



The University of Texas at Austin

Storm Water Management Program 2012

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Introduction

The original Municipal Separate Storm Sewer System (MS4) Permit for the University of Texas at Austin's storm sewer system was issued from the Environmental Protection Agency under the National Pollutant Discharge Elimination (NPDES) program in 1996. Under this original MS4 permit the University was a co-permittee with the City of Austin. UT Austin and The City of Austin each developed Storm Water Management Programs (SWMP) that complimented each other by outlining areas of responsibility in areas where there was jurisdictional overlap. Since the original permits issuance, the permitting authority for MS4 permits was transferred to the Texas Natural Resource Conservation Commission (TNRCC), now known as the Texas Commission on Environmental Quality (TCEQ) under the Texas Pollution Discharge Elimination System (TPDES). When the UT Austin permit was renewed in 2006, The University became the sole permittee for the storm sewer system that was solely under their operational control. The University and the City of Austin continue to work in cooperation with each other to effectively manage pollutants from reaching surface waters in the state discharging from storm sewer systems, though each entity is permitted separately and maintains individual SWMPs with individual requirements.

The original Storm Water Management Program for UT Austin was developed, adopted and implemented to satisfy the EPA's NPDES requirements for large cities. UT Austin has maintained the program on the larger tracts of developed land where roadways and utility conveyances are owned and maintained by UT Austin including; Main Campus, J.J. Pickle Research Campus (PRC), and the Brackenridge tract including the Gateway Apartments, and the Colorado Apartments.

The SWMP contained herein reflects the current programs in place and maintained by UT Austin to address pollutants from entering the MS4 and to meet the requirements of the TPDES permit issued and effective July 7th, 2011. The SWMP has been updated and modified to accurately reflect the efforts of UT Austin and will continue to be updated as programs change and technology allows for greater efficiency of storm water management. The SWMP Minimum Control Measures that constitute the framework of the SWMP provide the permit language requirements followed by a description of the UT Austin program to meet the requirements with a summary table at the end of each listing BMPS, goals, reporting time frames, and UT Austin Departments responsible for the maintenance of the program components.



The University of Texas at Austin

Storm Water Management Program Minimum Control Measure I:

MS4 Maintenance Activities

I. MS4 Maintenance Activities:

- A. *Structural Controls: The permittee shall operate and maintain the MS4, including any storm water structural controls in such a manner as to reduce erosion and the discharge of pollutants to the MEP.*
- B. *Floatables: The permittee shall implement a program to reduce the discharge of floatables (for example litter and other human generated solid refuse) into the MS4. This program element must include source controls at a minimum, and structural controls and other appropriate controls where necessary.*
- C. *Roadways: The permittee shall operate and maintain public streets, roads, and highways to minimize the discharge of pollutants, including pollutants related to deicing or sanding activities.*

I. MS4 Maintenance Activities

A. Structural Controls

1. Inspection, Monitoring, and Maintenance:

- a. Open Channel Drainage Systems (not Waller Creek) - Annually and more frequently as needed, inspect open channel drainage systems, including bar ditches, and remove any materials that could impede flow or increase erosion. The purpose of this activity is to maintain an appropriate flow rate in flood conditions and to maintain water quality.
- b. Open Channel Restrictions - Quarterly, inspect culverts, bridges, exposed utility conveyances, and other civil or natural open channel restrictions, and remove sediment, debris and vegetation. The purpose of this activity is to maintain an appropriate flow rate in flood conditions and to maintain water quality.
- c. Storm Sewer Mains - Continue the ongoing program of inspection, and if necessary cleaning of the storm sewer system. Suspect segments of the storm sewer mains will be inspected and cleaned immediately if necessary or annually at a minimum. The purpose of this activity is to maintain an appropriate flow rate in flood conditions, identify illicit discharges, and evaluate the condition of the system so that necessary repairs and replacements can be made. Waste materials removed from drainage conveyances will be disposed of in accordance with all applicable regulations promulgated by governmental authorities with jurisdiction.
- d. Repair or replace piping in the storm sewer to maintain optimal operating conditions on an as-needed basis. The purpose of this activity is to maintain an appropriate flow rate in flood conditions, identify illicit discharges, and evaluate the condition of the system so that necessary repairs and replacements can be made. Waste materials removed from

drainage conveyances will be disposed of in accordance with all applicable regulations promulgated by governmental authorities with jurisdiction.

This MCM has been in effect for some time as a flood control management practice, and includes clean out of curb inlets, repair of broken pipe, stoppage control, and other activities. Infrastructure maintenance activities will be managed to reduce or minimize the discharge of floatables and other pollutants to surface waters.

2. Flood Control Projects:

- a. Structural controls – UT Austin operates three detention type flood control structures. Additional details of these structural controls are discussed in MCM II Post-Construction Storm Water Control Measures in section B.

B. Floatables

1. As part of the original SWMP implementation, two floatable monitoring stations were established on Main Campus for the purpose of determining baseline conditions of floatable debris entering the MS4 system. These station locations were selected based on the size of the outfall and the collection area served. UT Austin determined that these are an adequate representation of the floatable debris entering the MS4 system and they are maintained after rainfall events of ≥ 0.5 ".

Curb Companion™ inlet protection is also utilized on curb and gutter inlets on streets adjacent to the football stadium on Main Campus to reduce floatable debris from entering the system associated with football games. As technology develops, additional structural controls will be evaluated and implemented in strategic areas to supplement overall program effectiveness.

C. Roadways

1. Street/impervious cover sweeping – UT Austin removes sediment, trash, and organic detritus on University owned streets, mall areas, sidewalks, and in parking garages. UT Austin may utilize a contractor for street and parking area sweeping services when necessary. UT Austin sweeps University owned streets on a semiannual basis and as needed to accommodate increased leaf litter and recover sand from deicing operations in the winter.
2. Street/impervious cover maintenance – The appropriate UT Austin department will evaluate re-pavement projects and utility repair projects for opportunities to retrofit storm water controls in addition to the needed repairs.

MCM 1 – MS4 Maintenance Activities				
BMP	Tasks	Measurable Goal	Frequency	Responsible Dept.
Open Channel Drainage Systems	Inspect open channels and remove any materials that could impede flow or increase erosion to maintain appropriate flow rate in flood conditions and to maintain water quality.	Perform inspections, perform material removal/maintenance of channels.	Annual	EHS/FCS/ UEM
Open Channel Restrictions	Inspect culverts, bridges, exposed utility conveyances, and other civil or natural open channel restrictions, and remove sediment, debris and vegetation	Perform inspections, remove obstructions	Quarterly	EHS/FCS/ H&F/PRC
Storm Sewer Mains	Inspect, and if necessary clean storm sewer system mains and laterals	Inspect, and maintain MS4 system.	Annual	UEM
Flood Control Projects	Maintain existing flood control structures according to designed specifications. Evaluate and encourage designers to incorporate flood control structures into future CIPs.	Maintain existing structures to engineered specifications, incorporate available retention/detention into future development.	As available	EHS/UEM/ PMCS
Floatables Monitoring	Monitor and maintain floatable control devices and collection stations.	Maintain the floatable monitoring stations consideration of expanding stadium controls to other areas.	Qualifying rain event	EHS
Street/Impervious Cover Sweeping	Sweep university owned streets on a semiannual basis and as needed.	Utilize owned equipment or contractor to sweep streets and impervious surfaces.	Biannually and more frequent as necessary	FCS
Street/Impervious Cover Maintenance	Evaluate re-pavement projects and utility repair projects for opportunities to retrofit storm water controls	Repair existing streets and paved surfaces as needed and evaluate re-pavement projects to improve runoff quality	As needed	PMCS/UEM
Related SMWP MCMs utilized to fulfill MS4 Maintenance component				
MCM 2 – Post Construction Storm Water Controls				



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Storm Water Management Program Minimum Control Measure II:

Post-Construction Storm Water Controls Measures

II. *Post-Construction Storm Water Control Measures:*

a. *Areas of New Development and Significant Redevelopment: The permittee shall implement a comprehensive master planning process (or equivalent) to develop, implement, and enforce controls to minimize the discharge of pollutants from areas of new development and significant redevelopment, after construction is completed. The goals of such controls must include:*

(1) *New development -limiting increases in erosion and the discharge of pollutants in storm water as a result of new development; and*

(2) *Redevelopment - reducing erosion and the discharge of pollutants in storm water.*

Within one (1) year of permit issuance, this measure shall be expanded as necessary to include all new development and redevelopment projects that disturb one acre or more of land, including projects less than one acre that are part of a larger common plan of development or sale that will result in disturbance of one acre or more. The permittee shall evaluate and revise the existing SWMP as necessary to ensure that this MCM includes a regulatory mechanism such as an ordinance or inter-local agreement to implement and enforce the new requirements of this program; and shall ensure that the SWMP includes strategies for structural and non-structural controls (i.e., BMPs) appropriate for the community. In addition, the permittee shall provide for adequate long-term operation and maintenance of BMPs.

