise as needed.

#### **BMP 5.02 OPERATIONS AND MAINTENANCE: STORM SEWER SYSTEM**

The University will continue to conduct a regular maintenance program to reduce the accumulation of pollutants in curb inlets, catch basins, and other surface drainage structures. The University will develop a storm sewer system inspection program that will include standard operating procedures (SOPs) to detect illegal dumping activities.

**Implementation Activities:**

- Continue trash removal and recycling efforts.
- Continue storm sewer surface drainage maintenance program.
- Develop a storm sewer inspection program to include a schedule and documentation procedures.
- Develop an inspection program and SOPs to detect illegal dumping activities to include; campus areas, a schedule, and documentation procedures.
- Identify areas for increased inspection due to water quality concerns or illegal dumping activities.

**Measurable Goals:**

- Estimate and report the amount of trash and recyclables collected annually.
- Estimate and report the amount sediment and debris removed annually.
- Record the number of surface drainage structures and campus areas inspected annually.
- Implement inspection program and SOPs and periodically evaluate schedules and areas.
- Increase inspection in areas that have water quality concerns or illegal dumping activities and estimate and report the amount of sediment, debris, or illegally dumped material removed annually.

**Implementation Schedule:**

- Year 1: Develop the inspection program and SOPs. Estimate and report the amount of trash and recyclables collected annually.
- Year 2: Implement the inspection program and document and report the number of drainage structures and campus areas inspected annually. Estimate and report the amount of sediment and debris removed from the storm sewer surface drainage areas annually.
- Years 3, 4, and 5: Maintain and document the inspection program and report the results annually. Evaluate inspection requirements based on water quality concerns or illegal dumping activities. Estimate and report and amount of trash, recyclables, and waste removed annually.

**BMP 5.03 MAPPING OF FACILITIES AND CONTROL INVENTORY**

The University will develop a map identifying all facilities and stormwater controls it owns and operates within its regulated area.

**Implementation Activities:**

- Develop a map depicting all university-owned facilities in the permit regulated area and listing appropriate stormwater quality controls.

**Measurable Goals:**

- Complete a map identifying all university-owned and operated facilities and stormwater controls.

**Implementation Schedule:**

- Years 1 and 2: Begin development of facility and stormwater control map.
- Year 3: Complete mapping.

**BMP 5.04 FACILITY INSPECTION PROGRAM**

Facilities deemed as “high priority” areas and associated pollutants that may affect stormwater runoff will be identified and inspected on a quarterly basis. The University will develop an inspection program to document, assess, and implement corrective actions in these deficient areas. Staff will develop a site-specific checklist of BMPs, a series of inspection SOPs, the assignment of inspection responsibilities, and a procedure for the documentation of corrective actions in deficient facilities.

**Implementation Activities:**

- Identify “high priority” facilities.
- Develop and implement facility inspection SOPs and checklists.
- Perform and document inspections of all University facilities.
- Implement corrective actions for stormwater management deficiencies.

**Measurable Goals:**

- Record “high priority” areas.
- Implement facility inspection program.
- Record and report the number of facility inspections performed annually.
- Record and report the number of stormwater management deficiencies corrected annually.

**Implementation Schedule:**

- Year 1: Identify “high priority” facilities.
- Year 2: Complete inspection procedures and checklists.
- Year 3: Implement and document facility inspections and deficiencies.
- Years 4 and 5: Maintain inspection program, document inspections, implement corrective actions, and report results annually.

**BMP 5.05 GOOD HOUSEKEEPING: LANDSCAPING**

The University will develop SOPs for implementing and maintaining stormwater quality BMPs with regards to its landscaping operations. The University will ensure applicable staff receive annual training to address the proper use of landscaping chemicals.

**Implementation Activities:**

- Evaluate areas of high priority for impacting stormwater quality.
- Develop an SOP for identifying and maintaining stormwater BMPs for landscaping operations.
- Ensure applicable staff are trained to properly store and employ landscaping chemicals.

**Measurable Goals:**

- List areas on campus considered high priority for impacting stormwater quality.
- Develop SOPs for landscaping BMPs.
- Document landscaping chemical usage and application rates.

