UNIVERSITY OF TEXAS ARLINGTON

Storm Water Management Program 2020

Contents

Introduction

The University of Texas at Arlington (UTA) has implemented a Storm Water Management Plan covering that portion of the Municipal Separate Storm Sewer System (MS4) within the corporate boundary of the City of Arlington operated by UTA. UTA is a co-permitee with the City of Arlington (the City) and has an interlocal agreement with the City of Arlington to clearly identify the respective roles and responsibilities of the parties. That part of the municipal separate storm sewer system operated by UTA is located on lands held by The Board of Regents of The University of Texas System (Board) and over which the Board exercises jurisdiction.

The Board is authorized and directed to govern, operate, support, and maintain each of the component institutions that are now or may hereafter be included in a part of The University of Texas System. See Texas Education Code, Section 65.31(a). UTA is a component of The University of Texas System. See Texas Education Code, Section 65.02(a)(1). The Board further has the sole and exclusive management and control of the lands set aside and appropriated to, or acquired by, The University of Texas System. See Texas Education Code, Section 65.39.

The original Municipal Separate Storm Sewer System (MS4) Permit for the UTA storm sewer system was issued from the Environmental Protection Agency under the National Pollutant Discharge Elimination (NPDES) program in 1998. Under this original MS4 permit the University was a co-permittee with the City of Arlington. UTA and The City of Arlington 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)

The SWMP contained herein reflects the current and planned programs that will be maintained by UTA to address pollutants from entering the MS4 and to meet the requirements of the TPDES permit issued and effective August 15, 2019. The practices apply to all UTA departments that implement projects with a potential for stormwater impacts within the UTA MS4. The SWMP has been updated and modified to accurately reflect the efforts of UTA and will continue to be updated as programs change, and technology allows for greater efficiency of storm water management. Per TCEQ requirements, SWMP modifications will be made annually, based on assessing the effectiveness of measurable goals. The SWMP Minimum Control Measures that constitute the framework of the SWMP provide the permit language requirements followed by a description of the UTA program to meet the requirements with a summary table at the end of each listing BMPs, goals, reporting time frames, and UTA Departments responsible for the maintenance of the program components.

References

1. The City of Arlington, SWMP Permit Term: 2019 – 2024
2. Implementation Plan for Five Total Maximum Daily Loads for Bacteria in Four Austin Streams, Texas Commission on Environmental Quality, January 2015.
3. The University of Texas at Austin, SWMP February 2019.
4. SITES (v2) Rating System for Sustainable Land Design and Development, June 2015.
5. City of Arlington Design Criteria Manual, April 2020
6. National Management Measures to Control Nonpoint Source Pollution from Urban Areas, United States Environmental Protection Agency, November 2005.

***:** When practices in criteria manual conflict with UTA Standards, the University standards will supersede.

Acronyms

COA	City of Arlington
EH&S	Environmental Health and Safety
NCTCOG	North Central Texas Council of Governments
OFM	Office of Facilities Management
OFM-BO	OFM Building Operations
OFM-CPDM	OFM Construction Planning, Design and Management
OFM-FS	OFM Facilities Service
OFM-LS	OFM Landscape Service
OFM-EMMO	OFM Energy Management and Mechanical Operations
PTS	Parking and Transportation Service
UHD	University Housing and Dining
UTS-CP	UT System Capital Project

**When "All" is used, this refers to any department which contributes data to the UTA MS4 Annual Report

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Minimum Control Measure I

MS4 Maintenance Activities

MS4 Maintenance Activities Permit Language

i. *Structural Controls: To the maximum extent practicable (MEP), the permittee shall continue to operate and maintain the MS4, including any storm water structural controls in such a manner as to reduce erosion and the discharge of pollutants.*

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

iii. *Roadways: The permittee shall continue to 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

The storm drainage system requires regular maintenance and inspection to mitigate and/or reduce negative impacts to water quality and to ensure that control structures intended to prevent pollution are functioning. Maintenance activities include implementing a comprehensive program to address structural controls, floatables, and roadways to decrease potential impacts to the MS4.

A. Structural Controls

1. Inspection, Monitoring, and Maintenance:

   a. Open Channel Drainage Systems - 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 – UTA operates two detention type flood control structures. Additional details of these structural controls are discussed in MCM II Post-Construction Storm Water Control Measures in section A (2).

B. Floatables

1. The University has established a program to reduce the discharge of floatables and other solid wastes primarily through source control strategies. Ground maintenance crews with litter pickup duties are active on a daily basis. Numerous trash receptacles and recycling bins are distributed throughout the campus. These station locations were selected based on the size of the discharge outfall and the collection area served. UTA determined that these are an adequate representation of the floatable debris entering the MS4 system and they are maintained daily during business days.

   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 – UTA removes sediment, trash, and organic detritus on University owned streets, mall areas, sidewalks, and in parking garages. UTA may construction projects to utilize a contractor or rent sweeper for street and parking area during construction projects when necessary. UTA sweeps University owned streets on a as needed basis to accommodate increased leaf litter and recover sand from deicing operations in the winter.

Table MCM 1 – MS4 Maintenance Activities				
BMP	**Tasks**	**Quantifiable Target**	**Deadline/ 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.	Inspect and remove materials in 100% (all channels) of the open channel drainage system.	September of each year	EH&S OFM-LS
Open Channel Restrictions	Inspect culverts, bridges, exposed utility conveyances, and other civil or natural open channel restrictions, and remove sediment, debris and vegetation.	Inspect and remove obstructions at 100% of open channel restrictions.	December, March, June, and September of each year	EH&S OFM-LS
Storm Sewer Mains	Inspect, and if necessary clean storm sewer system mains and laterals	Inspect, and maintain 100% of MS4 system.	Full system by September 2023	OFM-PS
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 100% of existing structures to engineered specifications. Incorporate available flood control structures into 100% of applicable CIPs.	September of each year/September of 2023	EH&S OFM OFM-CPDM
Floatables Monitoring	Monitor and maintain floatable collection stations.	Maintain floatable collection stations and quantify collected floatables	monthly	EH&S OFM-LS
Street/ Impervious Cover Sweeping	Sweep university owned streets on construction projects on as needed basis.	Contractor to sweep major thoroughfares, parking garages, and applicable impervious surfaces.	Frequent as necessary	OFM-CPDM EH&S
Related SMWP MCMs utilized to fulfill MS4 Maintenance component				
MCM 2 – Post Construction Storm Water Controls				

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Minimum Control Measure II

Post-Construction Storm Water Controls Measures

Post-Construction Storm Water Control Measures Permit Language

i. *The permittee shall continue implementation and enforcement of the 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:*

   A. *limiting increases in erosion and the discharge of pollutants in storm water as a result of new development; and*

   B. *Reducing erosion and the discharge of pollutants in storm water from areas of redevelopment.*

ii. *The permittee shall continue to implement a comprehensive master planning process (or equivalent) 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.*

iii. *The permittee shall evaluate and revise the existing SWMP as necessary to ensure that this MCM includes a regulatory mechanism such as an ordinance to implement and enforce the 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.*

iv. *The permittee shall assess the impacts on receiving water(s) 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

UTA formed a SWMP working group composed of individuals from EH&S and individuals from OFM (Auxiliary Operations & Logistics, Building Operations, Construction Planning, Design & Management, Energy Management and Mechanical Operations, Facilities Service). The focus of the working group is to identify areas of improvement and implement feasible goals to enhance water quality across the MS4. The group met regularly during the SWMP review period and will continue to bi-annually to identify and address areas of further improvement.

Representatives of the SWM team shall review all major construction plans for potential impacts on storm water quality to determine if proposed construction and post construction meet the requirements of this SWMP and shall recommend drainage and runoff controls to reduce erosion and peak flows and to mitigate impacts on water quality. A representative of the SWM team shall attend meetings of the campus master planning committee to address storm water management concerns relating to future construction.

During the implementation of the original SWMP, EH&S along with the appropriate departments of the OFM, 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. EH&S and OFM 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.

UTA has a policy document called *Construction Site Procedures for Contractors* (Appendix B) 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, will be incorporated by reference into the construction standards manual UTA Design and Construction Standards. Private developments on lands leased from UTA are not subject to UTA Design and Construction Standards or this SWMP.

To help reduce pollution into the MS4, UTA requires any food waste compactors and permanent dumpsters with the potential to contaminate storm water to have plugs installed.

In addition, OFM Landscape Services performs maintenance activities along several sections of the unnamed tributary which enters Johnson Creek near the intersection of South Center Street and South Mesquite Street. This involves soil management, vegetation maintenance, and removing excessive accumulation of sediment. They also implement several other general landscape management activities. These include the use of only organic material on site and utilizing erosion and compaction measures to ensure soils can support plants. Susceptible areas are monitored, and slopes and banks are repaired when required.

1. New Development
   Design criteria and specifications for permanent and temporary structural controls contained in the UTA Design and Construction Standards for Erosion Control (Appendix C) reference the appropriate sections of the Texas Pollutant Discharge Elimination System (TPDES) and the City of Arlington's Drainage Criteria Manual. UTA contractors use these manuals, with any modifications approved by UTA, as design guidelines for structural controls.

   a. Pre-construction - Construction details are reviewed by one or more of UTA's SWM team to determine if erosion, sedimentation, and pollution controls meet the requirements of the UTA Design and Construction Standards or the University Construction Site Procedures for Contractors. UTA 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 UTA 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, UTA 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. OFM Construction Planning, Design and Management 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, UTA 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. EH&S will review redevelopment projects for opportunities to improve post-construction storm water management. Retrofits of existing storm water infrastructure will be considered, in order to achieve water quality improvements. When sites are redeveloped, the retrofit storm water infrastructure can continue to serve the new facilities.

   a. Comprehensive master plan
      The University's current Campus Master Plan was approved by The University of Texas System Board of Regents in May 2000. The intent at that time was to update the Master Plan every 5 to 7 years. At the core of any campus master plan is the alignment of the physical development of the campus to the strategic or academic plan. This ensures that specific planning priorities are supported, furthering the mission of the institution. UTA will develop a storm water quality master plan that identifies short- and long term improvements.

   b. Regulatory mechanism
      The mission of the UTA Environmental Health & Safety (EH&S) Office is to promote a safe and healthy working, learning, and living environment for the campus community and protect the natural environment against adverse impact. EH&S provides services that support and enhance the University's efforts in research and education by providing technical consultation, training, investigation, and inspection to ensure compliance with applicable federal, state, and local laws and regulations. UTA's EH&S policies are found in the University Procedures.

   c. Flood Control Projects

      The Office of Facilities Management shall recommend appropriate approaches to flood problem areas and shall evaluate opportunities for retrofitting existing structural controls. UTA OFM has taken the opportunity to improve drainage on campus in the following flood prone area;

      - 1st Street and Spaniolo (Pecan) Street - Underground drainage upgrades, curb inlets were installed in three blocks on 1st Street and curb inlets were installed in four blocks on Spaniolo (Pecan) street.

      - College Park Center- Added an additional discharge line and increase the drainage pipe size from 24 inches to 48 inches.

      - The Green at College Park located at 601 S. Pecan Street, is a focal point along the City of Arlington's Center Street Pedestrian Trail. An urban oasis and green space for the University community, neighbors and downtown visitors, The Green features a large lawn, a curved stone wall that offers seating, paving materials made from recycled bottles that will allow water to permeate, native grasses, adaptive

plants, and a dry creek bed that will help manage rainwater and storm water runoff that drains into the unnamed tributary that flows into Johnson Creek.

- Mitchell Street and S. West Street- As a joint venture with the City of Arlington and UTA 8 new street inlets and a 60" discharge line was added taking the storm / rain water directly to the creek for discharge.

- Greek Row Drainage Corrections - UTA cleaned the creek to maximize drainage and also added safe guards around inlets. Scope also included major repair work on drainage lines under Greek Row. Removed three residences to create a retention area for heavy rain events.

- West Campus Development Project – Included the construction of a three story parking garage, West Hall, UTA's newest 500 bed residence hall, and The Commons, a dining facility. Part of this project included an underground drainage system for the entire project taking all run off directly to the unnamed tributary that flows into Johnson Creek.

- Science and Engineering Innovation and Research Building (SEIR) - As part of drainage control for the construction of the SEIR building, UTA installed an underground retention system and added a new discharge system.

Table MCM 2 – Post Construction SW Controls				
BMP	**Tasks**	**Quantifiable Target**	**Deadline/ Frequency**	**Responsible Dept.**
New Development / Redevelopment	Update and implement design and construction standards for structural BMPs	Review 100% of projects >1 acre for compliance with standard to minimize storm water pollution	September of each year	All
Comprehensive Master Plan	Follow guidance of framework plan and develop a storm water master plan	Gather input on stormwater master plan from 3 key stakeholder groups at UTA and utilize SITES in the interim.	January 2021	All
Regulatory Mechanism	Enforce and update the policy when required	Conduct monthly SWPPP inspections at 100% of construction sites >1 acre.	Every month	All
Flood Control Projects	Maintain flood control structures according to designed specifications.	Maintain 100% of existing structures to engineered specifications	September of each year	OFM
Related SWMP MCMs utilized to fulfill Post-Construction Controls component				
MCM 1 – MS4 Maintenance Activities				
MCM 6 – Construction Site Storm Water Run off				

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Minimum Control Measure III

Illicit Discharge Detection and Elimination

Illicit Discharge Detection and Elimination

i. *The permittee shall prohibit illicit non-storm water discharges from entering the MS4. The permittee shall continue to implement a program, including a schedule, to detect and eliminate illicit discharges and improper disposal into the MS4.This program must include:*

   A. *A description of the program, including inspection to implement enforce an ordinance, orders, or similar means to prevent illicit discharges to the MS4.*

   B. *A description of procedures to conduct on-going field screening activities, including areas or locations that will be evaluated by such field screens;*

   C. *A description of procedures to be followed to investigate portions of the MS4 that indicate a reasonable potential of containing illicit discharges or other sources of non-stormwater;*

   D. *A description of procedures to prevent, contain, and respond to spills that may discharge into the MS4;*

   E. *A description of a program to promote, publicize, and facilitate public reporting of illicit discharges or water quality impacts associated with discharges from the MS4;*

   F. *A description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials; and*

   G. *A description of controls to limit infiltration of seepage from municipal sanitary sewers to the MS4 where necessary.*

ii. *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:*

   A. *Discharges regulated by a separate NPDES or TPDES permit.*
   B. *Discharges that neither requires a NPDES or TPDES permit or that do require a NPDES nor TPDES permit application*
   C. *Miscellaneous non-stormwater discharges (see list in iv. below)*

iii. *The SWMP must identify any all categories of miscellaneous, non-storm water discharges that may be discharged into the MS4, and include a description of any local controls or conditions placed on discharges exempted from the prohibition on non-stormwater.*

iv. *Miscellaneous non-storm water discharges that may be authorized by the permittee include:*

A. *water line flushing;*

B. *landscape irrigation;*

C. *diverted stream flows;*

D. *rising ground waters;*

E. *uncontaminated ground water infiltration;*

F. *uncontaminated pumped ground water;*

G. *discharges from potable water sources;*

H. *foundation drains;*

I. *air conditioning condensation;*

J. *irrigation water;*

K. *springs;*

L. *water from crawl space pumps;*

M. *footing drains;*

N. *lawn watering;*

O. *street wash water;*

P. *individual residential vehicle washing;*

Q. *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;*

R. *flows from riparian habitats and wetlands;*

S. *dechlorinated swimming pool discharges;*

T. *other allowable non-storm water discharges listed in 40 CFR § 122.26(d)(2)(iv)(B)(1);*

U. *other allowable non-storm water discharges listed in the TPDES Construction General Permit No. TXR150000 and TPDES Multi-Sector General Permit No. TXR050000; and*

V. *other similar occasional incidental non-storm water discharges.*

v. Program descriptions must address discharges or flows from fire-fighting activities only where such discharges or flows are identified as significant sources of pollutants.

vi. *The permittee shall prohibit any individual non-storm water discharge otherwise exempted under this paragraph from the prohibition on non-storm water discharges if it is determined by the permittee that the discharge(s) is contributing significant amounts of pollutants to the MS4.*

vii. *Elimination of Illicit Discharges and Improper Disposal*

A. *The permittee shall continue to require the operator of an illicit discharge or improper disposal practice, to eliminate the illicit discharge or stop the improper disposal practices as quickly as reasonably possible. If the elimination of an illicit discharge within 30 days is not possible, the permittee shall continue to require the operator of the illicit discharge to remove the discharge according to an expeditious schedule. Until the illicit discharge or improper disposal is eliminated, the permittee shall continue to require the operator of the illicit discharge to take all reasonable measures to minimize the discharge of pollutants to the MS4.*