b. *Flood Control Projects: Impacts on receiving water quality shall be assessed for all flood control projects. Where feasible, new flood control structures must be designed, constructed, and maintained to provide erosion prevention and pollutant removal from storm water. If applicable, the retrofitting of existing structural flood control devices to provide additional pollutant removal from storm water shall be implemented, to the maximum extent practicable.*

II. Post –Construction Storm Water Control Measures:

A. Areas of New Development and Significant Redevelopment

UT Austin initiated a campus-wide master plan in 1994 to address architectural continuity and civil engineering aspects of future development and to provide for a more integrated and comprehensive planning process. UT Austin has retained consultants and appointed a Director of Planning to create a master plan guidance document. In conjunction with the integrated and comprehensive planning process, UT Austin formed a storm water management team (the "SWM team") during the first permitting period composed of individuals from Environmental Health and Safety (EHS), Utilities and Energy Management Department ("UEMD"), Facility Services (FCS), and appropriate academic department(s). Environmental Health and Safety, as a representative of the SWM team,

reviewed construction plans for potential impacts on storm water quality to determine if the proposed construction met the requirements of the plan and recommended drainage and runoff controls to reduce erosion and peak flows, and to mitigate poor water quality. Although the SWM Team was only utilized during the implementation of the original SWMP, EHS has continued the review of construction plans and submits comments to designers in an effort to identify impacts to the MS4 system and compliance with the SWMP.

For both new development and redevelopment, UT Austin publishes training briefs for its construction personnel outlining contractor responsibilities and procedural and structural control management practices. UT Austin has a policy document called *Construction Site Procedures for Contractors* (Appendix C) outlining procedural best management practices ("BMPs") that contractors are required to follow to achieve Maximum Extent Practicable ("MEP") goals. This document is distributed during planning or pre-construction meetings to construction contractors working on University projects. This document, together with the controls outlined in this SWMP, is incorporated by reference into the construction standards manual UT Austin Design and Construction Standards. Private developments on lands leased from UT Austin are not subject to UT Austin Design and Construction Standards or this SWMP.

1. New Development - Design criteria and specifications for permanent and temporary structural controls contained in the UT Austin Design and Construction Standards for Erosion Control (Appendix D) reference the appropriate sections of the Texas Pollutant Discharge Elimination System (TPDES), the City of Austin's Drainage Criteria Manual and the Water Quality Management section of the City's Environmental Criteria Manual. UT Austin contractors use these manuals, with any modifications approved by UT Austin, as design guidelines for structural controls.
 - a. Pre-construction - Construction details are reviewed by EHS to determine if erosion, sedimentation, and pollution controls meet the requirements of the UT Austin Design and Construction Standards. UT Austin holds pre-design conferences and schematic (proposed design) reviews allowing for site-specific construction phase and post-construction phase controls to be included in the scope of work.
 - b. Construction-Phase Controls - Guidelines for new construction are outlined in the UT Austin Design and Construction Standards. This document requires construction-phase controls to prevent contaminated water from any source with any substance which may cause water pollution or extraordinary maintenance of the storm sewer system from leaving the construction site. It applies to all new development construction projects, where there is any anticipated impact to storm water runoff. This document outlines specific details including preparation of

erosion/sedimentation control plans, sequence of development, and frequency of inspection of controls.

At incremental stages of design development, UT Austin conducts construction plan reviews. These reviews provide an opportunity to change the scope of work as necessary to accommodate or mitigate unanticipated impacts on storm water quality and conveyance systems caused by the new development. The Director of Environmental Health and Safety has been assigned responsibility to determine if modifications to construction-phase controls are necessary to meet requirements and goals of the management plan and to require implementation of such controls.

- c. Post-construction Phase Controls - Storm water management planning at the pre-construction phase will focus on aspects of the site plan, grading plan, and proposed storm water utilities. To achieve MEP reduction in pollutant loading of runoff, architectural and structural controls after construction is complete will also be considered. Where the scope of work warrants, UT Austin will look for retrofit opportunities to manage runoff from existing facilities up gradient from the project site.
2. Redevelopment - Except where there is no anticipated impact to storm water runoff, redevelopment will follow the same guidelines with respect to erosion and sediment and pollution control as new development. Contractors will be required to implement site-appropriate controls (including BMPs) during redevelopment construction. EHS will review redevelopment projects for opportunities to improve post-construction storm water management.

B. Flood Control Projects

UT Austin operates three detention type flood control structures. Due to the current state of development at the PRC campus, it is found that pollutant removal is sufficient utilizing the extensive grassy swale conveyance system as well as the retention the existing structures provide.

Extensive development of the Main Campus has made the construction of retention or detention structures infeasible. As an alternative to surface impoundment structures UT Austin has begun incorporating below grade structures to reduce peak runoff volumes and provide for treatment of storm water runoff such as TSS removal. Any such controls will be designed to reduce peak runoff for rainfall events of short duration or low precipitations rates. The subgrade detention structures also serve to reduce potable water consumption of the University by allowing collected storm water to be re-used for irrigation and other non-potable purposes. To address receiving water channel flooding problems, UT Austin performed a study to assess creek bank stability and identify areas where stabilization improvement projects were needed. Creek bank

stabilization and reinforcement projects were initiated at severe erosion locations and the evaluation and stabilization with structural improvements is ongoing. UT Austin works with the City of Austin to incorporate bank stabilization projects in conjunction with urban renewal aspects of the campus-wide master plan.

MCM 2 – Post Construction SW Controls				
BMP	Tasks	Measurable Goal	Frequency	Responsible Dept.
New Development / Redevelopment	Update and implement design and construction standards for structural BMPs	Ensure all contractors and UT personnel adhere to standards to minimize storm water pollution	Ongoing	All
Flood Control Projects	Maintain existing flood control structures according to designed specifications. Continue evaluation and encourage designers to incorporate flood control structures into future CIPs.	Maintain existing structures to engineered specifications, incorporate available retention/detention into future development.	As available	EHS/UEM/PMCS
Related SWMP MCMs utilized to fulfill Post-Construction Controls component				
MCM 1 – MS4 Maintenance Activities				
MCM 6 – Construction Site Storm water Run off				



The University of Texas at Austin

Storm Water Management Program Minimum Control Measure III:

Illicit Discharge Detection and Elimination

III. Illicit Discharge Detection and Elimination:

- A. *Illicit and allowable discharges: The permittee shall prohibit illicit non-storm water discharges from entering the MS4. For the purposes of this permit, the following discharges need not be addressed as illicit discharges by the permittee nor prohibited from entering the MS4:*
1. *Discharges regulated by a separate NPDES or TPDES permit.*
 2. *Discharges for which an NPDES or TPDES permit application has been submitted of an NPDES/TPDES permit is not required*
 3. *Other non-storm water discharges, as described below, that are not prohibited by the permittee in the SWMP. The SWMP shall identify any categories of non-storm water discharges that are not prohibited from being discharged into the MS4, in accordance with the following conditions:*
 - (a) *Categories of non-storm water discharges that the permittee may exempt from the prohibition on non-storm water entering the MS4 include the following: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated ground water infiltration; uncontaminated pumped ground water; discharges from potable water sources; foundation drains; air conditioning condensation; irrigation water; springs; water from crawl space pumps; footing drains; lawn watering; street wash water; individual residential vehicle washing; wash waters using only potable water, and which are similar in quality and character to street wash water or individual residential vehicle washing but without the use of detergents or surfactants; flows from riparian habitats and wetlands; dechlorinated swimming pool discharges; other allowable non-storm water discharges listed in 40 CFR § 122.26(d)(2)(iv)(B)(1); other allowable non-storm water discharges as listed in the TPD ES Construction General Permit No. TXR150000 and TPDES Multi-Sector General Permit No. TXR050000; as well as other similar occasional incidental non-storm water discharges, unless the TCEQ develops permits or regulations addressing these discharges. Program descriptions must address discharges or flows from fire fighting only where such discharges or flows are identified as significant sources of pollutants.*
 - (b) *The non-storm water discharges exempted from the prohibition of non-storm water discharges must be reasonably expected not to be significant sources of pollutants based on either the nature of the discharges or conditions placed on the discharges by the permittee.*
 - (c) *The SWMP must include a description of any local controls or conditions placed on discharges exempted from the prohibition on non-storm water. The permittee shall prohibit any individual non-storm water discharge otherwise exempted under this paragraph from the prohibition on non-storm water that is determined by the permittee to be contributing significant amounts of pollutants to the MS4.*