**Implementation Schedule:**

- Year 2: Identify areas that impact stormwater quality. Record landscaping chemical usage and application rates.
- Year 3: Develop SOPs for landscaping BMPs.
- Years 4 and 5: Implement landscaping stormwater quality BMP SOP and evaluate and revise annually.

**BMP 5.06 GOOD HOUSEKEEPING: FLEET AND EQUIPMENT MAINTENANCE**

The University will develop SOPs for implementing and maintaining stormwater quality BMPs with regards to its fleet and equipment maintenance operations and will inspect these operations quarterly.

**Implementation Activities:**

- Perform quarterly inspections of fleet and equipment maintenance operations.
- Assess spill prevention and protection measures.

**Measurable Goals:**

- Document and report inspections annually.
- Record and report the assessment of spill prevention and protection measures.

**Implementation Schedule:**

- Year 1: Record and report spill prevention and protection assessments annually.
- Years 2, 3, 4, and 5: Perform quarterly inspections and document results in annual report. Include any additional spill prevention and protection measures that were adopted in the annual report.

**BMP 5.07 STRUCTURAL CONTROL MAINTENANCE**

The University will continue to inspect and maintain structural controls that have been developed to prevent, inhibit, or slow the rate at which pollutants reach water bodies. An inventory of existing campus structural controls will be developed and an inspection and maintenance schedule will be established for these structural controls in order to promote their effective operation for stormwater quality treatment.

**Implementation Activities:**

- Develop an inventory of University structural controls.
- Develop and implement an inspection and maintenance program for structural controls.

**Measurable Goals:**

- Complete an inventory of University structural controls.
- Implement an inspection and maintenance program for structural controls.

**Implementation Schedule:**

- Year 2: Complete structural control inventory.
- Year 3: Implement a structural control inspection and maintenance program.
- Years 4 and 5: Continue program and procedures, evaluating annually and changing as needed.

**BMP 5.08 SPILL PREVENTION AND RESPONSE**

The University will review and revise current spill response procedures to ensure that stormwater quality protection measures are considered during spill response activities. The University will provide annual training to applicable employees in spill response procedures and will provide spill response kits in convenient locations at facilities where daily activities may potentially contribute to stormwater pollution. In addition, the University will examine spill response procedures for field personnel in order to prevent spilled materials from entering the drainage system.

**Implementation Activities:**

- Review spill response procedures to ensure proper procedures are followed to prevent spilled materials from entering the drainage system.
- Train applicable employees on spill response procedures and record agendas, sign in sheets, and training materials.
- Provide and maintain spill response kits in applicable facilities.

**Measurable Goals:**

- Implement spill responses.
- Record and report the number of employees trained annually.
- Report the number of spill response kits deployed and inspected annually.

**Implementation Schedule:**

- Year 1: Evaluate spill response procedures and deploy spill response kits at applicable facilities.
- Years 2, 3, 4 and 5: Implement spill response training, evaluate procedures, and continue to maintain and replace spill response kits as needed.



#### **BMP 5.09 EMPLOYEE TRAINING**

The University will develop and implement an employee training program designed to address: preventing and reducing stormwater pollution from activities such as grounds maintenance, fleet and building maintenance, new construction, land disturbance, and stormwater system maintenance. The program will promote good housekeeping procedures and help ensure that stormwater quality programs are properly implemented and BMPs are properly incorporated and maintained.

##### **Implementation Activities:**

- Develop stormwater pollution prevention training program.
- Provide annual training to employees and contractors, as applicable.

##### **Measurable Goals:**

- Implement stormwater pollution prevention training program.
- Record and report the number of sessions conducted and employees trained annually.

##### **Implementation Schedule:**

- Year 1: Develop training program.
- Years 2, 3, 4 and 5: Implement training program, evaluate annually and change as needed.

## **4. RECORDKEEPING AND REPORTING**

As detailed in TPDES General Permit TXR040000, the University must document and report the implementation of all stormwater BMPs throughout the course of the permit term, and the TCEQ will require that the University submit annual reports to document the development and implementation of the SWMP.