B. *The permittee shall keep a list of techniques used for detecting illicit discharges and revise the list as necessary; and use appropriate actions and enforcement procedures for removing the source of an illicit discharge and revise when necessary.*

viii. *Overflows and Infiltration. The permittee shall continue to implement controls where necessary and feasible to prevent dry weather and wet weather overflows from sanitary sewers into the MS4. The permittee shall continue to limit the infiltration of seepage from university sanitary sewers in to the MS4.*

ix. *Household Hazardous Waste and Used Motor Vehicle Fluids. The permittee shall prohibit the discharge or disposal of used motor vehicle fluids and household hazardous wastes, and the intentional disposal of collected quantities of grass clippings, leaf litter, and animal wastes in to the MS4.*

A. *The permittee shall continue to ensure the implementation of programs to collect used motor vehicle fluids (including at a minimum, oil and antifreeze) and household hazardous waste materials (including paint, solvents, pesticides, herbicides, and other hazardous materials) for recycling, reuse, or proper disposal. Such programs shall be readily available to the residential sector within the MS4 and shall be publicized and promoted on a regular basis.*

B. *Household hazardous waste collection centers which are operated by the permittee as a SWMP element are not an industrial activity requiring a separate TPDES authorization for the discharge of storm water.*

x. *MS4 Screening and Illicit Discharge Inspections. To locate portions of the MS4 with suspected illicit discharges and improper disposals, the permittee shall continue to implementation of a Dry Weather Screening Program described in Part III Section B.2.h.i of this permit. 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.

xi. *Priority Areas. The permittee shall develop a list of priority areas likely to have illicit discharges. The permittee shall continue to evaluate and update this list each year and report the results in the annual report.*

xii. *NPDES and TPDES Permittee List. The permittee shall maintain an updated 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.*

xiii. *MS4 Map*

A. *The permittee shall maintain a current, accurate MS4 map of the location of all MS4 outfalls; the names and locations of all waters of the U.S. that receive discharges from the outfalls; and any additional information needed by the permittee to implement its SWMP. Where possible, the permittee shall use the Global Positioning System (GPS) to locate outfalls and photographs for documenting baseline conditions.*

B. *The permittee shall document the source information used to develop the MS4 map, including how the outfalls are verified and how the map will be regularly updated.*

C. *New MS4 Areas: The permittee shall continue to develop and implement procedures to ensure that the above mapping requirements in Part II.B.2.c.xiii are met for all new portions of the MS4.*

D. *Existing MS4 Areas: The permittee shall continue to demonstrate that it has evaluated all existing portions of the MS4 and that the mapping requirements have been implemented to the maximum extent practicable.*

xiv. *Spill Prevention and Response. The permittee shall continue to implement existing programs which prevent, contain, and respond to spills that may discharged into the MS4. The spill response programs may include:*

A. *a combination of spill response actions by the permittee or another public or private entity; and*
B. *legal requirements for private entities within the jurisdiction of the permittee.*

III. Illicit Discharge Detection and Elimination

A.1 The UTA EH&S office monitors all storm water regulated activities, including small and large construction sites with NPDES or TPDES permits. EH&S will continue to monitor activities to ensure discharges from any permittees do not contribute pollutants into the UTA MS4.

A.2 As stated in III.A.1 all permitted operators on UTA MS4 properties will be monitored to prevent potentially polluted runoff from entering the UTA MS4.

A.3 (a) UTA maintains will develop an online Discharge Request system for all batch discharges of water to the sanitary and/or storm sewer systems on UTA Campus. EH&S will maintain and approve discharges after reviewing the information submitted and consulting with the requestor to prevent unintentional discharges of prohibited pollutants to sewer systems. This system will allow EH&S staff to analyze non-storm water discharges prior to release in order to investigate, and potentially sample to identify any pollutants. Those discharges that are acceptable under the TPDES permit will also be subject to this review and approval process. 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.

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

- *Water line flushing*
- *Landscape irrigation*
- *Diverted stream flows*
- *Rising ground water*
- *Uncontaminated pumped ground water*
- *Discharges from potable water sources*
- *Foundation drains*
- *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*
- *A/C condensate*
- *Water from crawl space pumps*
- *Footing drains*
- *Hand watering*
- *Street and other wash water using only potable water w/o detergents/chemicals*
- *Individual residential vehicle washing*
- *Program descriptions must address discharges or flows from firefighting 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 EH&S.

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 required. 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, EH&S and OFM 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 UTA 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) UTA OFM and EH&S will implement a dye testing program to identify and eliminate illicit connections to the storm sewer system as part of the SWMP. The dye testing will test suspected buildings on UTA. All permanent illicit discharges identified under this program will be addressed during this initiative to prevent cross contamination of storm water discharges with sanitary discharges. Whenever an illicit discharge is suspected, UTA 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 UTA will 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

B.2 (b) UTA EH&S office 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 EH&S, an investigation into the source of the discharge is initiated. UTA OFM or EH&S will affect an immediate cessation of illicit discharges upon notice of such discharge to OFM or EH&S. The Directors of OFM and EH&S 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 30 days of discovery. If correction cannot be accomplished within

30 days, an expeditious schedule will be established as to when the connection is expected to be corrected.

C. UTA 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.

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

1. Motor Vehicle Fluids – All UTA 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. Fleet maintenance facilities utilize EH&S for spill response and have posted notices to call EH&S should a spill occur.

   a. Motor Oil - UTA 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 EH&S. 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 - UTA has established a policy and program to collect and properly manage antifreeze wastes.

2. Hazardous Waste Materials - UTA is a generator of hazardous wastes and maintains multiple EPA ID numbers. UTA maintains a hazardous waste accumulation facility. The hazardous waste accumulation facilities are secured, limited access buildings. These facilities are operated as 90-day accumulation facilities consistent with UTA's status as a large quantity generator. The hazardous waste management program is publicized to University departments through training workshops, periodic newsletters, and advertisements. Hazardous wastes are picked up from the point of generation and

transported to the accumulation facilities by the EH&S 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. UTA employs full-time safety specialists 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 safety specialists 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. UTA employees transport these wastes only within the UTA property where the waste was generated. The accumulation facility is inspected on a weekly basis by a safety 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.

UTA 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 - UTA's policy for disposal of animal wastes is as follows:

    a. Research Laboratory Animals - UTA maintains an Industrial Wastewater Permit from the City of Arlington (COA) for the disposal of sanitary wastes through the sewage conveyance system to publicly owned treatment works operated by the COA. In the event that 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 on-site in our TCEQ permitted 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.

F. UTA monitors activities on the covered campus 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. EH&S continuously monitors campus activity to identify such discharges and works with operators to ensure permit requirements are met.

G. UTA OFM Construction Planning, Design and Management maintains composite utility maps for sewer systems on the UTA Campus. These map(s) include locations for MS4 discharge outfalls, and all receiving waters. The MS4 map(s) were developed 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. UTA 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. EH&S Training Programs – The University provides hazard communication & waste management training as required by Texas law. Hazard communication training includes, among other information, information on interpreting labels, and 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 UTA who manage chemicals or handle hazardous materials, including teaching assistants. EH&S requires additional site-specific training relating to chemical safety and disposal procedures by Principal Investigators.

    Additionally, HAZWOPER training is made available to UTA employees responsible for managing hazardous wastes. 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 EH&S web page and other appropriate means of communication.

    b. Other Educational programs - UTA 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 B).

EH&S is currently developing a training module that includes stormwater components that must be met by all campus stakeholders when projects are ongoing. This training will outline the requirements of the MS4 permit, proper waste disposal, dye testing, required BMPs, among other topics.

In addition, UTA will complete 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 D.

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 UTA properties which threaten or impact surface water quality, regardless of whether the responsible party is affiliated with UTA. Staff members coordinate response and clean-up activities with appropriate state and local governmental offices and ensure that any necessary corrective action is taken. EH&S is prepared to respond to spill incidents originating on UTA 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 COA.

   Equipment and Materials - UTA 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.

<u>Structural Components</u>

1. Prevention Measures

   a. Underground Storage Tanks - UTA 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, UTA 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.

Table MCM 3 – Illicit Discharge Detection and Elimination				
BMP	**Tasks**	**Quantifiable Target**	**Deadline/ Frequency**	**Responsible Dept.**
Monitor permitted discharges	UTA EH&S staff monitor NOI(s) submitted and corresponding permitted activities to prevent unauthorized discharges.	Review 100% of submitted NOIs to prevent unauthorized discharge. Report number of CSN's submitted as well as the number of NOI's received	September of each year	EH&S
Monitor Non-storm water discharges	UTA staff to monitor visible discharges during dry periods	Investigate 100% of observed or reported potential illicit discharges. Track the number of potential illicit connections reported by UTA campus community	Investigated upon receipt of report	EH&S OFM
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	EH&S staff respond to 100% of submitted requests to review process generating water, and areas proposed for discharge.	Each occurrence	EH&S
Maintain sanitary sewer system	OFM will conduct surveillance and maintenance of damaged sanitary lines to prevent blockage and bypass	Report on repairs, maintenance, inspections conducted by UTA personnel	September of 2020	OFM
		Post RFP for sanitary sewer system inspection contract	September of 2021	
		Repair 50% of deficiencies that could adversely affect receiving stream quality, as identified during inspection	September of 2023	
		Repair remaining 50% of deficiencies that could adversely affect receiving stream quality, as identified during inspection	September of 2024	

Table MCM 3 – Illicit Discharge Detection and Elimination				
BMP	**Tasks**	**Quantifiable Target**	**Deadline/ Frequency**	**Responsible Dept.**
Grease trap service/ maintenance	Service all pretreatment devices according to local requirements to minimize overflows	OFM-UHD to maintain contract with licensed service provider to pump grease traps. FS-FOM to repair/maintain grease traps. EH&S to ensure 100% of traps are serviced according to local requirements. Track the number of grease traps serviced.	September of each year	OFM-UHD EH&S
Spill Response Program	Maintain 24-Hr./7-day/week spill response program to minimize unauthorized discharges to MS4	EH&S to maintain appropriate spill response equipment, personnel, and staffing to allow for expeditious response to accidental spills that may enter MS4. Respond to 100% of applicable reported spills/incidents. Track the number of spills/incidents reported	September of each year	EH&S
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. Collect and dispose of 100% of regulated wastes. Track the amount of waste disposed.	September of each year	EH&S OFM
Maintain and update MS4 map(s)	Update and revise existing MS4 map(s)	Annually update stormwater system map.	September of each year	OFM-CPDM EH&S
Maintain SPCC plan(s) for USTs & ASTs	Implement and maintain SPCC plan requirements	Review and update the UTA SPCC plan once a year to minimize pollutants from UST/AST facilities.	December of each year	EH&S OFM
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				

Table MCM 3 – Illicit Discharge Detection and Elimination				
BMP	**Tasks**	**Quantifiable Target**	**Deadline/ Frequency**	**Responsible Dept.**

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Minimum Control Measure IV

Pollution Prevention/Good Housekeeping for University Operations

Pollution Prevention/Good Housekeeping Program for University Operations Permit Language

i. *Pollution Prevention and Good Housekeeping Program. The permittee shall continue to implement a pollution prevention and good housekeeping program for municipal operations. The program must include MCMs that address:*

   A. *Identification and implementation of good housekeeping and BMPs to reduce pollutant runoff from municipal operations such as: street and highway maintenance, parks, municipal office buildings, and water treatment plants.*

   B. *Reduction of discharge of pollutants to the MEP from road repair, equipment yards, material storage facilities, or maintenance facilities;*

   C. *Training for all employees responsible for university operations, which includes information on preventing and reducing storm water pollution from all municipal operations subject to this MCM; and*

   D. *Within one year from the date of permit issuance, implement a program for structural control maintenance.*

ii. *Waste handling. Permittee shall ensure that waste removed from the MS4 or other university operations is properly disposed.*

iii. *Pesticide, Herbicide, and Fertilizer Application. The permittee shall continue to implement controls to reduce the discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers, by its employees or contractors, to public right-of ways, parks or other university property. If the permittee has jurisdiction over lands it does not directly own (e.g. incorporated city), it shall implement programs to reduce the discharge of pollutants related to the commercial application and distribution of pesticides, herbicides, and fertilizers on those lands.*

iv. *List of Municipal Facilities. The SWMP must include a list of all municipal operations subject to the municipal operation, maintenance and training programs listed under this MCM and all municipally owned and operation industrial activities subject to TPDES or NPDES industrial storm water regulations.*

IV. Pollution Prevention / Good Housekeeping Program for University Operations

A. UTA EH&S conducted an investigation of university operations storage yards on campuses to identify those with a potential to contribute pollutants to storm water runoff. EH&S works with the responsible departments to develop best management practices to minimize storm water impacts.

1. As was discussed previously in MCM 1, UTA OFM removes sediment, trash, and organic detritus on mall areas, sidewalks, and in parking garages. UTA may utilize a contractor for street and parking area sweeping services. UTA sweeps University owned streets on an as needed basis and as needed to accommodate increased leaf litter and to recover sand from deicing operations in the winter.

   UTA OFM is 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. UTA EH&S will staff inspect the campus 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. EH&S will work with responsible departments who oversee the areas identified during the investigation to ensure UTA 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 UTA.

B. UTA conducts storm drain cleaning annually on 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 EH&S Hazardous Waste Program.

C. UTA 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 UTA 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 UTA 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 un-vegetated 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.

Main Campus:				
Building	**Location**	**Inventory (exposed)**	**Level of concern 0-4**	**Responsible Department**
Facilities Management Complex	1225 W. Mitchell	Trash/Recycling dumpsters	2	OFM
		Sand/dirt storage area	3	OFM
		Fleet parking area	1	OFM
Facilities Management Complex	Electric Shop/ 1225 W. Mitchell	Storage yard for Electrical Dist.	1	OFM-BO
		Cable rolls for Electrical Dist.	0	OFM-BO
		Piping for Mechanical Dist.	1	OFM-BO
Facilities Management Complex	Fleet Maintenance/ 1225 W. Mitchell	Vehicles/equipment	2	OFM-FS
Facilities Management Complex	Capital Asset Management/ 1225 W. Mitchell	Outside storage surplus materials	2	CAM
		Scrap Metal Dumpster	1	CAM
		Equipment storage	2	CAM
Facilities Management Complex	Landscaping/ 1225 W. Mitchell	Fertilizer storage	1	OFM-LS
		Fuel storage	2	OFM-LS
Civil Engineering Building	1221 W. Mitchell	Concrete work	0	CE
		Hydraulic equipment	1	CE
		Scrap metal	3	CE
Compost Site	Landscaping/ 500 Summit Ave.	Mulch piles	1	OFM-LS
		Topsoil storage	1	OFM-LS
		Brush piles	0	OFM-LS
Material Accumulation Center	1000 S. Davis Street	Hazard Waste Accumulation Center	3	EH&S
University Center	200 W, 1st Street	Trash Dumpster	2	OFM-UHD
		Compactor	2	OFM-UHD

Table MCM 4 – Pollution Prevention / Good Housekeeping for University Operations				
BMP	**Tasks**	**Quantifiable Target**	**Deadline/ Frequency**	**Responsible Dept.**
Inventory	Develop and maintain inventory of areas falling under MCM.	Reach out to the relevant departments to ensure list is accurate. Annually inspect 100% of locations.	September of each year	EH&S
Training	Develop training to provide to departments operating affected areas	Perform 1 training per year, to be revised prior to delivery. Number of employees received training.	September of each year	EH&S OFM-FS OFM-LS OM-BO OFM-UHD CAM
Related SMWP MCMs utilized to fulfill MS4 P2 and Good Housekeeping for University Operations				
MCM 2 – Post Construction Storm Water Controls				

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Minimum Control Measure V

Industrial and High Risk Runoff

Industrial and High Risk Runoff Permit Language

i. The permittee shall continue to improve its existing programs to identify and control pollutants in storm water dischargers to the MS4 from municipal landfills; other treatment, storage, or disposal facilities from municipal waste (e.g. transfer stations, incinerators, etc…); hazardous waste treatment, storage, disposal and recovery facilities; facilities that are subject to Emergency Planning and Community Right-to-Know Act (EPCRA) Title III, Section 313; and any other industrial or commercial discharge the permittee determines is contributing a substantial pollutant loading to the MS4.

ii. This MCM must include:

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

B. An industrial and High Risk Monitoring Program as described in Part III, Section B.2.h.iii of this permit.

IV. Industrial and High Risk Runoff

UTA 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, UTA 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, UTA has not identified any industrial facilities on its properties that contribute a substantial pollutant loading to the storm sewer system.