B. *Detection and Elimination of Illicit Discharges*

1. *The permittee shall require the operator of an illicit discharge or improper disposal practice, to eliminate illicit discharges and improper disposal practices as quickly as reasonably possible. Where elimination of an illicit discharge within 30 days is not possible, the permittee shall require the operator of the illicit discharge to remove the discharge according to an expeditious schedule. In the interim, the permittee shall require the operator of the illicit discharge to take all reasonable and prudent measures to minimize the discharge of pollutants to the MS4.*
 2. *Within one (1) year from the date of permit issuance, the SWMP must include:*
 - (a) *a list of techniques for detecting illicit discharges; and*
 - (b) *appropriate actions and enforcement procedures for removing the source of the discharge*
- C. *Overflows and Infiltration – Permittee shall implement controls where necessary and where feasible to prevent dry weather and wet weather overflows from sanitary sewers into the MS4, and shall limit the infiltration of seepage from university sanitary sewers in to the MS4.*
- D. *Hazardous Waste and Used Motor Vehicle Fluids – The discharge or disposal of used motor vehicle fluids, hazardous wastes, and the intentional disposal of collected quantities of grass clippings, leaf litter, and animal wastes in to the MS4 shall be prohibited. The permittee shall ensure the implementation of programs to collect used motor vehicle fluids (including at a minimum, oil and antifreeze) for recycle, reuse, or proper disposal and to collect hazardous materials (including paint, solvents, pesticides, herbicides, and other hazardous materials) for recycle, reuse, or proper disposal. Such programs shall be readily available to all students and employees generating wastes relating to university operations. The programs shall be publicized and promoted on a regular basis.*
- E. *MS4 Screening and Illicit Discharge Inspections – The permittee shall implement the Dry Weather Screening Program described in Part III Section B.11.a of this permit, to locate portions of the MS4 with suspected illicit discharges and improper disposals.*

Follow up activities to eliminate illicit discharges and improper disposals may be prioritized on the basis of magnitude and the nature of the suspected discharge; sensitivity of the receiving water; or other relevant factors. The entire MS4, but not necessarily each individual outfall, shall be screened at least once per five years.

- F. *NPDES and TPDES Permittee List – The permittee shall maintain, and update as necessary, a list of discharges that discharge directly to the MS4 that have been issued an NPDES or a TPDES permit. The list shall include the name, location and permit number (if known) of the discharger.*

G. MS4 Map

1. Requirements

- a. *The permittee shall develop or revise as necessary, the MS4 map to include:*
 - (1.) *The location of all MS4 outfalls;*
 - (2.) *The names and locations of all water of the US that receive discharges from the outfalls; and*
 - (3.) *any additional information needed by the permittee to implement its SWMP*
- b. *The permittee shall document the source information used to develop the MS4 map, including how outfalls were verified and how the map will be regularly updated.*

2. Deadlines for Compliance:

- a. *New MS4 Areas – Within one (1) year from the date of permit issuance, the permittee shall develop and implement procedures to insure MS4 map requirements are met for all NEW portions of the MS4.*
- b. *Existing MS4 Areas – Within one (1) year from the date of permit issuance, the permittee shall demonstrate that it has evaluated all existing portions of the MS4 and that the above requirements have been met to the maximum extent practicable.*

H. Spill Prevention and Response – The permittee shall continue to implement and improve as necessary existing programs which prevent, contain, and respond to spills that may discharge into the MS4. The program may include:

1. *A combination of spill response actions by the permittee or another public/private entity.*
2. *Legal requirements for private entities within the jurisdiction of the permittee.*

III. Illicit Discharge Detection and Elimination:

- A.1 The University of Texas at Austin EHS department monitors all storm water regulated activities, and with the exception of large construction sites, there have been no other NPDES/TPDES permitted sites to date. EHS will continue to monitor activities to ensure discharges from other permittees do not contribute pollutants into the UT Austin MS4.
- A.2 As stated in III.A.1 all permitted operators on UT MS4 properties will be monitored to prevent potentially polluted runoff from entering the UT MS4.
- A.3(a) The University of Texas maintains an online Discharge Request system for all batch discharges of water to the sanitary and/or storm sewer systems on Main Campus and Pickle Research Campuses (PRC). The EHS Dept. maintains and approves discharges after reviewing the information submitted and consulting with the requestor to prevent unintentional discharges of

prohibited pollutants to sewer systems. Those discharges that are acceptable under the TPDES permit are also subject to this review and approval process.

- A.3(b) The University of Texas utilizes the online Discharge Request system as identified in section III.A.3(a) to ensure that non-storm water discharges are not significant sources of pollutants. Should a requested discharge be found to have significant pollutants, the discharge will be denied and the requestor may have to pump and haul the water offsite for proper disposal.
- A.3(c) The online Discharge Request system discussed above allows EHS staff to analyze non-storm water discharges prior to release in order to investigate, and potentially sample to identify any pollutants. Should the request contain anything that would be considered a pollutant, the discharge request will be denied and alternative disposal methods will be developed.

B.1 The following list of non-storm water discharges are allowed on the UT Austin Campus':

- *Water line flushing*
 - *Landscape irrigation*
 - *Diverted stream flows*
 - *Rising ground water*
 - *Uncontaminated pumped ground water*
 - *Discharges from potable water sources*
 - *Foundation drains*
 - *A/C condensate*
 - *Irrigation water*
 - *Springs*
 - *Water from crawl space pumps*
 - *Footing drains*
 - *Lawn watering*
 - *Street wash water*
 - *Individual residential vehicle washing*
 - *Wash waters using only potable water w/o detergents/chemicals*
 - *Flows from riparian/wetlands*
 - *Dechlorinated swimming pool water*
 - *Other allowable non-storm water discharges listed in 40 CFR§(d)(2)(iv)(B)(1)*
 - *Other allowable non-storm water discharges listed in TPDES CGP TXR150000, and TPDES MSGP TXR050000*
- Program descriptions must address discharges or flows from fire fighting only where such discharges or flows are identified as significant sources of pollutants.*

All other discharges of non-storm water are prohibited without written authorization from the EHS Dept.

Should an illicit discharge be identified through one of the detection techniques the operator of the discharge is requested to discontinue the discharge as soon as discovered. If the immediate cessation of the discharge is not possible an expedited schedule of addressing the discharge is

requested. Most identified illicit discharges are able to be addressed within 30 days, however, should the situation arise that the discharge cannot be properly routed or eliminated, EHS works with the operator to minimize the discharge through appropriate BMPs which may include the pumping and hauling of all non-storm water discharges to an authorized wastewater treatment and disposal facility.

B.2 The University of Texas at Austin will continue the existing program of illicit discharge detection. As part of this updated SWMP a list of techniques being used for detecting illicit discharges as well as the actions and enforcement procedures to be taken are discussed below.

B.2(a) UT Austin UEMD implemented an extensive dye testing program to identify and eliminate illicit connections to the storm sewer system as part of the SWMP developed for the original Phase I MS4 permit. The dye testing was continued and expanded to test all buildings on UT and PRC campuses. All permanent illicit discharges identified under this program were addressed during this initiative to prevent cross contamination of storm water discharges with sanitary discharges. Whenever an illicit discharge is suspected, UT Austin may use this technique, as well as other methods to identify the discharge and expeditiously eliminate the discharge. In addition to this program the techniques used to detect illicit discharges to the storm sewer system by The University of Texas at Austin include:

1. Regular maintenance of sanitary sewer lines including visual inspection and cleaning of grease traps and known problem areas as needed to prevent overflows.
2. Responding to emergencies using appropriate equipment and materials to control overflows
3. Proper disposal of waste materials
4. Implementation of necessary repairs immediately or as soon as practicable
5. Dry Weather Screening on an annual basis for sanitary characteristics and perform subsurface monitoring by closed-circuit television on any suspect segments of storm sewer mains when suspect segments are identified

B.2(b) The University of Texas at Austin EHS Department has an emergency and spill response program that provides coverage for environmental emergencies 24-hours a day 7 days a week. Should an illicit discharge from a storm sewer be suspected and reported to EHS an investigation into the source of the discharge is initiated. UT Austin EHS will effect an immediate cessation of

illicit discharges upon notice of such discharge to UEMD or EHS. The Director of EHS has been given express authorization for specified individuals to require an immediate cessation of activities. An emergency work order may be initiated as soon as feasible to correct the illicit connection to the MS4. All reasonable efforts will be made to correct the illicit connection within 60 days of discovery. If correction cannot be accomplished within 60 days, an expeditious schedule will be established as to when the connection is expected to be corrected.

C UT Austin will continue the programs established under previous versions of the SWMP to minimize or prevent overflows and infiltrations from sanitary sewers into the MS4. The elements of these programs include:

1. Regular maintenance of sanitary sewer lines including visual inspection, cleaning of grease traps, and maintaining known problem areas as needed to prevent overflows.
2. Emergency response using appropriate equipment and materials to control overflows.
3. Proper disposal of waste materials.
4. Implementation of necessary repairs immediately or as soon as practicable.