### **4.1 RECORDKEEPING**

A primary component of the MS4 general permit is recordkeeping which allows for periodic evaluation of the SWMP. The University must document the development and implementation of all stormwater programs throughout the permit term, and as referenced in the TPDES general permit, must comply with a series of recordkeeping requirements:

- Retain all records, a copy of the TPDES general permit, and records of all data used to complete the NOI (application) for the general permit.
- Satisfy the public participation requirements, for a period of at least three years, or for the remainder of the term of this general permit, whichever is longer.
- Retain a copy of the SWMP at a location accessible to the TCEQ.
- Make the NOI and SWMP available to the public if requested to do so in writing. Copies of the SWMP must be made available within 10 working days of receiving a written request. Other records must be provided in accordance with the Texas Public Information Act.

As previously referenced, a copy of the SWMP and all annual reports will be accessible on the University's website. Individuals may also contact the University to request additional program documentation. The TPDES general permit should be referenced for additional information regarding recordkeeping requirements.

### **4.2 REPORTING**

The TPDES general permit requires that the University report to the TCEQ throughout the permit term and comply with specific reporting requirements:

### **4.2.1 Noncompliance Notification**

Any noncompliance which may endanger human health or safety, or the environment, in accordance with 30 TAC Chapter 305.125(9), must be reported by the University to the TCEQ. Oral and/or facsimile notification of the noncompliance must be made within 24 hours of becoming aware of the issue. A written report must be provided to the TCEQ within five working days.

### **4.2.2 Other Information**

When the permittee becomes aware that it either submitted incorrect information or failed to submit complete and accurate information requested in an NOI, Notice of Change (NOC), Notice of Termination (NOT), or any other report, it must promptly submit the facts or information to the executive director.

### **4.2.3 Annual Report**

The University will submit a concise annual report to the executive director within 90 days of the end of each reporting year. The general permit provided three options for MS4 operators to designate as the reporting year: the permit year, the permittee's fiscal year or the calendar year. Angelo State has elected to use the permit year as the reporting year.

The annual report must address the previous permit year and include the following information:

- The status of the compliance with permit conditions, an assessment of the appropriateness of the identified BMPs, progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, the measurable goals for each of the MCMs, and an evaluation of the success of the implementation of the measurable goals.
- Status of any additional control measures implemented by the permittee (if applicable).
- Any minimum control measure activities initiated before permit issuance may be included, under the appropriate headings, as part of the first year's annual report.
- A summary of the results of information (including monitoring data) collected and analyzed during the reporting period used to assess the success of the program at reducing the discharge of pollutants to the MEP.
- A summary of the stormwater activities the MS4 operator plans to undertake during the next reporting year.

- Proposed changes to the SWMP, including changes to any BMPs or any identified measurable goals that apply to the program elements.
- Notice that the MS4 operator is relying on another government entity to satisfy some of its permit obligations (if applicable).
- Each permittee must sign and certify the annual report in accordance with 30 TAC 305.128 (relating to Signatories to Reports).

The annual report will also include a summary of any proposed changes to the SWMP planned for the next reporting cycle.

#### **4.2.4 SWMP Changes**

The SWMP may be changed by the University at any time. According to the general permit, adding components, controls, or requirements to the SWMP, or replacing a BMP with an equivalent or better BMP only requires notification of the TCEQ.

When considering eliminating a BMP, review the list of required BMPs to ensure that removal of the BMP will not result in noncompliance for any of the minimum control measures. If the BMP to be eliminated is the only BMP that provides compliance for a specific permit provision, then a new BMP that continues to meet the relevant permit requirement must be added to the SWMP.

A Notice of Change (NOC) must be submitted to the TCEQ for review and approval when changing the SWMP to replace an unsuccessful BMP with an alternative BMP (i.e., replacing a structural BMP with a non-structural BMP). An NOC and TCEQ approval are not required for:

- Adding BMPs.
- Replacing a BMP with a BMP that is substantially similar in nature to the BMP.
- Making non-substantive changes, such as minor clarifications or edits to the SWMP.
- Adding or subtracting areas such as by annexation or de-annexation.

Specific requirements for SWMP changes and documentation of plan updates involving changes in BMPs, measurable goals, or the implementation schedule can be found in the general permit contained in Appendix C.

## 5. DEFINITIONS

**Best Management Practices (BMPs)** – Schedules of activities, prohibitions of practices, maintenance procedures, structural controls, local ordinances, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control runoff, spills or leaks, waste disposal, or drainage from raw material storage areas.