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Minimum Control Measure VI

Construction Storm Water Runoff

Construction Site Storm Water Runoff Permit Language

i. *The permittee shall continue to implement a program to reduce the discharge of pollutants into the MS4 from construction sites. This MCM must include an ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State or local law. The permittee shall continue to ensure that the existing program is revised as necessary to address construction projects that result in a land disturbance of one acre or more, including activities disturbing less that one acre that are part of a larger common plan of development or sale that would disturb one acre or more.*

ii. *This MCM must include:*

A. *requirements to use and maintain appropriate erosion and sediment control BMPs to reduce pollutants discharged to the MS4 from construction sites;*

B. *requirements for construction site operators to address the control of site waste, such as discarded building materials, concrete truck washout water, chemicals, litter, and sanitary waste;*

C. *requirements for inspections of construction sites and enforcement of control measure requirements;*

D. *requirements for the permittee to provide appropriate education and training measures to construction site operator;*

E. *notifications to construction site operators of their potential responsibilities under the NPDES or TPDES permitting regulations and permits for construction site runoff;*

F. *procedures for site plan review that incorporate consideration of potential water quality impacts;*

G. *procedures for receiving and considering input received from the public; and*

H. *a description of a program to implement and maintain structural and non-structural BMPs to reduce pollutants in stormwater runoff from construction sites to the MS4, which must include a description of the following:*

1) *procedures for site planning which incorporate consideration of potential water quality impacts;*

2) *requirements for nonstructural and structural best management practices;*

3) *procedures for identifying priorities for inspecting sites and enforcing control measures that consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality; and*
4) *appropriate educational and training measures for construction site operators.*

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

iv. The permittee shall ensure that this MCM includes the following elements in addition to the ones listed above:

A. The permittees shall require construction site contractors 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) at the construction site that may cause adverse impacts to water quality.

B. The permittee shall develop procedures for site plan reviews that incorporate consideration of potential water quality impacts, receipt and consideration of information submitted by the public, and site inspections and enforcement of control measures to the extent allowable under state and local law.

VI. Construction Site Storm Water Runoff

A. UTA's EH&S policies, procedure and standards protects the environmental health and safety of the campus community and visitors. The Director of EH&S the authority to terminate an activity or operation that threatens the safety of people or the environment. EH&S ensures water quality compliance for all construction sites, including those less than 1 acre, with the requirement of a site-specific erosion and sediment control plan. For sites larger than 1 acre, the appropriate TPDES procedures are followed.

B. UTA has maintained a construction storm water program since the first permitting period. The following control measures 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 erosion and sediment control BMPs – UTA 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 UTA personnel identified by various job titles depending on department.

2. Requirements to control site waste – UTA requires contractors to properly store site wastes, discarded materials, chemicals, litter, and sanitary waste. These items are monitored by the project teams and EH&S.

3. 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 the Director of EH&S. Construction inspectors review the work of the contractors on a regular basis and execute a weekly check-off inspection for properly functioning BMPs. EH&S makes both announced and unannounced reviews of construction sites 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.

4. Appropriate Education and Training Measures for Construction Site Operators, including UTA's 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. OFM CPDM issues new contractors a *Contractors Handbook* that includes several environmental topics with protection of storm water as a recurring topic. In addition, EH&S provides briefs and training workshops as requested to UTA construction inspectors and coordinators to familiarize them with construction site pollution control BMPs and other requirements.

5. Contractor Notification of Potential Responsibilities for Construction Site Runoff – In addition to references to this SWMP in the construction standards manual, UTA 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.

6. Site Plan Review and Consideration of Water Quality Impacts – OFM and EH&S staff review design documents at multiple stages of design in order to ensure that the proposed projects meet MS4 requirements and are taking steps to improve water quality.

7. Public Input Considerations – EH&S organized and facilitated a working group involving key departments and stakeholders throughout the University community to ensure a wide range of input was reflected in the Stormwater management program.

8. Maintenance programs for structural and non-structural BMPs – Several UTA department's partner to provide ongoing maintenance of the water quality BMPs, including but not limited to OFM Landscaping, General Construction Shops and UHD.

C. OFM and EH&S maintains a list of all construction activities that occur on UTA campuses affected by this SWMP.

Previous sections of this MCM and SWMP discussed the provisions that require construction site operators to implement erosion and sediment control BMPs to minimize pollutants from leaving construction sites and entering the UTA MS4.

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

Table MCM 6 – Construction Site Storm Water Runoff				
BMP	**Tasks**	**Quantifiable Target**	**Deadline/ 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 at 100% of pre-planning and construction bid meetings to notify contractors of compliance expectations.	September of each year	EH&S & OFM partners w/ construction projects
Require the designation of a Vegetation and Soils Protection Zone	Before construction, project team and contractors will create specific strategies to minimize disturbance and address treatment plans for restoration.	Analyze 3 projects for feasibility of VSPZ implementation and report square footage of protected soils/vegetated areas where implemented.	September of each year	EH&S, OFM-LS & partners w/ construction projects
Inspection of construction sites for compliance with phase control installation and maintenance	EH&S personnel, construction inspectors and coordinators to conduct regular inspections of construction sites.	Perform monthly construction inspections at all projects with SWPPP.	September of each year	EH&S & OFM partners w/ construction projects
Maintain and distribute guidance documents developed	Maintain EH&S "Construction Site Procedures for Contractors"	Include documents in distribution of information disseminated to 100% of new contractors at the start of construction projects	September of each year	EH&S & OFM partners w/ construction projects
Maintain list of permitted construction sites	EH&S to maintain a list of all construction sites occurring on the UTA campus affected by this SWMP	Maintain list containing 100% of permitted construction sites.	September of each year	EH&S
Maintain list of BMPs installed at construction sites	EH&S to maintain a list of BMPs installed at construction sites >1 acre	Maintain a list detailing the number of construction sites using specific types of BMPs	September of each year	EH&S
Related SMWP MCMs utilized to fulfill Construction Site Storm Water Runoff component				
MCM 3 – Illicit Discharge Detection and Elimination				

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Minimum Control Measure VII

Public Education and Outreach / Public Involvement and Participation

Public Education and Outreach/Public Involvement and Participation Permit Language

A. Public Education and Outreach

A. The 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. The permittee shall 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. The permittee shall continue to implement a public education and outreach program component to promote, publicize, and facilitate:

1) public reporting of illicit discharges or improper disposal of materials, including floatables, into the MS4;

2) the proper management and disposal of used oil and household hazardous waste; and

3) the proper use, application, and disposal of pesticides, herbicides, and fertilizers by public, commercial, and private applicators and distributors.

B. Public Involvement and Participation: The permittee shall continue to develop and implement a public involvement and participation program which must comply with State, Tribal, and local public notice requirements. This program 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. UTA will 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. UTA EH&S will establish an "online pollution reporting form" to facilitate reporting of observed illicit discharges or other environmental concerns by the public. The online reporting form we be forwarded to EH&S Office email. EH&S will investigate all reported incidents involving spills or other environmental emergencies.

Twice a year EH&S will publish an announcement in the Safety Matters newsletter 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 will be also available on the EH&S web site at all times. EH&S staff will also participate in outreach events on campus, one such outreach event is the UTA Earth Day.

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, UTA will 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 D.

    b. UTA is not permitted to collect household hazardous waste (HHW) from campus residents. The majority of campus residents are also City of Arlington residents, and as such all residents of the City of Arlington are eligible to participate in the City's HHW program allowing for the drop off of accumulated HHW. UTA 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.

    UTA Facility Landscaping Services, University Housing and Dining, 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 UTA 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 UTA 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, UTA notifies contracted commercial landscapers associated with new construction and re-vegetation projects of the required compliance with the procedures of this SWMP.

B. EH&S organized and facilitated a working group involving key departments and stakeholders throughout the University community to ensure a wide range of input was reflected in the Stormwater management program.

Table MCM 7 – Public Outreach and Education/Public Involvement and Participation				
BMP	**Tasks**	**Quantifiable Target**	**Deadline/ Frequency**	**Responsible Dept.**
Maintain pollution "online report form" for the reporting of illicit discharges.	Respond to reports or incidences affecting surface water quality of receiving stream segments.	Report 100% of responses/incidents involving storm water.	September of each year	EH&S
Publish announcements in EH&S newsletter and website	Develop and publish the announcements to educate students, staff, and faculty on MS4 protection, and proper waste management	Publish 1 announcement in newsletter	Newsletter: September and March of each year	EH&S
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	Label 10 existing storm drains and 100% of new storm drains	September of each year	EH&S
Stakeholder Involvement	Meet with SWMP Working Group annually to discuss areas of improvement	Report 100% of proposed additions or changes to SWMP.	September of each year	EH&S

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Minimum Control Measure VIII

Monitoring, Evaluation, and Reporting

Monitoring, Evaluation, and Reporting Permit Language

The permittee shall continue to implement, and modify as necessary, the following monitoring or screening programs for dry weather, wet weather, and industrial and high-risk runoff:

i. *Dry Weather Screening Program. This program shall continue the permittee's 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. The permittee may utilize modified screening methods based on experience gained during previous field screening activities; the screening methods are not required to conform to the protocol in 40 CFR § 122.26(d)(1)(iv)(D). Sample collection and analysis is not required to conform to the requirements of Part V, Section B.2. of this permit, "Test Procedures;"*

ii. Wet Weather Screening Program. The permittee shall identify, investigate, and address areas within their jurisdiction that may be contributing excessive levels of pollutants to the MS4. The wet weather screening program must:

A. Screen the MS4 as specified in the SWMP; and

B. Specify the sampling and non-sampling techniques to be used for current screening and also for follow up screening.

Sample collection and analysis for the Wet Weather Screening Program is not required to conform to the requirements of Part V, Section B.2. of this permit, "Test Procedures;" however, samples taken to confirm (e.g., in support of possible legal action) a particular illicit connection or improper disposal practice must conform to the requirements of PartV.B.2.

The permittees shall develop an implementation schedule for watershed protecting measures, based on the results of wet weather screening data collected in the first permit term. The implementation schedule shall also include an evaluation of the need for additional watershed improvement projects. The implementation schedule and evaluation shall be submitted to the TCEQ's Stormwater Team (MC-148) within 90 days of permit issuance.

iii. Industrial and High Risk Runoff Monitoring Program.

A. This program must include monitoring for pollutants in storm water discharges to the MS4 from from Type 1 facilities and Type 2 facilities.The program must include an inspection program to look closely at the activities of facilities capable of discharging industrial and high-risk runoff to the MS4. The inspection plan must identify the facility, risk level, and an inspection schedule.
Type 1 facilities include: municipal landfills; hazardous wastetreatment; storage, disposal and recovery facilities; facilities that are subject to Emergency Planning and

Community Right-to-Know Act (EPCRA) Title III, Section 313; and other industrial facilities that the permittees determine are contributing a substantial pollutant loading to the MS4.

Type 2 facilities include: other treatment, storage, or disposal facilities for municipal waste (e.g., publicly owned treatment works, transfer stations, and incinerators), and other industrial or commercial facilities that the permittees believe are contributing pollutants to the MS4.

B. *For type 1 facilities The Industrial and High-Risk Runoff Monitoring. The program must include the collection of quantitative data on parameters which have been identified by the permittee as a pollutant of concern for that facility, and shall:*

   1) *Coincide with the corresponding industrial sector-specific requirements of the TPDES Multi-Sector General Permit No. TXR050000 or any applicable general permit and is not contingent on whether a particular facility is actually covered by the general permit;*
   2) *Coincide with the monitoring requirements of any individual permit for the storm water discharges from that facility; and*
   3) *Include pollutants of concern for the storm water discharge from that facility as identified by the permittee*

C. *For Type 2 facilities, appropriate monitoring must be conducted as determined by the permittees to be necessary. This monitoring may include, analytical monitoring, visual monitoring or other appropriate monitoring method.*

D. *To avoid the duplication of efforts, the permittee may review data collected by a facility as required by a facility as required by any state or federally issued individual permit or general permit authorization for that facility rather than performing additional sample collection and analysis.*

E. *In lieu of the monitoring discussed above, the permittee may accept a "no exposure" certification from a facility, which certifies that raw and waste materials, final and intermediate products, by-products, material handling equipment or activities, industrial machinery or operations, or significant materials from past industrial activity are not presently exposed to storm water and are not expected to be exposed to storm water for the certification period.*

F. *The permittees may also waive monitoring requirements under this permit for facilities that they determine are in compliance with the TPDES Multi-Sector General Permit No. TXR050000.*

iv. *Storm Event Discharge Monitoring. The permittee shall comply with the monitoring requirements in part IV of this permit in order to characterize the discharge from the MS4.*

v. *Floatables Monitoring. The 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

UTA does not conduct dry weather screening. UTA dry weather monitoring efforts are coordinated by the City of Arlington (COA). The COA conducts dry weather screening to meet the permit requirements.

B. Wet Weather Screening Program

UTA and the City of Arlington do not conduct wet weather screening. Wet weather screening is conducted by the North Central Texas Council of Governments (NCTCOG). The COA monitors wet weather events through a wet weather screening program designed to identify and investigate areas that may contribute excessive concentrations of pollutants to the MS4, and to establish baseline data on receiving streams. The COA's wet weather monitoring efforts are coordinated by the NCTCOG through its Regional Wet Weather Characterization Program.

C. High Risk Runoff Monitoring Program

As stated in MCM V, UTA does not operate industrial & high- risk facilities as defined by 40 CFR 122.26(d)(2)(iv)(C), however, UTA has an on-going program to identify potential sources of surface water pollution. Visual surveys of loading areas, garbage disposal facilities, and a general survey of the campus grounds have been conducted during previous permitting periods and continue to be monitored.

1. In lieu of monitoring these facilities as outlined at 40 CFR 122.26 (d)(2)(iv)(C), EH&S conducted site inspections of each facility during the first permitting period. EH&S continues ongoing monitoring for any indication of pollutant discharges to the MS4 from these facilities.

D. Storm Event Discharge Monitoring

UTA does not have an outfall to monitor. COA coordinate monitoring with NCTCOG the Regional Wet Weather Characterization Program (RWWCP).

G. Floatables Monitoring Program

UTA's Floatable Monitoring program was initiated during the original SWMP development. UTA has established a program to reduce the discharge of floatables and other solid wastes primarily through source control strategies. Ground maintenance crews with litter pickup duties are active on a daily basis on regular business days. Numerous trash receptacles and recycling bins are distributed throughout the campus.

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.

Table MCM 8 – Monitoring, Evaluation, and Reporting				
BMP	**Tasks**	**Quantifiable Target**	**Deadline/ Frequency**	**Responsible Dept.**
Floatables Monitoring	Conduct source control strategies to control floatable impact in the MS4 permitted area(s)	Collect and provide weekly or monthly weight of collected floatables.	Weekly or Monthly	OFM-LS
Related SMWP MCMs utilized to fulfill Monitoring, Evaluation, and Reporting component				
N/A				

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Total Maximum Daily Load (TMDL) Compliance

IX. Total Maximum Daily Load Compliance

Impaired Water Bodies and Total Maximum Daily Load (TMDL) Requirements

1. *Discharges of the pollutant(s) of concern to impaired water bodies where there is a TCEQ and EPA-approved total maximum daily load (TMDL) are not eligible for this permit unless they are consistent with the approved TMDL. A water body is impaired for purposes of the permit if it has been identified, pursuant to the latest TCEQ and EPA-approved Texas Integrated Report Index of Water Quality Impairment, as not meeting Texas Surface Water Quality Standards.*

2. *The permittees shall control the discharges of pollutant(s) of concern to impaired waters and waters with approved TMDLs as provided in section(s) a and b below al)d shall assess the progress in controlling those pollutants.*

    a. *Discharges to Water Quality-Impaired Water Bodies with an Approved TMDL For any portion of the MS4 that discharges to a portion of a watershed with an approved TMDL, and because stormwater has the potential to cause or contribute to the impairment, the permittees shall include in the SWMP controls targeting the pollutant(s) of concern along with any additional or modified controls required in the TMDL and this section.*

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

        i. *Targeted Controls*

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

        ii. *Measurable Goals*

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

        iii. *Identification of Benchmarks*

            The SWMP must identify a benchmark for the pollutant(s) of concern.
            Benchmars are designed to assist in determining if the BMPs established are effective in addressing the pollutant(s) of concern in stormwater discharge(s) from the MS4 to the maximum extent practicable (MEP). The BMPs addressing the pollutant of concern must be re-evaluated on an annual basis for progress towards the benchmarks and modified as necessary within an adaptive management

framework. These benchmarks are not numeric effluent limitations or permit conditions but are intended to be guidelines for evaluating progress towards reducing pollutant discharges consistent with the benchmarks. The exceedance of a benchmark is not a permit violation and does not by itself indicate a violation of instream water quality standards.

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

A) If the MS4, or a portion thereof, is subject to a TMDL that identifies a Waste Load Allocation(s) (WLA) for permitted MS4 stormwater sources, then the SWMP may identify it as the benchmark. Where an aggregate allocation is used as a benchmark, all affected MS4 operators are jointly responsible for progress in meeting the benchmark and shall Uointly or individually) develop a monitoring/assessment plan as required in Part II.C.2.a.vi.