To address seepage UT Austin screens major storm water outfalls observed with dry weather flows on an annual basis for sanitary characteristics and will perform subsurface monitoring by closed-circuit television on any suspect segments of storm sewer mains when suspect segments are identified.

D UT Austin will control the illicit discharge of motor vehicle fluids, hazardous wastes, animal wastes, and landscape maintenance wastes generated by UT Austin, its employees and agents, by employing the following strategies:

1. Motor Vehicle Fluids – All UT Austin motor vehicles are maintained at storm water protected central facilities with provisions for proper collection, accumulation and transfer of waste fluids. Maintenance protocols and practices in place to prevent contaminated discharges to storm water from motor vehicle fluid handling facilities include containment around storage drums and tanks, use of oil drip pans where necessary, and covered and contained storage for used parts at service centers if the parts present a potential for release of contaminants. Both Main and PRC fleet maintenance facilities utilize EHS for spill response and have posted notices to call EHS should a spill occur. Slug Control Plans implemented to fulfill pretreatment requirements of City of Austin

Wastewater Permits also contain provisions for the protection of storm water runoff.

- a. Motor Oil - UT Austin has an established program to collect and recycle used motor oil. Automotive service operations include protocols for safely storing used motor oil, which is picked up by EHS. Motor oil and other waste oil products such as filters and oily rags, are manifested to an approved vendor for reprocessing to the maximum extent allowed under federal regulations.
 - b. Antifreeze - UT Austin has established a policy and program to collect and properly manage antifreeze wastes.
2. Hazardous Waste Materials- UT Austin is a generator of hazardous wastes and maintains multiple EPA ID numbers. UT Austin maintains a hazardous waste accumulation facility at Main Campus and at PRC. The hazardous waste accumulation facilities are secured, limited access buildings. These facilities are operated as 90-day accumulation facilities consistent with UT Austin's status as a large quantity generator. The hazardous waste management program is publicized to University departments through training workshops and through a periodic newsletter, the EHS Spotlight. Hazardous wastes are picked up from the point of generation and transported to the accumulation facilities by the EHS hazardous waste team. The materials are accumulated at these facilities for a period of no more than 90 days, then removed and disposed of by a contracted hazardous waste disposal company. UT Austin employs full-time hazardous materials technicians in the task of hazardous waste pickup and transport. They are trained and experienced in the proper handling of hazardous wastes and hazardous waste containers and have attended at least 24 hours of Hazardous Materials Emergency Response training. To protect themselves and the environment from chemical exposure, they inspect each container at the point of generation to ensure that its integrity is not compromised. If there is a release of hazardous materials during transport, the hazardous materials technicians have access to spill response supplies (e.g. hydrophilic and hydrophobic absorbents, boom and dike materials, and bioremediation supplies), which reduce the risk of introducing hazardous materials to the storm water system. UT Austin employees transport these wastes only within the UT Austin property where the waste was generated. The accumulation facilities are inspected on a weekly basis by a hazardous materials specialist. All hazardous waste containers are inspected to ensure that proper labeling requirements are met, that containers are tightly sealed, and that no containers are leaking.

UT Austin also addresses applicable provisions of this SWMP in other related programs such as the Waste Minimization Program, Hazard

Communication Program, Spill Prevention Control and Countermeasures, and Recycling Program.

3. Animal Wastes - UT Austin's policy for disposal of animal wastes is as follows:
 - a. Research Laboratory Animals - UT Austin maintains an Industrial Wastewater Permit from the City for the disposal of sanitary wastes through the sewage conveyance system to publicly owned treatment works operated by the City of Austin. Non-infectious metabolic wastes from research animals are disposed of through washing into sanitary sewer lines as well as disposal with other municipal trash. Animal carcasses are disposed of by off-site incineration.
 - b. Free-roaming Animals - Effect controls for metabolic wastes from roosting pigeons, grackles, starlings, and bats including:
 - (1.) Using noise-based disruption of roosting to the extent allowed by law.
 - (2.) The impact of significant roosting sites on storm water quality will be minimized by an aggressive program to discourage the establishment of such sites and cleaning of these areas by appropriate methods on an as needed basis.
4. Landscape Maintenance Wastes - Leaf litter and grass clippings are managed as a renewable resource by shredding, mixing, composting, and mulching. Grounds maintenance controls for leaf litter and grass clippings involve blowing, raking, and sweeping plant wastes into piles for transportation to an on-campus storage location.

E UT Austin will continue the Dry Weather Screening Program as described in Part III Section B.11.a of the previous MS4 permit issued by TCEQ in 2006. Under the original MS4 permit this program was implemented and served to locate portions of the MS4 that were suspected to have illicit discharges or improper disposals. The entire MS4 was originally screened in 2002 and any illicit discharges or improper disposals identified were addressed at that time. The program has continued to monitor dry weather flows and analyze any identified to ensure additional improper connections are not made to the MS4 system. In addition to the construction plan review conducted at various development intervals, this program will continue to screen the entire MS4 at least once per 5-year permit term. A summary of the program implemented follows:

Dry Weather Screening Program - UT Austin has surveyed all outfalls and identified the location of dry weather flows. Annually, a chemical analysis is performed on identified dry weather flows to locate illicit discharges and improper connections. During the annual chemical analysis, UT Austin will screen dry weather flows from University drainage system outfalls, and perform colorimetric analyses for Ph, chlorine, copper, phenol, detergents, and ammonia. Results of the screening and any analysis performed will be retained by the EHS Department. Any illicit discharge identified will be addressed expeditiously as described earlier in this MCM.

- F UT Austin monitors activities on the covered campuses for any TPDES permitted activities that would contribute to the MS4 system. These separately permitted facilities will be tracked by maintaining a list of the activity including the name, location, and permit number of the discharger. EHS continuously monitors campus activity to identify such discharges and works with operators to ensure permit requirements are met.
- G UT Austin UEMD has developed composite utility maps for sewer systems on UT Austin Campuses. These map(s) include locations for MS4 outfalls, and all receiving waters. The MS4 map(s) were developed by UT Austin UEMD through field reconnaissance or visual identification as well as keeping the map(s) updated utilizing the design development construction plan reviews discussed in other MCMs within this SWMP.
- H UT Austin has had a spill response program for many years and will continue to maintain and improve the program as necessary to prevent, contain, and respond to spills that may enter the MS4. University policy is that any discharge to surface waters of any substance which could or does cause pollution to surface waters is strictly prohibited. Criteria used to determine whether a substance may cause pollution include color, odor, sheen, impacted aquatic life, turbidity, and sampling and analysis when any of these characteristics are observed.

Procedural Components

1. Prevention Measures

- a. EHS Training Programs – The University provides hazard communication training as required by Texas law. Hazard communication training includes, among other information, information on interpreting labels, and material safety data sheets; general instruction on the handling and disposal of hazardous chemicals; and general instructions relating to spill cleanup procedures. This training is offered to all employees of UT Austin who manage or handle hazardous materials, including teaching assistants.

Additionally, HAZWOPER training is made available to UT Austin employees responsible for managing hazardous wastes. EHS requires additional specific training relating to chemical safety and disposal procedures to any University department. This training is customized to fit the needs of each department and includes information on disposal of waste materials and the reporting and handling of spills. The training sessions are publicized through venues such as the EHS web page and other appropriate means of communication.

- b. Other Educational programs - UT Austin distributes a policy document, the University Construction Site Procedures for Contractors, containing construction site procedures (aimed specifically at reducing pollution of surface waters) required of contractors. This SWMP incorporates by reference this policy document (See Appendix C).

In addition, UT Austin has completed an extensive storm drain marking program. This program is ongoing and newly installed storm drains are labeled after construction projects are complete and/or drains have the labels replaced when they are no longer legible, broken, or removed. This program is described in further detail in Appendix E.

2. Response Measures

- a. Personnel - The University implemented an on call system for responding 24 hours a day, 7 days a week to spills on UT Austin properties which threaten or impact surface water quality, regardless of whether the responsible party is affiliated with UT Austin or not. Staff members coordinate response and clean-up activities with appropriate state and local governmental offices and ensure that any necessary corrective action is taken. EHS is prepared to respond to spill incidents originating on UT Austin property which have impacted or threaten to impact any of the various surface water bodies in the corporate boundary or the extra-territorial jurisdiction of the City of Austin.

Equipment and Materials - UT Austin maintains a well-stocked equipment and materials cache for mitigating and abating spills which threaten or have impacted surface waters, including hydrocarbon absorbing/hydrophobic booms, dikes, and pads, absorbent clay, storage container liners, pumps, skimmers, shovels, brooms, mops, personal protective gear, and a trailer mounted recovery/storage tank.