**Catch Basins** – Storm drain inlets and curb inlets to the storm drain system. Catch basins typically include a grate or curb inlet that may accumulate sediment, debris, and other pollutants.

**Classified Segment** – A water body that is listed and described in Appendix A or Appendix C of the Texas Surface Water Quality Standards, at 30 Texas Administrative Code (TAC) § 307.10.

**Clean Water Act (CWA)** – The Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972, Pub.L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et. seq.

**Construction Activity** – Soil disturbance, including clearing, grading, and excavating; and not including routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (e.g. the routine grading of exiting dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities). Regulated construction activity is defined in terms of small and large construction activity.

**Construction Site Operator** – The person or persons associated with a small or large construction project that meets either of the following two criteria:

- The entity or entities that have operational control over construction plans and specifications (including approval of revisions) to the extent necessary to meet the requirements and conditions of this general permit; or
- The entity or entities that have day-to-day operational control of those activities at a construction site that are necessary to ensure compliance with a storm water pollution prevention plan (SWP3) for the site or other permit conditions (for example, they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions).

**Control Measures** – Any BMP or other method used to prevent or reduce the discharge of pollutants to water in the state.

**Conveyance** – Curbs, gutters, man-made channels and ditches, drains, pipes, and other constructed features designed or used for flood control or to otherwise transport storm water runoff.

**Discharge** – When used without a qualifier, refers to the discharge of storm water runoff or certain non-storm water discharges as allowed under the authorization of this general permit.

**Final Stabilization** – A construction site where either of the following conditions are met:

- All soil disturbing activities at the site have been completed and a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.
- For individual lots in a residential construction site by either:
  - the homebuilder completing final stabilization as specified in condition (a) above; or
  - the homebuilder establishing temporary stabilization for an individual lot prior to the time of transfer of the ownership of the home to the buyer and after informing the homeowner of the need for, and benefits of, final stabilization.
- For construction activities on land used for agricultural purposes (e.g. pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to a surface water and areas which are not being returned to their preconstruction agricultural use must meet the final stabilization conditions of condition (a) above.

**General Permit** – A permit issued to authorize the discharge of waste into or adjacent to water in the state for one or more categories of waste discharge within a geographical area of the state or the entire state as provided by Texas Water Code (TWC) § 26.040.

**Ground Water Infiltration** – For the purposes of this permit, groundwater that enters a municipal separate storm sewer system (including sewer service connections and foundation drains) through such means as defective pipes, pipe joints, connections, or manholes.

**High Priority Facilities** – High priority facilities are facilities with a high potential to generate stormwater pollutants. These facilities must include, at a minimum, the MS4 operator's maintenance yards, hazardous waste facilities, fuel storage locations, and other facilities where chemicals or other materials have a high potential to be discharged in stormwater. Among the factors that must be considered when giving a facility a high priority ranking are: the amount of urban pollutants stored at the site, the identification of improperly stored materials, activities that must not be performed outside (for example, changing automotive fluids, vehicle washing), proximity to water bodies, proximity to sensitive aquifer recharge features, poor housekeeping practices, and discharge of pollutant(s) of concern to impaired water(s).

**Hyperchlorinated Water** – Water resulting from hyper-chlorination of waterlines or vessels, with a chlorine concentration greater than 10 milligrams per liter (mg/L).

**Illicit Connection** – Any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

**Illicit Discharge** – Any discharge to a municipal separate storm sewer that is not entirely composed of storm water, except discharges pursuant to this general permit or a separate authorization and discharges resulting from emergency firefighting activities.

**Impaired Water** – A surface water body that is identified on the latest approved CWA § 303(d) List as not meeting applicable state water quality standards. Impaired waters include waters with approved or established total maximum daily loads (TMDLs), and those where a TMDL has been proposed by TCEQ but has not yet been approved or established.

**Indicator Pollutant** – An easily measured pollutant, that may or may not impact water quality that indicates the presence of other stormwater pollutants.

**Maximum Extent Possible (MEP)** – The technology-based discharge standard for municipal separate storm sewer systems (MS4s) to reduce pollutants in stormwater discharges that was established by the CWA § 402(p). A discussion of MEP as it applies to small MS4s is found in 40 CFR § 122.34.