B) Alternatively, if multiple MS4s are discharging into the same impaired watershed with an approved TMDL, with an aggregate WLA for all permitted stormwater MS4s, then the MS4s may combine or share efforts to determine an alternative sub-benchmark value for the pollutant(s) of concern (e.g., bacteria) for their respective MS4. The SWMP must clearly define this alternative approach and must describe how the sub-benchmark value would cumulatively support the aggregate WLA. Where an aggregate benchmark is broken into sub-benchmark values for individual MS4s, each permittee is only responsible for progress in meeting its sub-benchmark value.

iv. Annual Report

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

v. Impairment for Bacteria

If one of the pollutants of concern is bacteria, the permittees shall include focused BMPs addressing the areas noted below, as applicable, in the SWMP and implement as appropriate. If a TMDL Implementation Plan (I-Plan) is available, the permittees may refer to the I-Plan for appropriate BMPs or provide appropriate alternative BMPs. The SWMP and annual report must include the selected BMPs. Permittees may not exclude BMPs associated with the minimum control measures required under 40 CFR §122.34 from their list of proposed BMPs.

The BMPs shall, as appropriate, address the following:

A) Sanitary Sewer Systems

1) Make improvements to sanitary sewers to reduce overflows;
2) Address lift station inadequacies;
3) Improve reporting of overflows; and
4) Strengthen sanitary sewer use requirements to reduce blockage from fats, oils, and grease.

B) On-Site Sewage Facilities (for entities with appropriate jurisdiction)

1) Identify and address failing systems; and
2) Address inadequate maintenance of On-Site Sewage Facilities (OSSFs).

C) Illicit Discharges and Dumping

Put in place additional effort to reduce waste sources of bacteria; for example, from septic systems, grease traps, grit traps, or other sources.

D) Animal Sources

Expand existing management programs to identify and target animal sources such as zoos, pet waste, and horse stables.

E) Residential Education -Educate residents on the following

1) Bacteria discharging from a residential site either during rainfall runoff events or directly;
2) Fats, oils, and grease clogging sanitary sewer lines and resulting overflows;
3) Maintenance and operation of decorative ponds; and
4) Proper disposal of pet waste.

vi. *Monitoring or Assessment of Progress*

The permittees shall monitor or assess progress in achieving benchmarks and determine the effectiveness of BMPs, and shall include documentation of this monitoring or assessment in the SWMP and annual reports. In addition, the SWMP must include methods used to assess progress.

A) The permittees may use either of the following methods to evaluate progress towards the benchmark and improvements in water quality:

1) Evaluating Program Implementation Measures

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

The permittees may assess progress by using program implementation indicators such as: (1) number of sources identified or eliminated; (2) decrease in number of illegal dumping; (3) increase in illegal dumping reporting; (4) number of educational opportunities conducted; (5) reductions in sanitary sewer overflows (SSOs); or, (6) increase in illegal discharge detection through dry screening, etc.

2) Assessing Improvement in Water Quality

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

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

vii. Observing No Progress towards the Benchmark

By the end of the third year from the effective date of the permit, if the permittees observes no progress toward the benchmark either from program implementation or water quality assessments as described in Part II.C.2.a.vi, the permittees shall identify alternative focused BMPs that address new or increased efforts towards the benchmark or, as appropriate, shall develop a new approach to identify the most significant sources of the pollutant(s) of concern and shall develop alternative focused BMPs for those (this may also include information that identifies issues beyond the MS4's control). These revised BMPs must be included in the SWMP and subsequent annual reports.
Where the permittees originally used a benchmark value based on an aggregated WLA, the permittees may combine or share efforts v.rith other MS4s discharging to the same watershed to determine an alternative sub-benchmark value for the pollutant(s) of concern for their respective MS4s, as described in Part ILC.2.a.iii.B) above. The permittees must document, in their SWMP for the next permit term, the proposed schedule for the development and subsequent adoption of alternative sub-benchmark values for the pollutant(s) of concern for their respective MS4s and associated assessment of progress in meeting those individual benchmarks.

b. Discharges Directly to Water Quality-Impaired Water Bodies without an Approved TMD L

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

i. Discharging a Pollutant of Concern

A) Within the first year following the permit effective date, the permittees shall determine whether the MS4 may be a source of the pollutant(s) of concern by referring to the CWA §303(d) list and then determine if discharges from the MS4 would be likely to contain the pollutant(s) of concern at levels of concern.

B) If the permittees determines that the MS4 may discharge the pollutant(s) of concern to an impaired water body without an approved TMDL, the permittees shall, no later than two years following the permit effective date, ensure that the SWMP includes focused BMPs, along with corresponding measurable goals, that the permittees will implement to reduce the discharge of pollutant(s) of concern that contribute to the impairment of the water body.

ii. Impairment for Bacteria

Where the impairment is for bacteria, the permittees shall identify potential significant sources and develop and implement focused BMPs for those sources. The permittees shall, at a minimum, address the bacteria sources listed in Part II.C.2.a.v. of this permit.

iii. The annual report must include information on compliance with this section, including results of any sampling conducted by the permittees.

The permit promulgated on August 15, 2019 includes new requirements to address discharges of pollutants to impaired water bodies with and without approved TMDLs. The methodology for managing these discharges are discussed in a new section entitled: Impaired Waterbodies and TMDL Requirements.

The City of Arlington (COA) is responsible for addressing the TMDL AND IMPAIRED WATERBODIES IN ARLINGTON, TEXAS

The City of Arlington and UTA, as co-permittees, have agreed that the City (in this current permit term), will coordinate and implement the TMDL programmatic activities for the MS4 in its entirety – which will include UTA. Because the City and UTA afford each other mutual assistance, both entities have determined, in this permit term, that the City is better suited to coordinate and implement TMDL programmatic activities with assistance from UTA. UTA has already begun bacteria monitoring as locations approved by both entities with UTA providing those results to the City to be integrated into their comprehensive MS4 analysis. Both entities believe that this coordinated effort is the best approach to TMDL programmatic implementation at this time.

The Texas Commission on Environmental Quality (TCEQ) has adopted an implementation plan (I-Plan) for total maximum daily load (TMDL). A TMDL is a scientifically-derived target that tells us the greatest amount of a particular substance that we can add to a waterway and still keep it healthy. These substances are not necessarily harmful in and of themselves. For example, bacteria, which occur naturally in both human and animal waste. But too much bacteria can make it more hazardous to swim or wade in a creek, lake, or bay—activities called “contact recreation” in the state’s standards for water quality.

TMDL

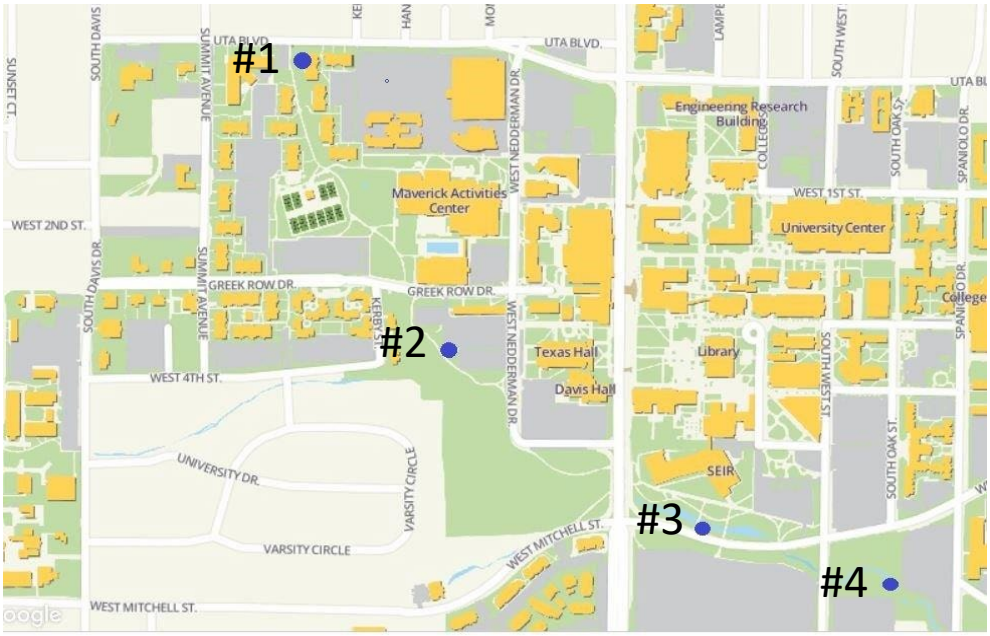
Those waterbodies identified in the 2016 Report will be the focus of the COA's TMDL and Impaired Waters program. As delistings and new listings occur, the City will revise its list of targeted waterbodies accordingly. The COA will continue to implement the relevant strategies outlined in the I-Plan. The I-Plan outlines implementation strategies in nine (9) areas: Wastewater, Stormwater, Planning and Development, Pets, Livestock, and Wildlife, OSSFs, Monitoring Coordination, Education and Outreach, BMP Library, and Strategy Evaluation. The following table identifies the areas of focused effort for bacteria reduction for UTA based on the I-Plan.

#1- F parking lot 5 (vicinity of UTA BLVD and Summit)

#2- Trinity S (vicinity of Greek Rd and Kerby St.)

#3- Mitchell St bridge (vicinity of W. Mitchell and S. Cooper St.)

#4- Lot 5 S2 (vicinity of S. Pecan and Doug Russell Rd)



IMPAIRMENT FOR BACTERIA

If one of the POCs identified by is bacteria, COA and UTA will include focused BMPs to address the impairment for bacteria.

A. Benchmark Identification

UTA will conduct bacteria testing for E Coli on a monthly basis at four locations on the unnamed tributary which flows into Johnson Creek. UTA will provide monthly analyses of the bacteria test to the COA.

UTA does conduct visual monitoring is examining and assessing a grab sample of stormwater for these characteristics, or parameters: color, clarity, oil sheen, odor, solids, foam, and other obvious indicators of Stormwater pollution.

UTA will conduct monthly turbidity test at four locations on the unnamed tributary which flows into Johnson Creek.

The current and proposed ways in which UTA plans to address the bacterial loads in its MS4 are discussed below.

Bacterial contamination generally comes in two different forms – runoff loads and in-line loads. Below are some ways in which UTA proposes to address each of these loads.

B. Runoff Loads

Runoff loads are those that come from the general landscape and are considered non-point sources of pollutants. These types of loads are best treated with source reductions, community education and upland treatment systems. In this vein, UTA proposes the following:

- Working cooperatively with the City of Arlington to implement BMPs to help achieve bacterial load reductions
- Explore additional locations for BMPs, such as bioswales, which have proven successful in reducing bacterial contamination

C. In-Line or End-of-Pipe Loads

In-line loads typically come from leaking sanitary infrastructure and sanitary sewer overflows that drain into the storm sewer network. UTA will conduct dye testing when plumbing changes warrant to ensure there are no cross connections between storm and sanitary sewer systems. OFM contractors clean and inspect all the sanitary sewers as needed. Additionally, OFM will continue to TV lines on an as needed basis when there is a suspected sanitary infrastructure leak and perform preventive maintenance in known problem areas. These efforts will continue, in order to identify leaking sanitary sewers and make repairs. EH&S and OFM will develop a SOP to outline departmental responsibilities for responses to water and wastewater emergencies such as sanitary sewer overflows. This will ensure the most efficient response is taken to minimize negative environmental impact. OFM also partners with City of Arlington ensure their sanitary infrastructure in the MS4 is well maintained, inspected, and leaks are identified and repaired.

In-line loads may be treated with end of pipe technologies such as lower capacity media filters or disinfection systems. These target the low flow but are bypassed during larger storm events. UTA will explore these end-of-pipe treatment technologies during the first two years of the permit term. UTA will also consider alternative practices for treating microbial pollution in areas with low, dry weather flow. One option is disinfecting runoff using ultraviolet light to reduce water quality issues

related to bacterial contamination. (From EPA guide page 5-53) Pre and post treatment installation monitoring will be conducted in order to test these technologies.

Table TMDL – Compliance				
BMP	**Tasks**	**Quantifiable Target**	**Deadline/ Frequency**	**Responsible Dept.**
Implement and monitor BMPs to achieve bacterial load reductions	Work cooperatively with the COA, and explore additional locations for BMPs which have proven successful. Monitor for effectiveness.	Report 1 project where bacteria-reducing BMP/s were designed or implemented. Monitor bacterial levels at 4 locations along the unnamed tributary that flow to Johnson Creek	September of each year	EH&S FS-LS COA
Maintain sanitary sewer system	OFM to continue process of surveillance and maintenance of damaged sanitary lines to prevent blockage and bypass	Report on repairs, maintenance, inspections conducted by UTA personnel	September of 2019	OFM
		Repair 50% of deficiencies that could adversely affect receiving stream quality, as identified during inspection	September of 2022	
		Repair remaining 50% of deficiencies that could adversely affect receiving stream quality, as identified during inspection	September of 2023	
Related SMWP MCMs utilized to fulfill Monitoring, Evaluation, and Reporting component				
N/A				

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Appendix A: UTA MS4 Enforcement Authority

Legal Authority

The Board of Regents of The University of Texas System (the Board) has legal authority established by statute which, at a minimum, allows it to:

1. Control the contribution of pollutants to that portion of the municipal separate storm sewer system operated by The University of Texas at Arlington (UTA) from storm water discharges associated with industrial activity, if any, and the quality of storm water discharged from municipal separate storm sewer system operated by UTA;
2. Prohibit illicit discharges to that portion of the municipal separate storm sewer system operated by UTA;
3. Control the discharge of spills and the dumping or disposal of materials other than storm water (e.g., industrial and commercial wastes, trash, used motor vehicle fluids, leaf litter, grass clippings, animal wastes, etc.) to that portion of the municipal separate storm sewer system operated by UTA;
4. Control through interagency or inter-jurisdictional agreements among permittees the contribution of pollutants from one portion of the municipal separate storm sewer system to another;
5. Require compliance with conditions in the Board's rules, regulations, permits, contracts or orders; and
6. Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance with permit conditions.

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Appendix B: Construction Site Procedures for Contractors

Revised: March 2020

CONSTRUCTION SITE PROCEDURES FOR CONTRACTORS

TABLE OF CONTENTS

1. GENERAL SAFETY

The purpose of these procedures is to provide a safe work environment for all individuals at the University of Texas Arlington (UTA). All contractors performing services on the UTA campus shall comply with all applicable local, state and federal policies. This includes implementing and providing any required employee training and/or written programs.

Before providing any services, the contractor shall furnish to the Environmental Health & Safety Office (EH&S) a copy of all applicable required written programs and documentation of training for all employees under their control.

2. APPLICABLE REGULATIONS

The terms pollutant, pollution, hazardous waste, hazardous substance, hazardous material, or contaminant, refer to any toxic or harmful substance as defined by the Occupational Safety & Health Act (OSHA), the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Superfund Amendments and Reauthorization Act (SARA), the National Fire Protection Association (NFPA), Texas Regulations for Control of Radiation (TRCR) and/or any other applicable federal, state, or local law, rule, or regulation.

The following OSHA regulations may apply to services performed and require the contractor to provide proper employee training, documentation of employee proficiency, and/or a written program:

- Respirator Protection, 29 CFR 1910.134, Subpart I
- Personal Protective Equipment, 29 CFR 1910, Subpart I
- Permit-Required Confined Spaces, 29 CFR 1910.146, Subpart J and 29 CFR 1926
- The Control of Hazardous Energy (Lockout/Tagout), 29 CFR 1910.147, Subpart J
- Welding, Cutting, and Brazing, 29 CFR 1910, Subpart Q
- Electrical, 29 CFR 1910, Subpart S
- Bloodborne Pathogen, 29 CFR 1910.1030, Subpart Z
- Hazard Communication, 29 CFR 1910.1200 Subpart Z
- Cranes, Derricks, Hoists, Elevators & Conveyors, 29 CFR 1926, Subpart N
- Fall Protection, 29 CFR 1926, Subpart M and CFR 29 1910.22 Subpart D Walking and Working Surfaces
- Excavation, 29 CFR 1926, Subpart P
- Scaffolds, 29 CFR 1926, Subpart L

3. FIRE & LIFE SAFETY REQUIREMENTS

The following information regarding fire and life safety requirements on the UTA campus shall be adhered to during all phases of construction activity:

Hot Work Permit

Hot work can be any of the following: electric arc welding, oxygen acetylene welding, tig/mig welding, cutting/soldering, propane torch, grinding, torch applied roofing, tar kettles and/or any other activity or the use of a device that creates heat or sparks. Before beginning any of these hot work activities the contractor must obtain a Hot Work Permit issued by the EH&S office. Prior to beginning hot work, all individuals performing the hot work, as well as the required fire watch, must complete UT Arlington's Hot Work Training (provided by EH&S). Please call EH&S at 817-272-2185 at least one day prior to requesting a Hot Work Permit to make arrangements for training. Contractors should also contact EH&S directly when they are ready for the permit to be issued at the site.

Fire Extinguishers

Contractor furnished fire extinguishers are required on all job sites to meet NFPA requirements.