Structural Components

1. Prevention Measures

- a. Underground Storage Tanks - UT Austin maintains compliance with regulatory requirements for underground storage tanks by employing strategies such as double walled USTs, cathodic protection, spill and overfill appurtenances, continuous monitoring and integrity testing.
- b. Aboveground Storage Tanks - Aboveground storage tanks containing bulk process materials such as lubricating oils, acids, scale and corrosion inhibitors, and large outdoor liquid-cooled transformers are designed or retrofitted with secondary containment and/or neutralization. In cases where the secondary containment feature is not protected from rainfall, UT Austin uses an established protocol for the release of trapped storm water. Sampling and analysis of the rainwater will be completed if there is a reasonable suspicion of contamination based upon the criteria of color, odor, sheen, turbidity, or impacted aquatic life. Trained personnel use these criteria to assess storm water quality prior to release from secondary containment.

- 2. Response measures - Permanent anchoring bolts for floating booms have been placed at five separate locations in the banks of Waller Creek, the receiving water for approximately 95% of the Main Campus drainage.

MCM 3 – Illicit Discharge Detection and Elimination				
BMP	Tasks	Measurable Goal	Frequency	Responsible Dept.
Monitor permitted discharges	UT Austin EHS staff monitor NOI(s) submitted and corresponding permitted activities to prevent unauthorized discharges.	Report number of NOI's received	Annual	EHS
Monitor Non-storm water discharges	UT Austin staff to monitor visible discharges during dry periods	UT Austin staff in EHS, UEM, PMCS, H&F, FCS monitor all visible dry weather flows either entering or exiting system to address any illicit discharges	Ongoing	EHS, UEM, PMCS, H&F, FCS
Maintain Online Discharge Request System	Monitor and work with requestors to properly discharge waters to appropriate sewer system with approved BMPs to prevent pollutants from entering MS4	EHS staff respond to submitted requests to review process generating water, and areas proposed for discharge.	As needed	EHS
Maintain	UEM to continue process	Report linear footage of	Annual	UEM

sanitary sewer system	of surveillance and maintenance of damaged sanitary lines to prevent blockage and bypass	sanitary sewer lines surveyed and/or repaired or maintained.		
Grease trap service/maintenance	Service all pretreatment devices according to local requirements to minimize overflows	FCS to maintain contract with licensed service provider to pump grease traps. UEM to repair/maintain grease traps as needed. EHS to ensure traps are serviced according to local requirements.	Annual	FCS/UEM/EHS
Spill Response Program	Maintain 24-Hr./7-day/week spill response program to minimize unauthorized discharges to MS4	EHS to maintain appropriate spill response equipment, personnel, and staffing to allow for expeditious response to accidental spills that may enter MS4.	Ongoing	EHS
Collect and properly dispose of wastes	Continue established programs to collect and properly dispose of hazardous wastes, automotive wastes, animal wastes, and landscape wastes.	Manage the programs of waste pick up and disposal to minimize unauthorized discharges of regulated wastes.	Ongoing	EHS
Dry Weather Screening	Monitor MS4 outfalls during dry weather periods for flows from system.	EHS will survey MS4 outfalls and sample any identified for sanitary characteristics as described in Part III, Section B.11.a of the previous MS4 permit.	Annual	EHS
Maintain and update MS4 map(s)	Update and revise existing MS4 map(s)	EHS will work with UEM to ensure all requirements of Part III, Section B.3.g (1) (a) i-iii are included	As needed	EHS, UEM
Maintain SPCC plan(s) for USTs & ASTs	Implement and maintain SPCC plan requirements	Maintain the UT Austin SPCC plan to minimize pollutants from UST / AST facilities	Ongoing	EHS, UEM,
Related SWMP MCMs utilized to fulfill Illicit Discharge and Elimination component				
MCM 1 – MS4 Maintenance Activities				
MCM 6 – Construction Site Storm water Run off				
MCM 8 – Monitoring, Evaluation, and Reporting				



The University of Texas at Austin

Storm Water Management Program Minimum Control Measure IV:

Pollution Prevention/Good Housekeeping for University Operations

IV. *Pollution Prevention/Good Housekeeping Program for University Operations:*

- A. *Within one (1) year from the date of permit issuance, the permittee shall implement a pollution prevention/good housekeeping program for university operations. The program must include the following MCMs to address:*
 - 2. *Good housekeeping and BMPs must be identified and implemented with the goal of reducing pollutant runoff from university operations such as: street and highway maintenance, open spaces, university buildings, water treatment plants.*
 - 3. *Permittee shall reduce the discharge of pollutants to the MEP from road repair, equipment yards, and material storage facilities, or maintenance facilities*
 - 4. *Permittee shall develop training for all employees responsible for university operations to include materials directed at preventing and reducing storm water pollution from all university operations subject to this MCM.*
- B. *Waste handling – Permittee shall ensure proper disposal of waste that is removed from the MS4 or from other university operations.*
- C. *Pesticide, Herbicide, and Fertilizer Application – Permittee shall implement controls to reduce the discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers, by the permittee’s employees or contractors, to public right-of ways, parks or other university property.*
- D. *List of University Facilities – SWMP must included a list of all university operation subject to the university operation, maintenance and training programs listed under this program element and all university owned and operation industrial activities subject to TPDES or NPDES industrial storm water regulations.*

IV. Pollution Prevention / Good Housekeeping Program for University Operations:

- A UT Austin EHS conducted an investigation of university operations storage yards on Main and PRC campuses to identify those with a potential to contribute pollutants to storm water runoff. EHS works with the responsible departments to develop best management practices to minimize storm water impacts.
 - 1. As was discussed previously in MCM 1, UT Austin removes sediment, trash, and organic detritus on mall areas, sidewalks, and in parking garages. UT Austin may utilize a contractor for street and parking area sweeping services. UT Austin sweeps University owned streets on a semiannual basis and as needed to accommodate increased leaf litter and to recover sand from deicing operations in the winter.

UT Austin departments responsible for the maintenance of roadways and impervious areas evaluate re-pavement projects and utility repair projects for opportunities to retrofit storm water controls during the design development process.

2. UT Austin EHS staff inspected the campuses falling under the jurisdiction of this SWMP to identify those areas exposed to storm water that would be considered university operations associated with road repair, equipment yards, and material storage, or maintenance facilities. These areas are listed in Section 4D below. The operators of these areas are instructed to minimize the pollutants leaving the area by implementing certain good housekeeping measures in the storage and maintenance of the materials and equipment stored in their areas. The good housekeeping measures that are implemented include;
 - Storing only essential items necessary for the work that is performed by the department to reduce the volume of exposed materials.
 - Storing materials away from storm drains as much as possible, and protecting receiving storm drain(s) with diversion structures or other BMPs to minimize pollutant transport.
 - Whenever possible, covering materials or equipment either with permanent structures or temporary tarps that will be stored for long periods of time.
 - Storing materials off the ground on racks, pallets, or other means to minimize contact with storm water runoff.
 - Regular sweeping of impervious cover in areas where aggregate or other materials easily transported to storm drains by storm water runoff sheet flow.
 - Proper maintenance of oil containing vehicles and equipment to minimize the staining of impervious cover from leaks of oil and fuel. Equipment and vehicles with known leaks that are parked shall utilize drip pans or oil absorbent pads under the equipment to capture leaks prior to staining the ground.
 3. EHS will work with responsible departments who oversee the areas identified during the investigation to ensure UT staff are aware of the potential pollutants and the good housekeeping practices necessary to minimize the impact of their activities on storm water runoff. The training will be incorporated into the orientation and other training as appropriate for employment with UT.
- B UT Austin conducts storm drain cleaning annually on Main Campus and only as needed on PRC campus due to the limited amount of subgrade conveyance at the PRC campus. The wastes that are removed from the MS4 are temporarily staged in a holding area until all wastes are accumulated. This staging also allows for the visual assessment of the waste to ensure there are no hazardous or prohibited materials being disposed of. Once all materials have been collected the material is transported to an area landfill for proper disposal.

Wastes that are generated from other university operations are evaluated on a case by case basis and either disposed of in a landfill as municipal solid waste, or disposed of through the Environmental Health & Safety Departments, Hazardous Waste Section.

- C UT Austin requires all pesticide, herbicide and fertilizer application be conducted in a standard uniform manner by applicators trained and licensed by the Texas Department of Agriculture, or work under a licensed applicator. Both UT Austin employees and contractors must receive annual training covering basic topics of storage, application, and disposal as well as any other requirements as stated in applicable regulations.

The best management practices for UT Austin include the following:

- Use of natural organic fertilizers and soil supplements in lieu of synthetic fertilizers.
- Applying/using techniques that minimize the application to sidewalks, streets, and unvegetated areas.
- Only apply in dry and low wind conditions. Do not apply just before rain events.
- Apply according to the labels recommended application rate.
- Store in rainfall protected locations within secondary containment.
- Do not leave pesticide, herbicide, or fertilizer containers uncovered.
- Do not rinse containers, equipment, or dispose of pesticides, herbicides, or fertilizers in sinks, storm drains, on the ground outside, or in dumpsters.
- Clean up spills immediately by dry cleanup methods only. Sweep up granular products or utilize absorbent material such as kitty litter to clean up liquids.