**MS4 Operator** – For the purpose of this permit, the public entity or the entity contracted by the public entity, responsible for management and operation of the small municipal separate storm sewer system that is subject to the terms of this general permit.

**Municipal Separate Storm Sewer System (MS4)** – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- Owned or operated by the U.S., a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over the disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under the CWA §208 that discharges to surface water in the state;
- That is designated or used for collecting or conveying stormwater;
- That is not a combined sewer; and
- That is not part of a publicly owned treatment works (POTW) as defined in 40 CFR § 122.2.

**Non-traditional Small MS4** – A small MS4 that often cannot pass ordinances and may not have the enforcement authority like a traditional small MS4 would have to enforce the stormwater management program. Examples of non-traditional small MS4s include counties, transportation authorities (including the Texas Department of Transportation), municipal utility districts, drainage districts, military bases, prisons and universities.

**Notice of Change (NOC)** – A written notification from the permittee to the executive director providing changes to information that was previously provided to the agency in a notice of intent.

**Notice of Intent (NOI)** – A written submission to the executive director from an applicant requesting coverage under this general permit.

**Notice of Termination (NOT)** – A written submission to the executive director from a permittee authorized under a general permit requesting termination of coverage under this general permit.

**Outfall** – 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 or an adjacent property, or otherwise not actually discharging into waters of the U.S. are not considered an outfall.

**Permittee** – The MS4 operator authorized under this general permit.

**Point Source** – (from 40 CFR § 122.22) any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling



stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

**Pollutant(s) of Concern** – For the purpose of this permit, includes biochemical oxygen demand (BOD), sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation), pathogens, oil and grease, and any pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from an MS4. (Definition from 40 CFR § 122.32(e)(3)).

**Redevelopment** – Alterations of a property that changed the “footprint” of a site or building in such a way that there is a disturbance of equal to or greater than one (1) acre of land. This term does not include such activities as exterior remodeling, routine maintenance activities, and linear utility installation.

**Small Municipal Separate Storm Sewer System (MS4)** – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

- Owned or operated by the United States, a state, city, town, borough, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under CWA § 208;
- Designed or used for collecting or conveying storm water;
- Which is not a combined sewer;
- Which is not part of a publicly owned treatment works (POTW) as defined at 40 CFR § 122.2; and
- Which was not previously authorized under a National Pollutant Discharge Elimination System (NPDES) or a Texas Pollutant Discharge Elimination System (TPDES) individual permit as a medium or large municipal separate storm sewer system, as defined at 40 CFR §§ 122.26(b)(4) and (b)(7).

This term includes systems similar to separate storm sewer systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. This term does not include separate storm

sewers in very discrete areas, such as individual buildings. For the purpose of this permit, a very discrete system also includes storm drains associated with certain municipal offices and education facilities serving a nonresidential population, where those storm drains do not function as a system, and where the buildings are not physically interconnected to an MS4 that is also operated by that public entity.

**Stormwater and Stormwater Runoff** – Rainfall runoff, snow melt runoff, and surface runoff and drainage.

**Storm Water Management Program (SWMP)** – A comprehensive program to manage the quality of discharges from the municipal separate storm sewer system.

**Structural Control (or Practice)** – A pollution prevention practice that requires the construction of a device, or the use of a device, to capture or prevent pollution in storm water runoff. Structural controls and practices may include but are not limited to: wet ponds, bioretention, infiltration basins, storm water wetlands, silt fences, earthen dikes, drainage swales, vegetative lined ditches, vegetative filter strips, sediment traps, check dams, subsurface drains, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins.

**Surface Water in the State** – Lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or non-navigable, and including the beds and banks of all water-courses and bodies of surface water, that are wholly or partially inside or bordering the state or subject to the jurisdiction of the state.

**Total Maximum Daily Load (TMDL)** – The total amount of a substance that a water body can assimilate and still meet the Texas Surface Water Quality Standards.

**Traditional Small MS4** – A small MS4 that can pass ordinances and have the enforcement authority to enforce the stormwater management program. An example of traditional MS4s includes cities.

**Urbanized Area (UA)** – An area of high population density that may include multiple MS4s as defined and used by the U.S. Census Bureau in the 2010 Census.