Nuisance Alarms

Prior to beginning any operation that will affect the fire alarms system (i.e., dust, smoke, steam, fog, etc.) contact EH&S to arrange for the temporary disabling and/or disconnection of any potential affected smoke detectors.

Means of Egress

Means of egress must be maintained from occupied spaces at all times. Reduction in required exit width, reduction in the number of means of egress, and/or temporary egress must be approved in advance by EH&S. Temporary exit signs must be in place at all times where necessary.

Emergency Access

Fire Department emergency access, to include the approach and all designated fire lanes, must be in place prior to building construction. In addition to UT Arlington Police Dept. approval, EH&S must be informed of all temporary street obstructions or closures.

Flammable/Combustible Storage

The use of mobile or temporary storage tanks containing flammable or combustible materials will require prior written approval from EH&S.

Temporary Structures

Temporary structures, including tents, shall be erected and secured in a safe manner. A site plan and a flame retardant certificate shall be provided to EH&S prior to the erection of a tent or temporary structure.

4. PROCEDURES TO FOLLOW WHILE ON THE UTA CAMPUS

Securing the work area - use any means possible to secure the work area and mark it "Construction Area

Authorized Personnel Only" to prevent Students. Faculty or Staff from entering the work zone. During interior renovations, contain the work area under renovation to segregate the renovation from the building occupants.

Equipment Cleaning

Equipment should be cleaned in a manner that does not create any discharge of cleaning agents, paints, oil, or other pollutants to a storm sewer or waterway. Soaps and detergents should never be discharged to the ground or off-site. When rinsing painting equipment outside, contain rinse water in a bucket or other container. Water-based or latex paint rinse water may be discharged to the sanitary sewer. Oil-based paint wastes, including solvents and thinners, should ***not*** be disposed into the sanitary sewer. They must be collected and disposed of through the contractor's disposal company. Cement handling equipment should be rinsed in a contained area so there is no drainage off-site.

Asbestos Containing Materials

Before beginning work in any UTA campus building, the contractor shall verify that no asbestos containing or suspected asbestos containing materials will be damaged or disturbed during any portion of the work to be performed. This can be verified through the UTA Asbestos Program office at 817-272-7008. If the contractor incidentally damages or disturbs asbestos containing or suspected asbestos containing materials during any portion of the work, the contractor shall immediately stop work in that area, restrict access to the area, and contact the Facilities Management Office at 817-272-3571. All personnel working on the campus who may come into contact with suspected asbestos containing materials must attend a 2-hour asbestos awareness class that will be provided by UTA's Asbestos Program office. The training will be held on the UTA campus at a location to be determined. This awareness training will not meet the OSHA asbestos training requirements for workers removing asbestos containing materials or the training requirements for an asbestos competent person.

Trash/Debris Disposal

All trash or debris must be cleaned daily, contained on-site and disposed of in a recycling bin or waste receptacle to prevent wind or rain from carrying it off-site into a storm drain or waterway. Petroleum wastes, such as waste oil and used oil filters, should be containerized for recycling or disposal by the contractor. Non-hazardous solid wastes, such as general construction debris, can be recycled or disposed of in the trash container. Never place liquid wastes of any kind in dumpsters.

Ionizing/Non-Ionizing Radiation

The contractor may not bring radioactive materials, radiation-producing machines, and/or class IIIb or class IV laser devices on campus without first notifying and obtaining written approval from the UTA Radiation Safety Officer (RSO). Additionally, if it is necessary for a contractor to enter any campus area that is posted "Radioactive Material," "X-ray Radiation," or "Danger Laser," they must first notify and obtain approval from the RSO. The RSO may be reached in EH&S at 817-272-2185.

5. CONTRACTOR REQUIREMENTS AND RESPONSIBILITIES

- The contractor shall maintain a legible copy of a current Safety Data Sheet (SDS) for each hazardous chemical brought to the construction site. SDS(s) shall be readily available, on request, for review by University personnel.
- The Contractors will conduct daily safety inspections of all assigned areas to identify and correct hazards.
- The Contractor will provide employees with required personal protective equipment.
- Contractor will contact UTA EH&S office during the planning phase of confined space operations and again before entering a confined space on construction sites at UTA. The contractor must at a minimum following UTA's Confined Space Program, If contractors have their own Confined Space Program, EH&S must review and approve prior to beginning of confine space operations and issuing any confined space permit.
- Contractor must provide an attendant to manage the confined space entry operation.
- The Contractors are responsible for establishing and maintaining an effective Housekeeping Program. The Contractors are responsible for cleaning up and properly disposing of all spilled pollutants brought to the site, including oil, paint, fuels, antifreeze, solvents, etc. Contractors should keep accurate records (such as receipts, copies of analytical results, etc.) indicating proper disposal of spilled materials.
- The Contractors are responsible for ensuring that all discharges from the site comply with applicable regulations.
- No substance that might cause pollution should be dumped, leaked onto the ground, or allowed to run-off of a construction site. Be aware that the contractor is responsible for pollutant contaminated run-off and proper disposal of all waste materials generated.
- No substance should be abandoned on UTA property.

6. STORM WATER REQUIREMENTS

Storm Water Management

UTA has implemented a Storm Water Management Plan covering that portion of the municipal separate storm water system within the corporate boundary of the City of Arlington operated by UTA. Prior to beginning construction, contractors are required to submit a Storm Water Pollution Prevention Plan for review by the EH&S Office and the UTA Storm Water Management (SWM) Team.

The purpose of this section is to inform contractors about the Storm Water Pollution Prevention Plan (SWPPP) requirements for UTA. UTA is a co-permittee with the city of Arlington, which is considered a large MS4.

Construction is a specialized type of industrial activity that involves intense, varied activities in a limited area. Erosion and sedimentation are two of the largest potential problems from these sites. Debris and on-site chemicals are other sources to consider.

SWPPPs

A Storm Water Pollution Prevention Plan (SWPPP), if required, must be submitted to EH&S for review no less than two (2) weeks before a project is scheduled to begin. The plan must be approved by EH&S before

any earth moving activity takes place. In addition, one of the requirements of a SWPPP will be a field verification (walking of the site). This will be performed by the author of the SWPPP along with EH&S staff.

A SWPPP should include (but not be limited to) the following:

- Site description
- Project and soil description
- List of potential pollutants
- Detailed site map (erosion control plan)
- Description of construction support activities
- Copy of construction general permit
- Copy of Notice of Intent (NOI)- large construction projects, or a Construction Site Notice (CSN) for small construction projects
- Discharge plans (filtering and pumping storm water from the site)

Inspections

Inspections will be conducted on a weekly basis. Sites will be walked together by a representative from EH&S and the contractor.

BMPs (Best Management Practices)

BMPs must be installed prior to any earth disturbing activity. Even small projects such as boring, saw cutting, trenching, etc. will be required to utilize erosion and sediment controls. A list of approved BMPs can be found in the *integrated Storm Water Management Technical Manual – Construction Controls. (*http://iswm.nctcog.org/Documents/technical_manual/Construction_Controls_4-2010b.pdf*).*
This manual was produced by the North Central Texas Council of Governments (NCTCOG http://www.nctcog.dst.tx.us/) and provides the design criteria for permanent and temporary structural controls during preconstruction, construction, and post construction phases.

Silt Fence and Inlet Protection Requirements

Silt fence materials and installation requirements must meet stated technical specifications (silt fence and inlet protection specs - http://www.uta.edu/campus-ops/ehs/stormwater/docs/silt-fence.pdf). All inlet protection must be anchored with orange colored gravel bags. There should be no protruding or bent wires that may be potential safety hazards. Such wires must be clipped off, tied down or bent back into place.

Stormwater Pollution Prevention Signage

All permitted construction projects must display appropriate signage. The following link contains examples for both small and large construction sites. (http://www.uta.edu/campus-ops/ehs/stormwater/docs/swppp-signs.pdf). Small construction site notices must contain the operator name, contact name and number, project description, and location of SWPPP. Large site notices should include all the previous items plus a Notice of Intent and the site specific TPDES authorization number. Signs must be displayed at the main entrance.

Permit Coverage Requirements

The size of a project determines the amount of regulation. The flow chart on page 8 will help contractors determine which regulations apply to their particular project.

Final Stabilization

Final stabilization of a construction site is satisfied when all soil disturbing activities are complete and a uniform vegetative cover with 70 percent coverage has been established. Disturbed areas that will not be re-disturbed for 21 days must be stabilized by the 14th day after the last disturbance.

Erosion/Sediment Control

Proper erosion and sedimentation controls must be in place to prevent sediment or silt run-off. Sediment (including cement) should never be rinsed off the site; instead, it should be cleaned up in a manner that does not allow it to reach a storm drain or waterway. Equipment tires may be rinsed before leaving the site to avoid tracking sediment into the roadway or off the site.

Stormwater Pollution Prevention Resources (SWPPP)

Texas Commission on Environmental Quality (TCEQ) Stormwater Program
(http://www.tceq.texas.gov/permitting/stormwater/sw_permits.html)
NCTCOG Preventing Stormwater Pollution at Construction Sites Field Guide (2011)
(http://www.nctcog.org/envir/SEEclean/stormwater/pubs/documents/constructionguide_final.pdf)
NCTCOG Illicit Discharge Detection and Elimination Field Investigation Guide (2011)
(http://www.nctcog.org/envir/SEEclean/stormwater/program-areas/illicit-discharge/
documents/IDDEFieldGuide_Final.pdf)
UTA EH&S Storm Water website
(http://www.uta.edu/campus-ops/ehs/stormwater/index.php)

Separators or Traps

Before removing oil/water separators or traps connected to the sanitary sewer, the materials in them must have been tested within the last two years (Toxicity Characteristic Leachate Procedure or TCLP) *before* they are cleaned out. Be aware that this test may take three weeks to complete if a recent test has not been completed, so plan accordingly. Documentation of the test results must be submitted to EH&S for review and approval *before* emptying or removing the trap.

7. SPILL PREVENTION, CLEAN-UP AND DISPOSAL

Spill Prevention Control and Countermeasure (SPCC)

Contractors are required to have materials on hand at all times in the event of a spill. They are required to notify EH&S at 817-272-2185 immediately if a spill occurs. Additionally, MSDSs are required to be on site for any and all chemicals on site.

Petroleum

Spills of hydraulic fluid, oil and other petroleum products should always be immediately cleaned up to prevent discharge of these fluids with storm water run-off. Petroleum contaminated soil should be cleaned up and disposed of properly. Storage containers should be kept closed, clean, and free of oily

residue. Construct a liquid-tight bermed area for temporary fuel tanks used during construction.

Plan Ahead

It is cheaper to prevent spills than to mitigate them. Be prepared to contain or dike spills to prevent spreading. Small areas are easier to clean than large ones. Keep sorbent materials such as clay (kitty litter), polypropylene booms and pads, rags and sawdust on hand for clean-up of spilled liquids.

Clean-up

Sorbent materials can be used to effectively clean up various materials spilled on pavement, water, and soil. Soil or other media that has been contaminated with petroleum or other pollutants should be excavated or remediated to prevent contaminated discharges to a storm drain or waterway. Excavated contaminated materials should be stored in containers or on plastic and covered so that the contamination is not flushed back onto the ground during a rainstorm.

Contaminated Material Disposal

Proper disposal of waste materials depends partly on the type of contaminant. Hazardous wastes (such as flammable petroleum products and solvents, thinners) and materials contaminated with hazardous wastes are considered regulated wastes, and should be containerized for transport and disposal by a permitted company. Disposal also depends on the amount of contaminant**.** For information on testing of contaminated soil and disposal options, contact EH&S at 817-272-2185.

8. SPILL AND COMPLIANCE RESPONSE PROGRAM

EH&S has a program to enforce water quality regulations and assist you in compliance with those regulations. The EH&S staff respond 24 hours a day, 7 days a week to hazardous materials spills and spills which threaten surface water quality within UTA. Investigations are conducted to determine compliance with environmental laws and regulations and ensure corrective actions are taken when necessary. Discharges of any material or substance that will cause, or could potentially cause, pollution to surface waters is strictly prohibited. Staff have specialized training in hazardous materials response and spill clean-up regulations. For information about spill clean-up requirements and other regulations, contact EH&S at 817-272-2185.

9. NOTIFICATION REQUIREMENTS AND PROCEDURES

The contractor shall immediately notify EH&S in the event of:

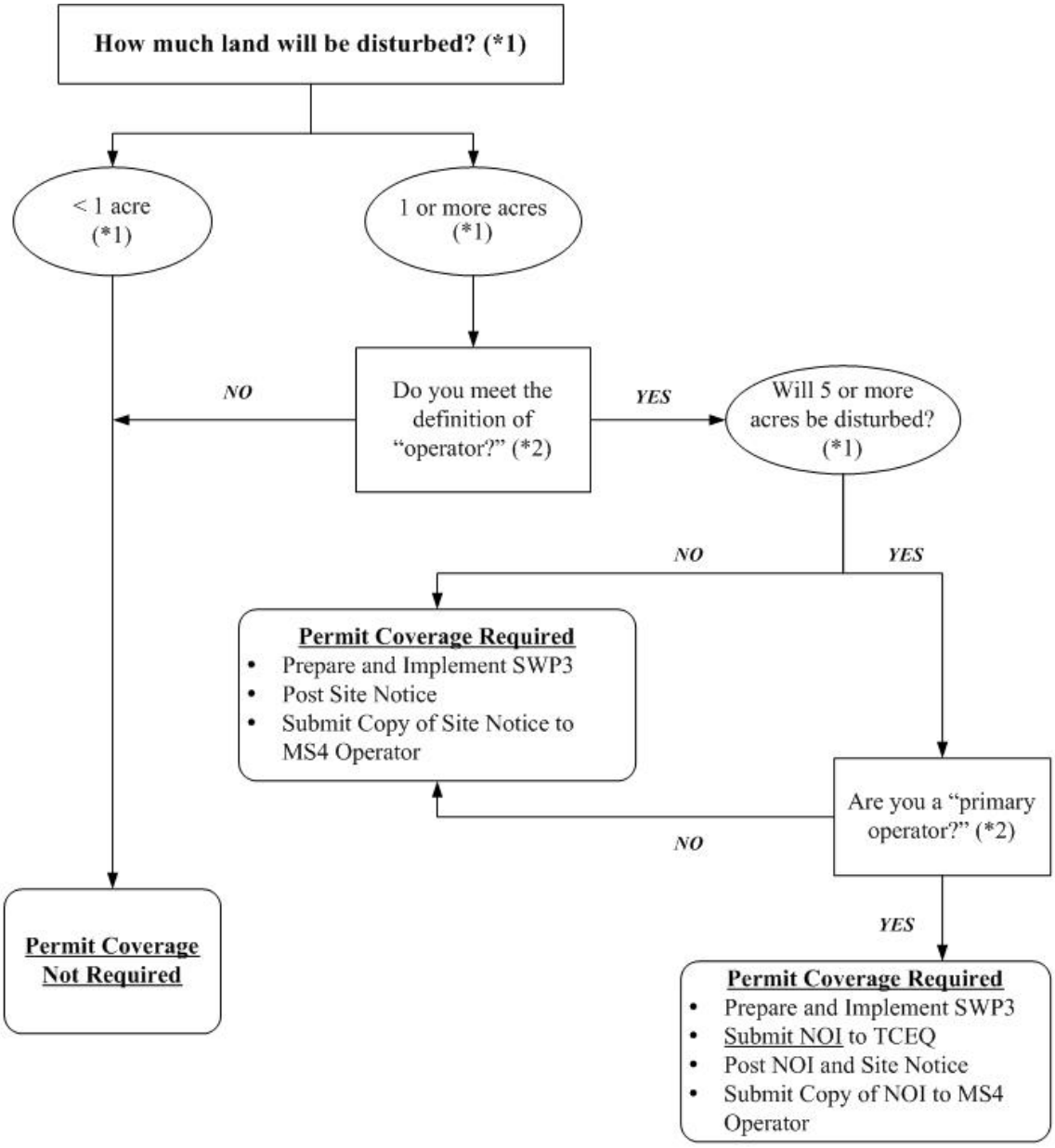
- Any spill that threatens to enter a storm sewer or watercourse.
- All petroleum spills, e.g. hydraulic fluid, transmission fluid, diesel, gasoline, etc.
- Contact with asbestos containing or suspected asbestos containing materials.
- Any hazardous or unknown material spill, e.g. many solvents, cleaners, etc.

- Any discharge from the site that is suspected to be in violation of local, state, and/or federal regulations, e.g. discharges that are cloudy, foul-smelling, colored, contain chemicals or heavy sediment loads.