- D The following table lists the areas of the MS4 with outdoor storage and maintenance areas that were identified at the time of this SWMP development. This list is dynamic and will change as the campuses evolve with future re-development projects and departmental changes.

<u>Main Campus:</u>			
<u>Building</u>	<u>Location</u>	<u>Inventory (exposed)</u>	<u>Level of concern 0-4</u>
FC1	West side of Facilities Complex	Scrap metal dumpster	2
		Wet saw area	2
		Sand/concrete waste area	3
		Stone/aggregate storage area	1
		Concrete blocks/bricks on pallets	0
FC4	Central building in Facilities	Carts	0

	Complex		
		Hydraulic equipment	1
		Scrap metal	3
FC8	Northwest corner of Facilities Complex	Mulch piles	1
		Topsoil storage	1
		Sand storage	1
		Brush piles	0
		Fertilizer application tanks	3
<u>PRC:</u>			
P45 (Surplus)	Southwest corner of campus	Outside storage yard with revolving miscellaneous items	1
ETS 188	Adjacent to Surplus	Storage yard for Electrical Dist.	1
		Cable rolls	0
		Piping	1
		Transformers	2
135/136	Fleet Maintenance/ SE Corner	vehicles/equipment	2
		5gal. pails of materials on pallet(s)	4

MCM 4 – Pollution Prevention / Good Housekeeping for University Operations				
BMP	Tasks	Measurable Goal	Frequency	Responsible Dept.
Inventory	Develop and maintain inventory of areas falling under MCM.	Develop list, maintain accuracy of areas identified.	Ongoing	EHS
Training	Develop training to provide to departments operating affected areas	Number of employees received training.	Annual	EHS, PMCS, FCS, UEMD, H&F
Related SMWP MCMs utilized to fulfill MS4 P2 and Good Housekeeping for University Operations				
MCM 2 – Post Construction Storm Water Controls				



The University of Texas at Austin

Storm Water Management Program Minimum Control Measure V:

Industrial and High Risk Runoff

V. *Industrial and High Risk Runoff:*

Permittee shall continue to improve as necessary the existing programs to identify and control pollutants in storm water dischargers to the MS4 from university landfills; other treatment, storage, or disposal facilities from university waste (e.g. transfer stations, incinerators, etc...); hazardous waste treatment, storage, disposal and recovery facilities that are subject to Emergency Planning and Community Right-to-Know Act (EPCRA) Title III, Section 313. This MCM must include:

E. Priorities and procedures for inspections and for establishing and implementing control measures for such discharges; and

F. An industrial and High Risk Management Program as described in Part III, Section B.8.c of this permit.

V. **Industrial and High Risk Runoff:**

UT Austin does not operate industrial & high risk facilities as defined by 40 CFR 122.26(d)(2)(iv)(C). On the properties covered by this permit, U.T. Austin does not own or operate a municipal landfill, hazardous waste treatment, disposal and recovery facilities, or industrial facilities that are subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). Further, UT Austin has not identified any industrial facilities on its properties that contribute a substantial pollutant loading to the storm sewer system.



The University of Texas at Austin

Storm Water Management Program Minimum Control Measure VI:

Construction Storm Water Runoff

VI. *Construction Site Storm Water Runoff:*

- A. *Permittee shall continue to implement a program to reduce the discharge of pollutants into the MS4 from construction sites more than one acre in size or that are part of a larger common plan of development. This MCM must include:*
1. *Requirements to use and maintain appropriate structural and operational BMPs*
 2. *Inspection of construction sites and enforcement of control measure requirements*
 3. *Appropriate education and training measures for construction site operators*
 4. *Notification to construction site operators of their potential responsibilities under the NPDES/TPDES permitting regulations and permits for construction site runoff.*
- B. *Lists of Sites – Permittee shall maintain, and update as necessary, a list of construction sites that discharge directly to the MS4 that have been issued an NPDES or a TPDES permit.*
- C. *Within one (1) year of the permit issuance, the permittee shall ensure and demonstrate that this MCM includes the following elements as well as those above:*
1. *Require construction site operators to implement appropriate erosion and sediment control BMPs and control waste (e.g. discarded building materials, concrete truck washout water, chemicals, litter, and sanitary wastes)*
 2. *Develop procedures for site plan review incorporating consideration of potential water quality impacts, receipt and consideration of information submitted by the public, and site inspection and enforcement of control measures to the extent allowable under state and local law.*

VI. Construction Site Storm Water Runoff

- A UT Austin has maintained a construction storm water program since the program was implemented during the first permitting period. The following control measures were implemented during that period and will continue to be mandatory for all construction activities occurring on the sites covered under this MS4 permit.
1. Requirements to use and maintain appropriate operational and structural BMPs – UT Austin requires BMP implementation to reduce pollutant loading of runoff from construction sites (including exterior washing practices) to the maximum extent reasonably possible. Construction sites are monitored by UT Austin and UT System personnel identified by various job titles depending on department.

2. Inspection of construction sites and enforcement of control measures – The authority to enforce pollution control measures for construction projects, including the authority to issue a stop-work order for failure to implement or maintain pollution control BMPs has been provided to specific individuals, including the Director of Environmental Health and Safety. Construction inspectors review the work of the contractors on a periodic basis and execute a weekly check-off inspection for properly functioning BMPs. EHS makes both announced and unannounced reviews of construction phase controls and housekeeping practices of the contractors. Contractors are required to immediately cease any activity or practice which is impacting or threatening to impact surface waters or the MS4 and correct any defect in structural controls.
 3. Appropriate Education and Training Measures for Construction Site Operators, including UT Austin Construction Inspectors and Coordinators – The policy document *University Construction Site Procedures for Contractors* is distributed to construction site superintendents or project managers prior to initiation of the project. PMCS issues new contractors a *Contractors Handbook* that includes several environmental topics with protection of storm water as a recurring topic. In addition, EHS provides briefs and training workshops as requested to UT Austin construction inspectors and coordinators to familiarize them with construction site pollution control BMPs and other requirements.
 4. Contractor Notification of Potential Responsibilities for Construction Site Runoff – In addition to references to this SWMP in the construction standards manual, UT Austin Design and Construction Standards, and University Construction Site Procedures for Contractors, pre-bid and pre-construction review meetings also provide an opportunity to notify construction site operators of their responsibilities to control construction phase storm water runoff.
- B Due to the extensive development of the campuses affected by this permit and SWMP it is rare that a construction site is greater than 1 acre of disturbed soil. When this does occur, the EHS Department is notified as the MS4 operator for any construction site required to submit an NOI to obtain a TPDES permit. EHS maintains a list of all construction activities that occur on UT Austin campuses affected by this SWMP.
- C In previous sections of this MCM and SWMP discussed the original SWMP implementation including the provisions that required construction site operators to implement erosion and sediment control BMPs to minimize pollutants from leaving construction sites and entering the UT Austin MS4.

UT Austin continues to require installation of BMPs on all construction sites with soil disturbance. The UT Austin Construction Standard for Storm Water Management (Appendix D) provides details of the requirements. Through construction plan review, site investigation, and responses to calls received, EHS representatives ensure that BMPs are installed and maintained according to TPDES, and UT Austin construction standards.

MCM 6 – Construction Site Storm Water Runoff				
BMP	Tasks	Measurable Goal	Frequency	Responsible Dept.
Require installation of phase control BMPs for active construction sites.	Update and maintain erosion control construction standard. Implement program to ensure requirements are met by construction personnel.	Include erosion control standard and other storm water compliance goals pre-planning and construction bid meetings to notify contractors of compliance expectations.	Ongoing	PMCS, OFPC, UEM, H&F, FCS, EHS
Inspection of construction sites for compliance with phase control installation and maintenance	EHS personnel, construction inspectors and coordinators to conduct regular inspections of construction sites.	Report number of construction inspections conducted annually.	Annual	EHS, PMCS, OFPC, UEM, FCS, H&F
Maintain and distribute guidance documents developed	Maintain EHS “Construction Site Procedures for Contractors” and the PMCS Contractors Handbook for distribution to contractors	Include documents in distribution of information disseminated at construction meetings.	Ongoing	EHS, PMCS, OFPC, UEM, FCS, H&F
Maintain list of permitted construction sites	EHS to maintain a list of all construction sites requiring TPDES permit through submission of NOI	Maintain permitted construction sites list.	As needed	EHS
Related SMWP MCMs utilized to fulfill Construction Site Storm Water Runoff component				
MCM 3 – Illicit Discharge Detection and Elimination				



The University of Texas at Austin

Storm Water Management Program Minimum Control Measure VII:

**Public Education and Outreach /
Public Involvement and Participation**

VII. Public Education and Outreach/Public Involvement and Participation:

G. *Public Education – Permittee shall continue to implement a public education program component with the following elements:*

1. *An element to promote, publicize, and facilitate public reporting of illicit discharges or improper disposal of materials into the MS4*
2. *An element to promote, publicize and facilitate the proper management and disposal of used oil and HHW; and*
3. *An element to promote, publicize and facilitate the proper use, application, and disposal of pesticides, herbicides, and fertilizers by public, commercial, and private applicators and distributors.*

Within one (1) year from date of permit issuance, permittee shall document and ensure that the SWMP promotes, publicizes, and facilitates public education and outreach to: residents, visitors, public service employees, businesses, commercial and industrial facilities, and construction site personnel and provide justification for any group that is not addressed by the program. Permittee must document the activities conducted and materials used to fulfill this program element and provide enough detail to demonstrate the amount of education and outreach resources and materials used to address each group.