10. CONTACT INFORMATION

Environmental Health & Safety	817-272-2185
Office hours – M–F - 8:00 am to 5:00 pm	
Facilities Management	
Main	817-272-3571
Asbestos Program	817-272-7008
After-hours Emergency	817-272-3581
UTA Police Department	
Emergency	817-272-3003
Non-emergency	817-272-3381

SWPPP Permit Coverage Requirements Flowchart
(based on amount of land disturbed)



(*1) To determine the size of the construction project, use the size of the entire area to be disturbed, and include the size of the larger common plan of development or sale, if the project is part of a larger project (refer to Part I.B., "Definitions," for an explanation of "larger common plan of development or sale").

(*2) Refer to the definitions for "operator," "primary operator," and "secondary operator" in Part I., Section B. of this permit.

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Appendix C: UTA Construction Standard 015713

SECTION 01 57 23 – UTA CONSTRUCTION STANDARD TEMPORARY STORM WATER POLLUTION CONTROLS

Part 1 - General

1.1. Definitions

1.1.1. BMP – Best Management Practice

1.1.2. CI – Construction Inspector

1.1.3. CSN – Construction Site Notice (Large CSN for sites 5 acres or larger; Small CSN for sites less than 5 acres)

1.1.4. EH&S – Environmental Health and Safety Office for the institute at which construction is occurring

1.1.5. EPA – United States Environmental Protection Agency

1.1.6. MS4 – Municipal Separate Storm Sewer System

1.1.7. NOI – Notice of Intent for TPDES permits

1.1.8. NOT – Notice of Termination for TPDES permits

1.1.9. OCP – The University of Texas System Office of Capital Projects

1.1.10. ODR – Owners Designated Representative

1.1.11. RCM – Resident Construction Manager

1.1.12. SWPPP – Storm Water Pollution Prevention Plan

1.1.13. TCEQ – Texas Commission on Environmental Quality

1.1.14. TPDES – Texas Pollutant Discharge Elimination System

1.1.15. TPDES General Permit – TCEQ TPDES General Permit No. TXR150000 effective March 5, 2018

1.1.16. Large Construction Activities – Construction activities including clearing, grading, and excavating that result in land disturbance equal to or larger than 5 acres of land

1.1.17. Small Construction Activities – Construction activities including clearing, grading, and excavating that result in land disturbance equal to or larger than 1 acre and smaller than 5 acres of land

1.2. Related Documents and Applicable Work

1.2.1. This specification requires compliance with all provisions of the TCEQ TPDES general permit and the project SWPPP. The TCEQ requirements currently pertain to large construction activities of 5 acres or more and small construction activities that disturb 1 acre to less than 5 acres.

1.2.2. The University of Texas at Arlington Storm Water Management Program (SWMP)

1.2.3. The University of Texas at Arlington Construction Site Procedures

1.2.4. Information to Respondents, Agreement, Uniform General and Supplementary General Conditions for The University of Texas System Building Construction Contracts (UGC), and Special Conditions shall be read carefully for provisions pertaining to this work. In the event of conflict, the better quality or greater quantity shall prevail.

1.2.5. The work described in this section is applicable to any and all sections of the contract documents. Any and all work that would disturb the existing site conditions or present the potential for site runoff shall adhere fully to this specification section.

1.2.6. Unless specifically notified to the contrary and in writing by the Owner, all aspects of this specification shall apply to this project.

1.3. Contractor Responsibilities

1.3.1. This project requires implementation of storm water BMPs for control devices and monitoring by the Contractor to comply with all provisions of the SWPPP developed for the project by the project civil engineer licensed that is in the State of Texas. The Contractor must fulfill all TPDES regulatory requirements, including the filing of the NOI and NOT or signing and posting of the CSN.

1.3.2. The Contractor shall provide signatures of a Corporate Officer, in accordance with 30 TAC 305.44, for the NOI, Large CSN, Small CSN, NOT, and any other forms or applications as required by the TPDES General Permit. The Contractor shall also provide delegated authorization to sign reports per 30 TAC 305.128. Individuals conducting site inspections shall be qualified to the satisfaction of the Owner.

1.3.3. When the Contractor receives the approved SWPPP from the Owner, the Contractor then files the NOI with the TCEQ and provides a copy of the receipt to the OCP Engineer along with the Large CSN. Or the Contractor signs the Small CSN (see sample forms in Part 4 - Supplemental Documents) and forwards it to the Owner/OCP Engineer. The Contractor shall insert a copy of the signed NOI or

Small CSN into the SWPPP book to be kept at the jobsite.

1.3.4. The SWPPP book kept at the jobsite shall also contain the following:

1.3.4.1. A letter delegating signature authority to the field personnel for both the Contractor and the Owner,
1.3.4.2. A copy of the TPDES Authorization when received,
1.3.4.3. A copy of the Large or Small CSN, and
1.3.4.4. A copy of the Shared SWPPP Acceptance Certification form.

1.3.5. The Contractor shall review the SWPPP and verify existing conditions at the site before determining scope of implementation of site controls. Site survey and site plan drawings shall be used for additional reference. The Contractor shall notify the Owner, in advance, of this site review to allow for Owner and campus EH&S participation.

1.3.6. The Contractor shall construct a Project SWPPP sign and place it at the main entrance to the project site. This sign shall include the NOI and TPDES Authorization along with the TCEQ TPDES Large or Small CSN, depending on the size of the construction project. The sign shall be constructed as detailed in the sample SWPPP sign drawings included in Part 4 - Supplemental Documents.

1.3.7. The Contractor shall contact the OCP/ODR CI for review of initial site controls in place prior to commencing site-disturbing activities, to ensure that any unusual circumstances or unforeseen site conditions with regard to erosion and sedimentation have been addressed.

1.3.8. The Contractor shall complete the SWPPP Project Start-up form (see Sample in Part 4 - Supplemental Documents) and review it with the Owner before commencing soil disturbing activities. Both parties shall sign this form when the requirements listed in the SWPPP Project Start-up form have been met.

1.3.9. The Contractor shall provide all material, labor, equipment, and services required to implement, maintain, and monitor all erosion and sedimentation controls in compliance with the SWPPP. All controls implemented by the Contractor shall comply with the TPDES regulations as described in the current TCEQ TPDES General Permit listed in Article 1.1.14. These controls shall remain in operation until project completion and re-establishment of the site or longer as directed by the RCM. The work shall include, but not be limited to, the following:

1.3.9.1. All earthwork as required to implement swales, dikes, basins, and other excavations for temporary routing of utilities to protect against erosion or sediment-laden (polluted) storm water runoff.
1.3.9.2. All structural controls as shown or specified, including silt fences, sediment traps, stabilized construction entrances, subsurface drains, pipe slope drains, inlet protection, outlet protection, reinforced soil retention, gabions, rock berms, etc.

1.3.9.3. All non-structural controls as shown or specified, including temporary or permanent vegetation, mulching, geotextiles, sod stabilization, preservation of vegetative buffer strips, and preservation/protection of existing trees and other mature vegetation.

1.3.9.4. All modifications and revisions to SWPPP necessary to meet changing site conditions and to address new sources of storm water discharges, as the work progresses.

1.3.9.5. All maintenance and repair of structural and non-structural controls in place shall continue until final stabilization is achieved or as directed by the OCP/ODR RCM.

1.3.9.6. Weekly site inspections, as required by the SWPPP, of pollutant sources, including hazardous sources, structural and non-structural controls, and all monitoring of SWPPP revisions and maintenance of inspection records.

1.3.9.7. Removal of all structural and non-structural controls as necessary upon completion of the work after final stabilization is achieved.

1.3.9.8. Filing of NOT with the OCP/ODR RCM within 30 days of final stabilization being achieved and being approved by the Owner or another Operator assuming control of the unstabilized portions of the site.

1.3.9.9. Refer to the SWPPP for additional requirements to ensure compliance with TPDES regulations.

1.4. Quality Assurance

1.4.1. To minimize the discharge of pollutants to storm water, the Contractor shall implement all permanent and temporary site controls according to TPDES Guidelines as set forth by the TCEQ.

1.4.2. Implementation of site controls shall be performed by a qualified contractor experienced in the proper installation of such devices in accordance with manufacturers' specifications, in keeping with recognized BMPs, and in keeping with TPDES regulations. Qualification of installing Contractor shall be reviewed with the Owner prior to entering into a contract with them for services.

1.4.3. The Contractor shall inspect all BMPs weekly as specified in the SWPPP for this project. Use standard Owner Inspection forms (Part 4 - Supplemental Documents) for each inspection. Record all deficiencies of site controls and take immediate action to correct any deficiencies recorded. Keep records of inspections current and on file, available for review by EPA, TCEQ, MS4 Operator, or Owner.

1.5. Submittals

1.5.1. Submittals of products used in structural and non-structural controls shall be made through established procedures for review and approved by the Owner prior to installation on the site. The Contractor shall make available physical samples of and product literature for any material used in structural or non-structural controls during the course of the project prior to its implementation in the field.

Part 2 - Products

2.1. Materials

2.1.1. Specific site control devices are identified in the SWPPP. Where such devices are indicated, their material composition shall comply with this section. Materials to be used in structural and non-structural site controls shall include, but not be limited to the following:

2.1.2. Area Inlets, Curb Inlets, and Silt Fences: implemented to filter and remove sediment from storm water. They shall be composed of the following materials:

2.1.2.1. Geotextile fabric – a non-woven, polypropylene, polyethylene, or polyamide fabric with non-raveling edges. It shall be non-biodegradable, inert to most soil chemicals, ultraviolet resistant, unaffected by moisture and other weather conditions, and permeable to water while retaining sediment. Fabric shall be 36 inches wide with a minimum weight of 4.5 oz./yd.

2.1.2.2. Wire Backing – a galvanized, 2-inch x 4 inch welded wire fencing, 12-gauge minimum. Width shall be sufficient to support geotextile fabric 18 inches above adjacent grades. Chain link fences located along the same lines as silt fences may be used to support geotextile fabric. In this circumstance, the geotextile fabric shall be firmly attached to the fence at regular intervals.

2.1.2.3. Posts for area inlets and silt fences – steel fence posts shall be made of hot rolled steel, galvanized or painted, with a Y-bar or TEE cross-section of sufficient strength and stiffness to withstand forces found on an active construction site.

2.1.3. Rock Berms: shall be composed of the following materials:

2.1.3.1. Rock – clean open graded rock with a maximum diameter of 3 inches.

2.1.3.2. Wire Mesh Support – a galvanized, woven wire sheathing having a maximum opening size of 1 inch, and a minimum wire diameter of 20 gauge.

2.1.3.3. Ties – metal hog rings or standard wire/cable ties.

2.1.4. Triangular filter dikes: for use on surfaces or in locations where standard silt fence cannot be implemented, shall be composed of the following:

2.1.4.1. Geotextile fabric – a non-woven, polypropylene, polyethylene, or polyamide fabric with non-raveling edges, with a minimum width of 60 inches.

2.1.4.2. Dike Structure – 6-gauge, 6 inch x 6 inch welded wire mesh, 60 inches wide, folded into a triangular form. Each side shall be 18 inches with an overlap of 6 inches.

2.1.4.3. Ties – metal hog rings or standard wire/cable ties for attachment of wire mesh to itself and for attachment of geotextile fabric to wire mesh.

2.1.5. Stabilized construction exit: a steel grid that allows the safe passage of vehicles while agitating the tires to loosen and remove the soil buildup. The grid or structures shall conform to the following:

2.1.5.1. Steel grid:

2.1.5.1.1. Shall consist of pipes or tubes spaced such that there is a minimum clear distance between the pipes or tubes of 4.5 inches. It shall be elevated above the ground surface a minimum of 8 inches to allow water, debris, and soil to drain. Minimum diameter of pipe or tube shall be 3 inches.

2.1.5.1.2. Shall be designed to support any and all vehicles entering and leaving the construction site.
2.1.5.1.3. Shall be firmly placed in the ground at the exit.
2.1.5.1.4. Shall be of sufficient length so that the agitation will remove the soil from the tires, or a minimum of 12 feet.
2.1.5.1.5. Shall be used as the tire wash area. When tire wash is in use (rainy or muddy days), the area shall be staffed and the tires shall be washed using a high-pressure hose/nozzle.
2.1.5.1.6. Shall have an area beneath the grid that is sloped such that debris, soil, and water shall be diverted back onto the construction site or to a sediment basin. No water, soil, or debris shall leave the construction site. The resulting discharge shall be disposed of properly.

2.1.5.2. Approaches to Steel Grid:

2.1.5.2.1. The steel grid will be between the street side approach and the job site crushed stone/rock.
2.1.5.2.2. At the street side approach there shall be an impervious surface or it shall consist of 3 inch to 5 inch diameter angular crushed stone/rock minimum of 5 feet in length and minimum of 8 inches deep.
2.1.5.2.3. At the job site side of the grid, there shall be 3 inch to 5 inch diameter angular crushed stone/rock 15 feet in length, a minimum of 8 inches deep.
2.1.5.2.4. All crushed stone/rock shall have filter fabric beneath the stone/rock.

2.1.6. Concrete/Paint/Stucco/Equipment Washout: shall be used for containment of fluids from various washout wastes and shall be constructed of:

2.1.6.1. Gravel bags, concrete blocks, or open graded rock.
2.1.6.2. 10 mil plastic sheeting.

2.1.7. Temporary Storage Tanks: shall be used for temporary storage of fuels on the construction project site and shall be constructed of:

2.1.7.1. 2 inches of sand on the bottom of the containment area.
2.1.7.2. 6 mil plastic sheeting.
2.1.7.3. 2 inches of sand on top of the plastic sheeting.

2.1.8. Erosion Control Matting: shall be used on steep slopes, in drainage swales, and in high traffic pedestrian areas of barren soil. It shall consist of one or more of the following:

2.1.8.1. Jute Mat – a plain fabric made of jute yarn woven in a loose and simple manner with a minimum unit weight of 2.7 pounds per square yard. Width shall be as required for the dimensions of the area to be covered.
2.1.8.2. Wood Fiber Mat – a mat composed of wood fibers, which are encased in nylon, cotton, or other type of netting
2.1.8.3. Synthetic Webbing Mat – a mat manufactured from polyvinyl chloride or polypropylene monofilaments that are bonded together into a three-dimensional web to facilitate erosion control, re-vegetation, or both.

2.1.9. Organic mulches: shall be used for covering bare soil, retaining moisture under

existing vegetation being preserved, and for absorbing the energy of compaction caused by foot or vehicular traffic. Mulch shall be one or more of the following:

2.1.9.1. Straw – from broken straw bales that are free of weed and grass seed where the grass from the seed is not desired vegetation for the area to be protected.

2.1.9.2. Wood Chips – from chipped limbs of cleared trees on site, or delivered in chipped form, in bulk quantities of pine, cedar, or cypress. Wood chips of all species shall be partially decomposed to alleviate nitrogen depletion of the soil in areas where existing vegetation is to be preserved and protected.

2.1.9.3. Shredded Mulches – from pine, cypress, or cedar, mechanically shredded, and capable of forming an interlocking mat following placement, and after sufficient wetting and drying has taken place naturally.

2.1.10. Any other materials indicated in the SWPPP or Site Erosion and Sedimentation Control Drawings and Details.

2.2. Alternative Materials

2.2.1. Alternative materials proposed for use by the Contractor shall be reviewed and approved by the Owner prior to installation on the Site.

Part 3 - Execution

3.1. General

3.1.1. The Contractor shall provide a complete installation of all site control devices and measures indicated in the SWPPP, the Site Erosion and Sedimentation Control Drawing, and as specified herein. Installed BMPs must be confirmed as fully operational by the Owner before any work that disturbs the site can begin.

3.1.2. As an alternative to the BMPs indicated in the SWPPP, the Site Erosion and Sediment Control Drawing, and as specified herein, the Contractor may propose alternate BMPs that perform the same function as the indicated BMPs but may be of a different configuration, material, or type for review and approval by OCP. Installation of alternate BMPs shall not proceed until approved by OCP.

3.1.3. The Contractor shall provide inspection and monitoring of in-place controls and shall perform all revisions and updating of SWPPP. An accurate, chronological record of all Contractor inspections, revisions, and additional controls shall be available for review and on file at the project site with a copy of the SWPPP book.

3.1.4. The Contractor shall submit their NOT, with the approval of the OCP Engineer, to the Owner after all disturbed areas are re-established (stabilized) with vegetative cover following completion of construction. Following acceptance of stabilized areas, all site controls that are no longer necessary shall be removed.

3.2. Control Devices

3.2.1. Execution of specific site control devices is described in the following paragraphs. Refer to the SWPPP for applicable devices, extent, and location.

3.2.2. Area Inlet Detail

3.2.2.1. Area inlet fences shall be constructed of materials described in Article 2.1.2 and as shown in Exhibit A.

3.2.2.2. Maintain silt fence daily as necessary to repair breaches in geotextile fabric. Maintain steel posts in the as-specified in tilted condition. When siltation has occurred, it shall be removed when it has reached a depth of 6 inches. Silt that has been removed shall be disposed of offsite.

3.2.2.3. Remove area inlet when the disturbed areas have been completely stabilized as specified. Minimize site disturbance while removing area inlet protection and posts.

3.2.3. Curb Inlet Protection

3.2.3.1. Curb inlet protection shall be constructed of materials described in Article 2.1.2 and as shown in Exhibit B.

3.2.3.2. Maintain inlet protection daily as necessary to repair breaches in geotextile fabric. When siltation has occurred, it shall be removed when it has reached a depth of 2 inches. Silt that has been removed shall be disposed of offsite.

3.2.3.3. Remove curb inlet protection when the disturbed areas have been completely stabilized as specified. Minimize site disturbance while removing curb inlet protection and posts

3.2.4. Rock Berm

3.2.4.1. Rock berm shall be constructed of materials described in Article 2.1.3 and as shown in Exhibit C. Rock berm shall have a minimum flow-through rate of 60 gallons per minute per square foot of berm face.

3.2.4.2. Maintain rock berm in a condition that allows the sediment to be removed, when the depth of sediment has reached one-third of the height of the berm. Berm shall be reshaped as needed and silt buildup removed to maintain specified flow through berm.

3.2.4.3. Rock berm shall be removed when the disturbed areas served have been stabilized as specified.

3.2.5. Silt Fence

3.2.5.1. Silt fences shall be constructed of materials described in Article 2.1.2 and as shown in Exhibit D.

3.2.5.2. Maintain silt fence daily as necessary to repair breaches in geotextile fabric. Maintain steel posts as specified in tilted condition. When siltation has occurred, it shall be removed when it has reached a depth of 6 inches. Silt that has been removed shall be disposed of offsite.

3.2.5.3. Remove silt fence when the disturbed areas protected by silt fence have been completely stabilized as specified. Minimize site disturbance while removing silt fence and posts.

3.2.6. Triangular Dike

3.2.6.1. Triangular dikes shall be constructed of materials described in Article 2.1.4 and as

shown in Exhibit E.

3.2.6.2. Maintain triangular dikes daily as necessary to repair breaches in geotextile fabric. Maintain wire mesh to retain intended shape of triangular dikes. When siltation has occurred, it shall be removed when it has reached a depth of 6 inches. Silt that has been removed shall be disposed of offsite.

3.2.6.3. Remove triangular dikes when the disturbed areas protected by them have been completely stabilized as specified. Minimize site disturbance while removing triangular dikes.

3.2.7. Stabilized Construction Exit

3.2.7.1. Stabilized construction exits shall be constructed of materials described in Article 2.1.5 and as shown in Exhibit F.

3.2.7.2. The stabilized construction exit shall be properly maintained throughout the entire construction process until removal is approved by OCP.

3.2.7.3. Remove stabilized construction exit traffic when into and out of the site has finished. Minimize site disturbance while removing stabilized construction exits.

3.2.8. Concrete/Paint/Stucco/Equipment Washout (Self-Installed)

3.2.8.1. Concrete/Paint/Stucco/Equipment Washout shall be constructed of materials described in Article 2.1.6 and as shown in Exhibit G.

3.2.8.2. The washout containment area shall be maintained in a condition that will not allow concrete buildup within the containment area to exceed 50 percent of the storage capacity.

3.2.8.3. The washout area will be removed when it is no longer necessary to wash out concrete trucks, paint, stucco, or other potentially hazardous materials on the site.

3.2.8.4. Clean equipment in a manner that does not create any discharge of cleaning agents, paints, oil or solvents to a storm sewer, waterway, or onto the ground. Soaps and detergents must never be discharged to the ground. Cement handling equipment must be rinsed in a contained area and there must be no drainage off-site or onto to ground.

3.2.8.5. When rinsing painting equipment or tools outside, rinse water must be contained in a bucket or other container for appropriate disposal. Water-based or latex paint rinse water may be discharged to the sanitary sewer only with permission and approval from OCP or Campus EH&S Office

3.2.8.6. Oil based paint wastes, including solvents and thinners, must not be disposed of in the sanitary sewer; they must be collected and disposed of through the contractor's disposal company in accordance with applicable laws and regulations.

3.2.8.7. Discharges from pressure washing using soaps or chemicals must not be allowed to enter a storm sewer. The wastewater will need to be collected and transported to appropriate disposal site. If the rinse only contains water and soil or sediment, it may be spread on a grass area or contained and filtered with clean water allowed to enter storm sewer. In some cases, it may also be possible to discharge to a sanitary sewer with permission from Campus EH&S.

3.2.9. Temporary Storage Tanks

3.2.9.1. Must be located in a bermed containment area. The volume contained within the berm must be adequate to contain the maximum contents of the largest tank plus 8 inches of fluid depth (approximately 110 percent of the tank capacity). The containment area is constructed by beginning with a 2-inch sand pad, and then covered with 6-mil plastic

or rubber sheeting. The sheeting is then covered with another 2-inch layer of sand. The plastic sheeting is secured to the outer berm.

3.2.9.2. Storage tanks are to be placed no closer than 50 feet from a building or property line.

3.2.9.3. If using tanks with a gravity feed setup, the containment must be of sufficient size to contain the tank if it should fall over.

3.2.9.4. There must be a fusible link at the valve that will shut off the flow to the hose in the event of a fire.

3.2.9.5. There must be sufficient cover for the tank and the containment area to prevent potential storm water runoff.

3.2.9.6. The area within the containment area is to be kept free and clear of spills. If a spill occurs, the sand is to be removed and replaced with a fresh layer of sand.

3.2.9.7. The storage tank containment area is to be removed from the site once it has been determined that it will no longer be used.

3.2.10. Diversion Dike

3.2.10.1. Diversion dikes shall be formed and shaped using compacted fill and shall not intercept runoff from more than 10 acres. The dike shall have a minimum top width of 24 inches and a minimum height of 18 inches. Soil shall have side slopes of 3H:1V or flatter and shall be placed in 8-inch lifts. Compact soil to 95 percent standard proctor density. Where protected slopes exceed 2 percent, the uphill side of diversion dike shall be stabilized with crushed stone or erosion control matting to a distance of not less than 7 feet from toe of dike. The channel that is formed by the diversion dike must have positive drainage for its entire length to a stabilized outlet, such as a rock berm, sandbag berm, or stone outlet structure. Storm water shall not be allowed to overflow the top of diversion dike at any point other than the stabilized outlet.

3.2.10.2. Maintain the diversion dike in a condition that allows the storm water runoff to be diverted away from exposed slopes. Repair any failures at top of dike and remove sediment as necessary behind the dike to allow positive drainage to a stabilized outlet.

3.2.10.3. Remove diversion dike when the exposed slopes being protected are stabilized with vegetation or other permanent cover.

3.2.11. Interceptor Swale

3.2.11.1. An interceptor swale shall be implemented to prevent storm water from entering a disturbed area or prevent sediment-laden runoff from leaving the site or disturbed area. The interceptor swale shall be excavated as required by the SWPPP drawings with side slopes of 3H:1V or flatter. The Contractor shall include all labor and equipment associated with the installation and maintenance of the swale as shown on the construction documents. Constructed swale may be v-shaped or trapezoidal with a flat bottom, depending on the volume of water being channeled. Sediment laden runoff from swale shall be directed to a stabilized outlet or sediment-trapping device. Flow line of swale shall have a continuous fall for its entire length and shall not be allowed to overflow at any other points along its length.

3.2.11.2. Maintain interceptor swale in a condition that allows the storm water runoff to be channeled away from disturbed areas. Remove sediment in swale as necessary to maintain positive drainage to a stabilized outlet.

3.2.11.3. Fill in or remove swale after the disturbed area or areas being protected are completely stabilized as specified.

3.2.12. Erosion Control Matting

3.2.12.1. Remove all rocks, debris, dirt clods, roots, and any other obstructions which would prevent the matting from lying in direct contact with the soil. 6 inch by 6 inch anchor trenches shall be dug along the entire perimeter of the installation. Bury matting in trenches by backfilling and compacting soil. Fasten matting to the soil using 10-gauge wire staples, 6 inches in length and 1 inch wide. Use a minimum of 1 staple per 4 square feet of matting, and at 12 inches on center along all edges. Install parallel to flow of water and overlap joining strips a minimum of 12 inches.

3.2.12.2. Maintain erosion control matting by repairing any bare spots. Missing or loose matting shall be promptly replaced or re-anchored.

3.2.12.3. Remove matting where protection is no longer required. In areas where permanent vegetation is established along with matting, matting can be left in place permanently.

3.2.13. Mulches

3.2.13.1. Apply specified mulches in areas identified on the SWPPP to a depth of 3 inches or as otherwise specified on the SWPPP drawings.

3.2.14. Alternative BMPs

3.2.14.1. Alternative BMPs proposed for use by the Contractor shall be reviewed and approved by OCP/ODR prior to installation on the Site.

3.3. Inspections and Record Keeping

3.3.1. Contractor shall inspect all BMPs on 7-day intervals. Coordinate inspections with OCP/ODR CI, who is also required by TPDES to regularly inspect the site. Use standard Owner Inspection forms (see form in Part 4 - Supplemental Documents) for each inspection. Record all deficiencies of site controls and take appropriate action to correct any deficiencies recorded. Exception is rock berms located in a streambed. Any rock berm located in a streambed shall be inspected on a daily basis. Keep records of inspections current and on file, available for review by EPA, TCEQ, MS4 Operator Representative, Owner's Representative, or combination thereof.

3.3.2. Contractor shall keep records of all Contractor inspections on file with SWPPP book at project site and make available for review by Owner's Representative or EPA, TCEQ, or MS4 Operator officials requesting review of SWPPP inspection records. One copy of each inspection report shall be delivered to the OCP/ODR CI and the OCP/ODR RCM office.

3.3.3. Contractor shall keep records of all major grading and stabilization activities on file with the SWPPP book at the project site and make available for review by Owner's representative, EPA, TCEQ, or MS4 Operator officials requesting review of the SWPPP.

3.3.4. Contractor shall retain their copy of the SWPPP and copies of all inspection records and the Major Grading and Stabilization Log (Part 4 - Supplemental Documents)

along with SWPPP book for 3 years from NOT date per TCEQ regulations.

3.4. Maintenance

3.4.1. All erosion and sediment control measures and other protective measures identified in the SWPPP must be maintained in effective operating condition for the duration of the Work. If through inspections the it is determined that BMPs are not operating effectively, maintenance must be performed before the next anticipated storm event or as necessary to maintain the continued effectiveness of storm water controls. If maintenance prior to the next anticipated storm event is impracticable, maintenance must be scheduled and accomplished as soon as practicable. Erosion and sediment controls that have been disabled (intentionally or unintentionally), run over, removed, or otherwise rendered ineffective must be replaced or corrected immediately upon discovery.

3.5. Waste Disposal

3.5.1. Contractor is responsible for proper disposal of hazardous materials. Hazardous wastes (such as flammable petroleum products, solvents, and thinners) and materials contaminated with hazardous wastes are considered regulated wastes and should be containerized for transport and disposal by a permitted company in accordance with applicable laws and regulations.

3.5.2. Any trash or debris must be contained on site and disposed of in a recycling bin or waste receptacle in accordance with applicable laws and regulations to prevent wind or rain from carrying it off-site. Non-hazardous solid wastes such as general construction debris may be recycled or disposed of in the trash container. Never dispose of liquid wastes of any kind in dumpsters.

Part 4 - Supplemental Documents

Sample Forms

The following forms are to be used by the Contractor in the execution of the work in this Section in compliance with TPDES requirements and the SWPPP.

- SWPPP Posting Sign for Main Construction Entrance for large construction site (5 acres or larger),

- SWPPP Posting Sign for Main Construction Entrance for small construction sites (larger than 1 acre and less than 5 acres), and

4.1. Exhibits

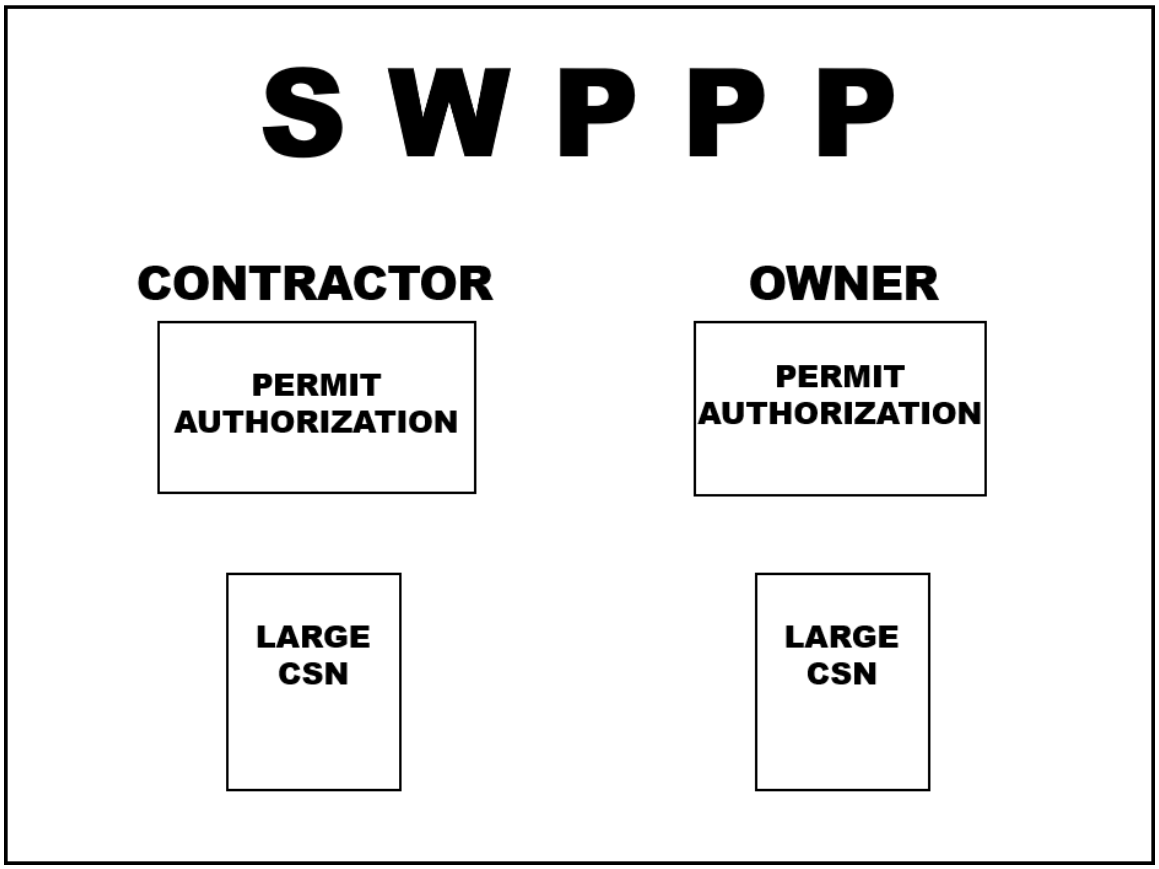
Sketches/additional details of BMPs described in Articles 3.2.2 through 3.2.8 are provided as exhibits to this specification section:

Exhibit A – Area Inlet Detail,
Exhibit B – Curb Inlet Detail,
Exhibit C – Rock Berm Detail,
Exhibit D – Silt Fence Detail,
Exhibit E – Triangular Dike Detail,
Exhibit F – Stabilized Construction Exit, and
Exhibit G – Concrete/Paint/Stucco/Equipment Washout.