B. *Public Involvement and Participation: - Within one (1) year from date of permit issuance, the permittee shall develop and implement a public involvement/participation program which must comply with State, Tribal, and local public notice requirements. This element must include opportunities for a wide variety of constituents within the MS4 area to participate in the SWMP development and implementation.*

VII. Public Education and Outreach / Public Involvement and Participation

A UT Austin will continue to maintain the public education campaign initiated during the first permitting term and update the program as necessary to include those elements described in the current permit with the following components:

1. Promote, publicize, and facilitate reporting of illicit discharges and improper disposal of materials into the MS4.
 - a. UT Austin has established a "pollution hotline" telephone line to facilitate reporting of observed illicit discharges or other environmental concerns by the public. The phone is answered by EHS staff during normal business hours and is forwarded to University Police Department (UTPD) during non-business hours. UTPD contacts EHS for all incidents involving spills or other environmental emergencies.

- b. Twice a year UT Austin publishes an announcement in the Daily Texan, the UT student newspaper, in connection with the bi-annual Waller Creek Clean-Up events. These announcements include language educating UT students, staff, and faculty on how to report illicit discharges, protection of storm drains, proper disposal of materials such as; automotive fluids, and household hazardous waste, as well as other tips to protect the MS4 system. Similar information is also available on the EHS web site at all times.
2. Promote, publicize, and facilitate proper disposal of used motor vehicle fluids and hazardous wastes.
- a. In addition to the program elements that are described in MCM III.3.D.1-4 of this SWMP, UT Austin continues to maintain the storm drain marking program that was initiated during the first permitting term of the MS4. This drain labeling program is described further in Appendix E.
 - b. UT Austin is not permitted to collect household hazardous waste (HHW) from campus residents. The majority of campus residents are also City of Austin residents, and as such all residents of the City of Austin are eligible to participate in the City's HHW program allowing for the drop off of accumulated HHW. UT Austin encourages and educates all campus students, staff, and faculty to properly dispose of their wastes generated for personal use through referral to community programs and opportunities such as these.
3. Promote, publicize, and facilitate the proper use, application, and disposal of pesticides, herbicides, and fertilizers by public, commercial, and private applicators and distributors.

UT Austin Facility Services Landscaping employees, Housing and Food, and Athletics are the three main departments identified as having employees that may apply pesticides, herbicides, and/or fertilizers. Those employees applying pesticides receive annual training and are supervised by individuals licensed by the Texas Department of Agriculture. An integrated pest and fertilizer management program with the following elements has been in place at UT Austin since the first permitting period to reduce pollutant discharges associated with storage, application, and disposal of fertilizers and pesticides (including herbicides):

- a. Identification of all UT Austin departments or offices with employees that apply pesticides and fertilizers on UT properties.
- b. Requirement that application of pesticides and fertilizers be performed only by trained individuals and in a standard, uniform manner.
- c. Require an annual training on pesticide and fertilizer management techniques addressing, at a minimum, the following:

- Storage - pesticides and fertilizers of any type will be stored in rainfall protected locations within secondary containment.
- Application - pesticides and fertilizers will be applied using techniques that minimize their application to impervious cover and un-vegetated areas.
- Disposal - unused pesticides and fertilizers and pesticide and fertilizer residues will be properly disposed of according to applicable state and federal regulations.
- Other considerations required by law.

d. In addition to the proposals put forth in this SWMP, U.T. Austin notifies contracted commercial landscapers associated with new construction and re-vegetation projects of the required compliance with the procedures of this SWMP.

B EHS allows for students, staff, and faculty to provide comments to the SWMP staff on recommendations, or concerns that they have involving the SWMP through the EHS website. Environmental Operations staff review submitted comments to guide the development and include in subsequent updates of the SWMP.

MCM 7 – Public Outreach and Education/Public Involvement and Participation				
BMP	Tasks	Measurable Goal	Frequency	Responsible Dept.
Maintain pollution “hotline” for the reporting of illicit discharges.	Respond to calls or incidences affecting surface water quality of receiving stream segments.	Report number of responses/incidents involving storm water.	Annual	EHS
Publish announcements in Daily Texan	Develop and publish the announcements to educate students, staff, and faculty on MS4 protection, and proper waste management	Report publication dates of announcements in newspaper	Bi-annual	EHS
Storm Drain Labeling Program	Continue to inspect and label existing storm drains with missing labels. Label new storm drains as a result of development or redevelopment	Number of drains labeled in reporting year.	Annual	EHS
Public Involvement	Track comments or suggestions received from the public.	Number of comments received vs. additions or changes to SWMP.	Annual	EHS



The University of Texas at Austin

Storm Water Management Program Minimum Control Measure VIII:

Monitoring, Evaluation, and Reporting

VIII. Monitoring, Evaluation, and Reporting:

- H. Dry Weather Screening Program – Permittee will continue ongoing efforts to detect the presence of illicit connections and improper discharges to the MS4. All areas of the MS4 must be screened at least once during the permit term.*
- I. Wet Weather Screening Program – Permittee shall identify, investigate, and address areas within their jurisdiction that may be contributing excessive levels of pollutants to the MS4. The program must:*
 - 5. Screen the MS4 as specified in the SWMP; and*
 - 6. Specify the sampling and non-sampling techniques to be used for current screening and also for follow up screening.*
- J. Industrial and High Risk Runoff Monitoring Program – Program must include monitoring for pollutants in storm water discharges to the MS4 from university landfills; other treatment, storage, or disposal facilities from university waste (e.g. transfer stations, incinerators, etc...); hazardous waste treatment, storage, disposal and recovery facilities that are subject to Emergency Planning and Community Right-to-Know Act (EPCRA) Title III, Section 313. The program must include the collection of quantitative data on those parameters which have been identified by the permittee as a pollutant of concern for that facility, and shall:*
 - 7. Coincide with the corresponding industrial sector-specific requirements of the TPDES Multi-Sector General Permit or any other general permit...*
 - 8. Coincide with the monitoring requirements of any individual permit for the storm water discharges from that facility; or*
 - 9. Include pollutants of concern for the storm water discharge from that facility as identified by the permittee*
- K. Storm Event Discharge Monitoring – Permittee shall comply with the monitoring requirements in part IV of this permit in order to characterize the discharge from the MS4.*
- L. Floatables Monitoring – Permittee shall implement a floatables program as described in Part IV, Section B of this permit.*

VIII. Monitoring, Evaluation, and Reporting:

A. Dry Weather Screening Program

Over the course of previous permitting terms, UT Austin surveyed all outfalls and identified the location of dry weather flows. Annually, a chemical analysis is performed on identified dry weather flows to locate illicit discharges and improper

connections. Drainage maps of the Main Campus have been compiled at 1:200 scale on both planimetric and topographic bases. These maps incorporate the UT Austin storm sewer system and identify specific outfall points for each drainage area.

Several surveys of the Waller Creek drainage (a primary drainage from Main Campus) have been made during periods of dry weather and narrative descriptions of visual observations have been made for each outfall. A program is ongoing to identify sources of observed dry weather flows, using visual overland reconnaissance for obvious sources such as irrigation runoff, and manhole surveys of storm lines involved in the conveyance of dry weather flows.

During the annual chemical analysis, UT Austin screens dry weather flows from University drainage systems, with a particular emphasis on suspect flows, and also performs colorimetric analyses for Ph, chlorine, copper, phenol, detergents, and ammonia. UT Austin continues to monitor and mitigate any illicit discharges as a result of renovation, new construction, or other modifications that would have the potential to affect the MS4 system. All areas of the MS4 are screened at least once every permitting term.

B. Wet Weather Screening Program

In order to satisfy the original NPDES storm water permit requirements related to wet weather monitoring, UT Austin proposed utilizing a visual assessment to provide a post-storm event evaluation of the storm water runoff to campus area waterways. The program was implemented over the first MS4 permit term. The program has continued throughout the permit terms up to the current permit. UT Austin utilizes the wet weather screening program to accomplish the following objectives:

- Provide a tool to detect excessive levels of pollutants in waterways after storm events.
- Provide information related to the type of pollutants present in waterways after storm events.
- Provide a tool for investigating the origin of pollutants.
- Provide a limited assessment of storm water impact on aquatic life.
- Provide a tool to detect acute pollution events.

SCREENING LOCATIONS

Site Selection:

The screening sites within each watershed have been selected based on the following criteria:

- within UT Austin's permit area,
- along the main stem of the stream or main open channel system,
- distribution within permit area,

- ability for staff to access site safely,
- ability to determine the area discharging upstream of the site.

Site locations:

The Wet Weather Screening program completes visual assessments of storm water flow in the following watersheds:

Waller Creek Watershed

- Waller Creek at wooden bridge immediately east of Animal Resources Center (approx. 27th Street)
- Waller Creek at 24th Street
- Waller Creek at 21st Street
- Waller Creek at Martin Luther King Blvd.

Town Lake Watershed

- SW corner of Colorado Apartments ravine up from Town Lake

Johnson Creek Watershed

- North end of Creek along West side of Gateway Apts.
- South end of Creek along West side of Gateway Apts.

Shoal Creek Watershed

- Detention pond at SE corner of J. J. Pickle Research Campus
- SW corner of J. J. Pickle Research Campus (near intersection of Neils Thompson Dr. and Road "D")

PROGRAM PROCEDURES

Each site is screened at least once a year. A visual assessment of storm water flow is completed at each monitoring site within 24 hours of a storm event. For the purposes of this screening program, a storm event is defined as any event greater than or equal to 0.10 inches of rain. After determining that a storm event has occurred within the target watersheds, EHS staff conducts a visual evaluation related to the type of pollutants that may be present in the storm water flow at each monitoring site. EHS staff completes one data collection form in each watershed monitored. A copy of the Wet Weather Screening Field Observation Form is included in appendix F.

ANALYSIS

EHS staff reviews each screening site assessment for indications of elevated pollutant levels. If unusual conditions exist at a screening location, a complaint investigation

may be initiated. If, during an assessment, site conditions indicate that an acute pollutant event may have occurred, EHS spill response personnel are notified and investigators respond to initiate a detailed investigation of the situation.

RECORD KEEPING AND REPORTING

EHS staff will retain all wet weather screening field observation forms as required by the permit. EHS staff will also enter field data into a spreadsheet for electronic storage and reporting purposes. The results of the assessment activities described above are included and submitted to the TCEQ in the MS4 Annual Report.

C. High Risk Runoff Monitoring Program

As stated in MCM V, UT Austin does not operate industrial & high risk facilities as defined by 40 CFR 122.26(d)(2)(iv)(C), however, UT Austin has established a TPDES inspection program that includes random and planned inspections of University facilities, particularly those facilities that may be considered to be associated with high risk activities. UT Austin has an on-going program to identify potential sources of surface water pollution. Surveys of loading areas, garbage disposal facilities, and a general survey of the Main Campus grounds have been completed during previous permitting periods and continue to be monitored. A building survey program involving interviews with building personnel, site inspections, and reviews of mechanical and plumbing drawings was also completed during the first permit term. The information has been beneficial in identifying areas within the MS4 that require closer monitoring due to the nature of the discharges.

1. Outfall 001, sampled in conjunction with the wet weather monitoring program includes discharges from facilities which identified to be associated with high risk activities. These include the laboratories, cogeneration plant structures, chilling stations and hazardous waste accumulation facilities.
2. Many facilities in which activities or materials handled might be considered a risk to surface water quality have been designed or redesigned with architectural and structural controls to prevent storm water contact with potential pollutants. Hence, UT Austin requested a certification of "no exposure" from the managers of the following structures:
 - a. PPL (cogeneration plant complex, a three-building facility)
 - b. CS (chilling stations 3, 4, 5, and 6 four separate buildings)
 - c. SER14 (Hazardous Waste Container Storage Building [CTB])
 - d. PRC Accumulation Facility
 - e. Waste Management Area (PRC)
3. In lieu of monitoring these facilities as outlined at 40 CFR 122.26 (d)(2)(iv)(C), EHS conducted site inspections of each facility during the first permitting period.

EHS continues ongoing monitoring for any indication of pollutant discharges to the MS4 from these facilities.

D UT Austin will continue the Storm Event Discharge Monitoring Program that has been established under previous MS4 permits. UT Austin has elected to update the program in accordance with the requirements of Part IV Section A.1 for Representative Monitoring under the current TPDES MS4 permit.

1. Representative Monitoring Program

- a. Discharge monitoring samples for UT Austin shall be collected from Outfall 001 prior to entering Waller Creek. Outfall 001 is located under the Waller Creek crossing on 24th St. just east of San Jacinto Blvd.
- b. The monitoring frequency shall be once per period during each year of the permit. The monitoring periods are September-November, December-February, March-May, June-August.
- c. Samples shall be collected from a qualifying rain event of ≥ 0.1 " that occurs at least 72 hours from the previously measurable storm event of ≥ 0.1 ".
- d. Samples collected shall be composite samples for all pollutants except as described in the TPDES MS4 permit Part IV A.1a.(1).
- e. Each monitoring sample shall be analyzed for the following parameters, and shall be reported with the daily maximum concentration in milligrams per liter except as indicated below:

biochemical oxygen demand, 5-day (BOD)	total silver ($\mu\text{g/L}$)
chemical oxygen demand (COD)	total zinc ($\mu\text{g/L}$)
oil and grease	chlorides (as Cl)
total suspended solids (TSS)	sulfates
total dissolved solids (TDS)	DDT ($\mu\text{g/L}$)
total nitrogen	DDD ($\mu\text{g/L}$)
total kjeldahl nitrogen (TKN)	DDE ($\mu\text{g/L}$)
nitrate+nitrite	total PCBs ($\mu\text{g/L}$)
total phosphorus	Chlordane ($\mu\text{g/L}$)
dissolved phosphorus	E. coli (MPN/100 mL)
total cadmium ($\mu\text{g/L}$)	enterococci (cfu/100 mL)
total copper ($\mu\text{g/L}$)	pH (report daily minimum and daily maximum results in standard units, "S.U.")
total lead ($\mu\text{g/L}$)	hardness (as CaCO ₃)
	temperature ($^{\circ}\text{C}$)
	Atrazine ($\mu\text{g/L}$)

E Floatables Monitoring Program

UT Austin’s Floatable Monitoring program was initiated during the original SWMP development. The program established monitoring sites at two major outfalls just prior to their discharge into Waller Creek. Each monitoring site consists of a section of expanded metal that extends across the width of the outfall discharge point to trap floating materials as they flow toward the creek. Each station is anchored at the bottom and on both sides of the flared section of each headwall.

The site selection criteria for both stations were based on suitable conditions for access to cleaning, debris removal, and the ability to access the site in a safe and secure manner. The locations chosen were identified as having characteristics that would make it likely to be impacted by the diversified segments of the campus. These impacts consist of mixed educational and include educational and administrative buildings, student residences, pervious and impervious covers. Waller Creek in its entirety is approximately 9 miles in length and runs 1.1 miles north and south through UT Austin. The northern portion of the creek prior to university property is primarily urban; however, the floatable monitoring stations do not capture these flows.

Floatable Monitoring Site Locations

Watershed with Segment Number	Site No.	Monitoring Site Location	Land Use
Waller Creek 1429	1	Outfall 9031 (12’ x 8’)	Mixed educational
	2	Outfall 3692 (6’ x 4’)	

EHS staff monitors the condition of each station on a quarterly basis and within 24 hours after significant rainfall events of ≥ 0.50 ". Each site is cleaned on a quarterly basis at a minimum, or more frequently as conditions necessitate.

Cleaning of the monitoring stations occurs once flow has ceased. All trapped floating material caught in the station will be removed, bagged, measured, and disposed of appropriately. Dates, times, floatable station number and measurements will be logged in and tabulated on a quarterly basis. Measurements are converted in cubic yard estimates for reporting purposes. Logged information is reported in the MS4 Annual Report.

MCM 8 – Monitoring, Evaluation, and Reporting				
BMP	Tasks	Measurable Goal	Frequency	Responsible Dept.
Dry Weather Screening	Survey outfalls during dry weather periods to identify outfalls discharging.	Survey all outfalls over the course of the permitting term	Annual	EHS

Wet Weather Screening	Visually assess storm water quality from designated locations within 24 hrs. of qualifying rain event	Observe all locations and identify pollutant discharge events.	Annual	EHS
High Risk Runoff Monitoring	Monitor those facilities identified as potentially high risk within MS4 permitted area(s)	Continue ongoing program of inspection and monitoring of potentially high risk areas	Ongoing	EHS
Storm Event Discharge Monitoring	Collect samples at designated outfall from qualifying rain events	Collect sample and have analytical tests according to permit requirements to properly characterize discharge(s)	Quarterly	EHS
Related SMWP MCMs utilized to fulfill Monitoring, Evaluation, and Reporting component				
N/A				