Contact the Owner's representative for electronic copies of the forms to be used in the execution of work in this section:

TCEQ TPDES Notice of Intent (NOI),
TCEQ TPDES CSN (Large CSN or Small CSN),
TCEQ TPDES Notice of Termination (NOT),
Shared SWPPP Acceptance Certification form
SWPPP Inspection form

SIGN FOR LARGE CONSTRUCTION SITE



MINIMUM SIGN SPECIFICATIONS: Sites 5 acres or larger

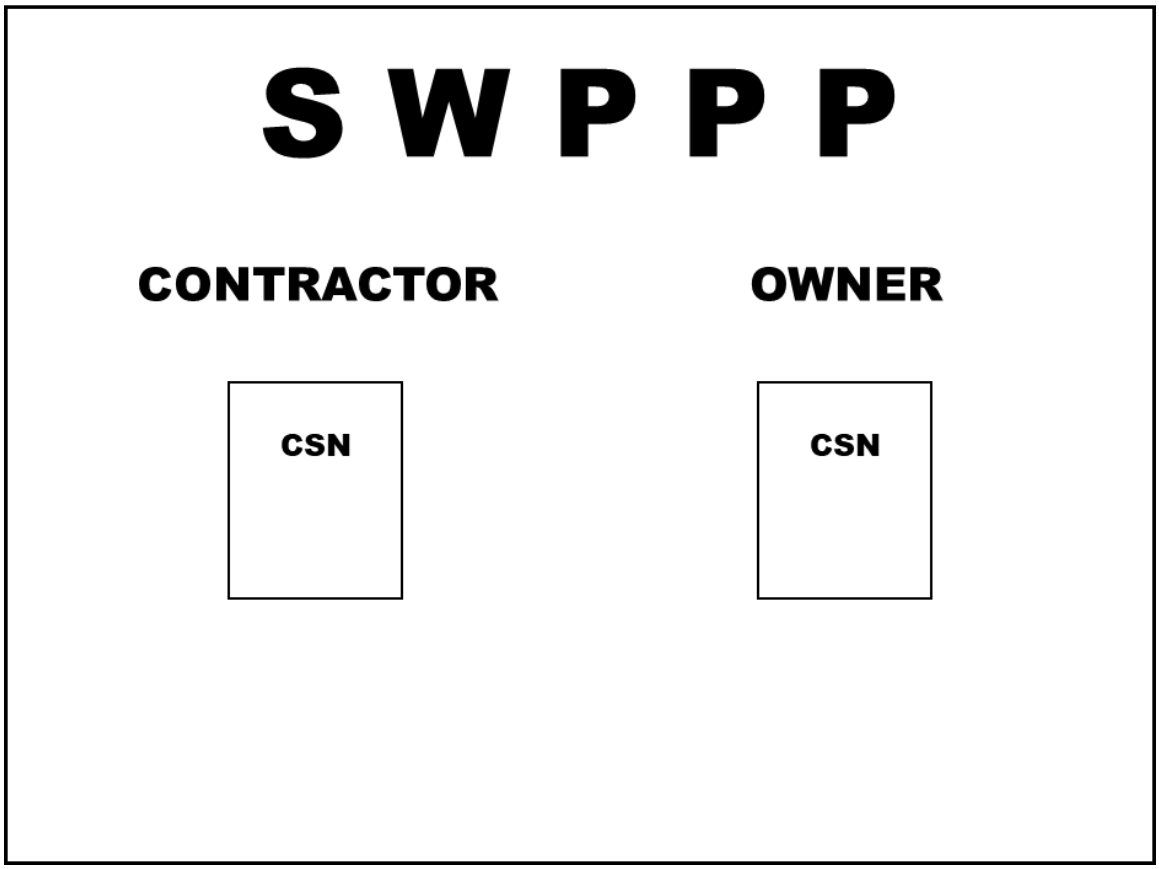
SIGN: Exterior grade 3/4 in. plywood cut 4 ft x 4 ft, with red painted letters, background painted white – DISPLAY ON CONSTRUCTION FENCE AT MAIN ENTRANCE TO PROJECT SITE

S W P P P: 10-inch painted letters, 3 inches from top of sign, centered

CONTRACTOR; OWNER: 3-inch painted letters, 4 inches below SWPPP letters, centered on each half of sign

PERMIT; CSN: 8-1/2 in. X 11 in. TCEQ forms, laminated beyond edges of documents, stapled to plywood.

SIGN FOR SMALL CONSTRUCTION SITE



MINIMUM SIGN SPECIFICATIONS: Sites larger than 1 acre and less than 5 acres

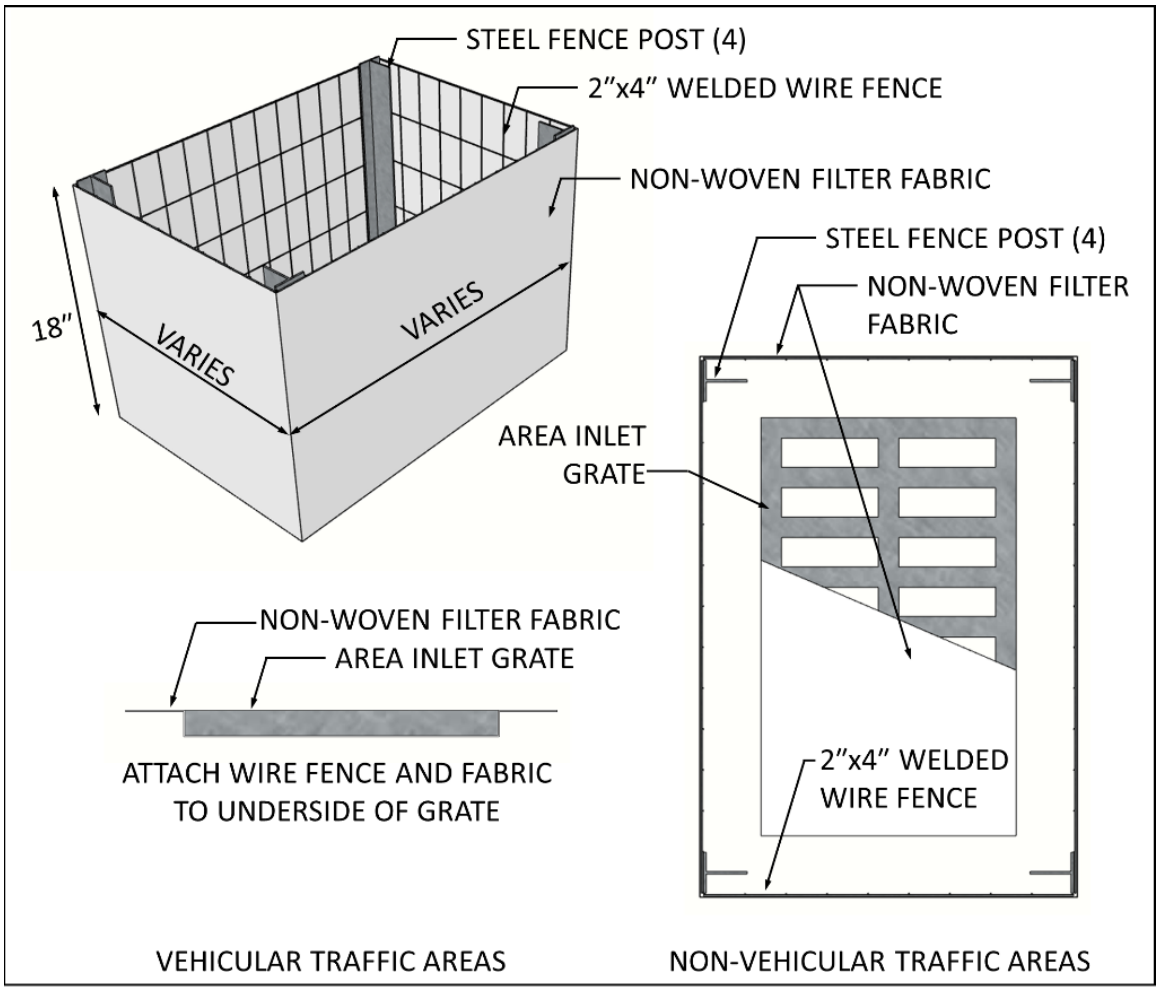
SIGN: Exterior grade 3/4 in. plywood cut 4 ft x 4 ft, with red painted letters, background painted white – DISPLAY ON CONSTRUCTION FENCE AT MAIN ENTRANCE TO PROJECT SITE

S W P P P: 10-inch painted letters, 3 inches from top of sign, centered

CONTRACTOR; OWNER: 3-inch painted letters, 4 inches below SWPPP letters, centered on each half of sign

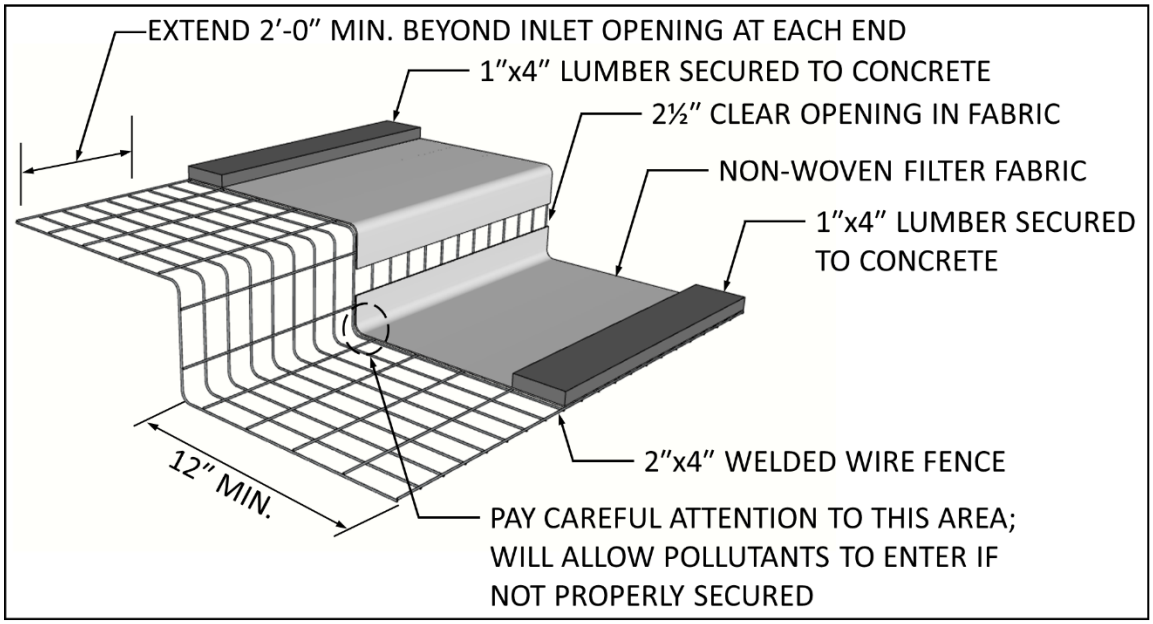
CONSTRUCTION SITE NOTICE: 8-1/2 in. X 11 in. TCEQ forms, laminated beyond edges of documents, stapled to plywood.

EXHIBIT A – AREA INLET DETAIL



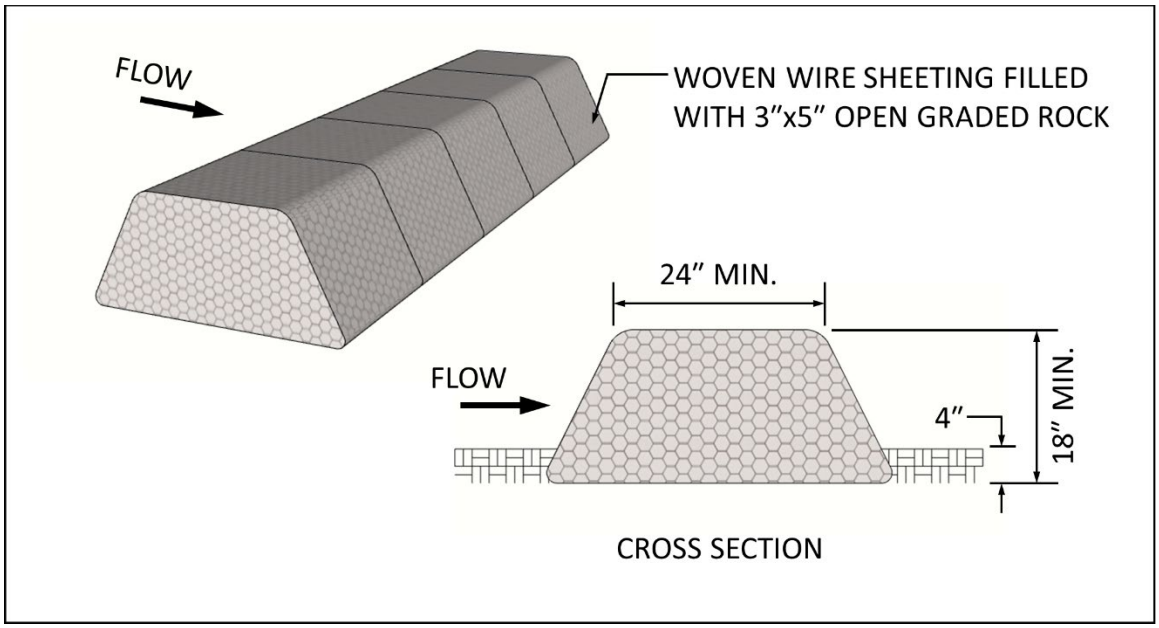
1. INSTALL STEEL POSTS THAT SUPPORT THE SILT FENCE AT EACH CORNER, AND ALSO BETWEEN CORNERS IF THE DISTANCE IS GREATER THAN 6 FEET BETWEEN CORNER POSTS.
2. USE SILT FENCE DETAIL FOR INSTALLATION OF THE SILT FENCE AROUND THE AREA INLET.
3. LIFT THE METAL AREA INLET GRATE, WRAP THE FILTER FABRIC AROUND IT, AND THEN REPLACE THE GRATE.
4. IN VEHICULAR TRAFFIC AREAS, LIFT THE METAL GRATE AND PLACE WIRE FENCE MATERIAL UNDER IT WITH FILTER FABRIC PLACED BETWEEN THE GRATE AND THE WIRE FENCE. THEN ATTACH THE WIRE FENCE TO THE GRATE.
5. REMOVE ACCUMULATED SILT WHEN THE FILTER FABRIC OVER THE GRATE COMPLETELY COVERS THE GRATE AREA OR THE SILT AROUND THE SILT FENCE REACHES A HEIGHT OF 6 INCHES.
6. REMOVE AREA INLET PROTECTION WHEN THE SITE IS COMPLETELY STABILIZED.

EXHIBIT B – CURB INLET DETAIL



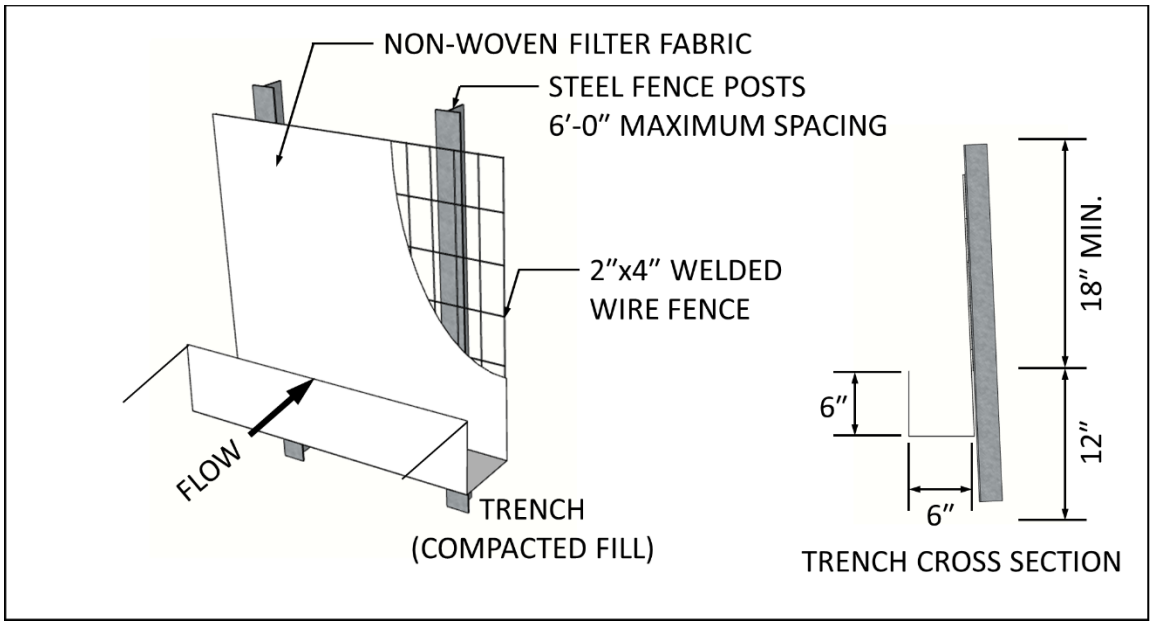
1. WHERE MINIMUM CLEARANCES CAUSE TRAFFIC TO DRIVE IN THE GUTTER, USE 1 INCH BY 4 INCH LUMBER SECURED WITH CONCRETE NAILS 3 FEET ON CENTER NAILED INTO THE CONCRETE. IF THERE IS PEDESTRIAN TRAFFIC ONLY, THE USE OF 20-POUND GRAVEL BAGS TO SECURE MATERIAL IS PERMITTED.
2. REMOVE SECTION OF FILTER FABRIC AS SHOWN IN THIS DETAIL.
3. SECURE FABRIC TO WIRE BACKING WITH CLIPS OR HOG RINGS.
4. INSPECT DAILY AND REMOVE SILT ACCUMULATION WHEN THE DEPTH REACHES 2 INCHES.
5. MONITOR THE PERFORMANCE OF THE INLET PROTECTION DURING EACH RAINFALL EVENT AND REMOVE PROTECTION IMMEDIATELY IF THE STORM WATER BEGINS TO OVERTOP THE CURB.
6. REMOVE INLET PROTECTION AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.
7. OVERLAP FABRIC BY 3 INCHES MINIMUM AT EDGES OF FILTER FABRIC.

EXHIBIT C – ROCK BERM DETAIL



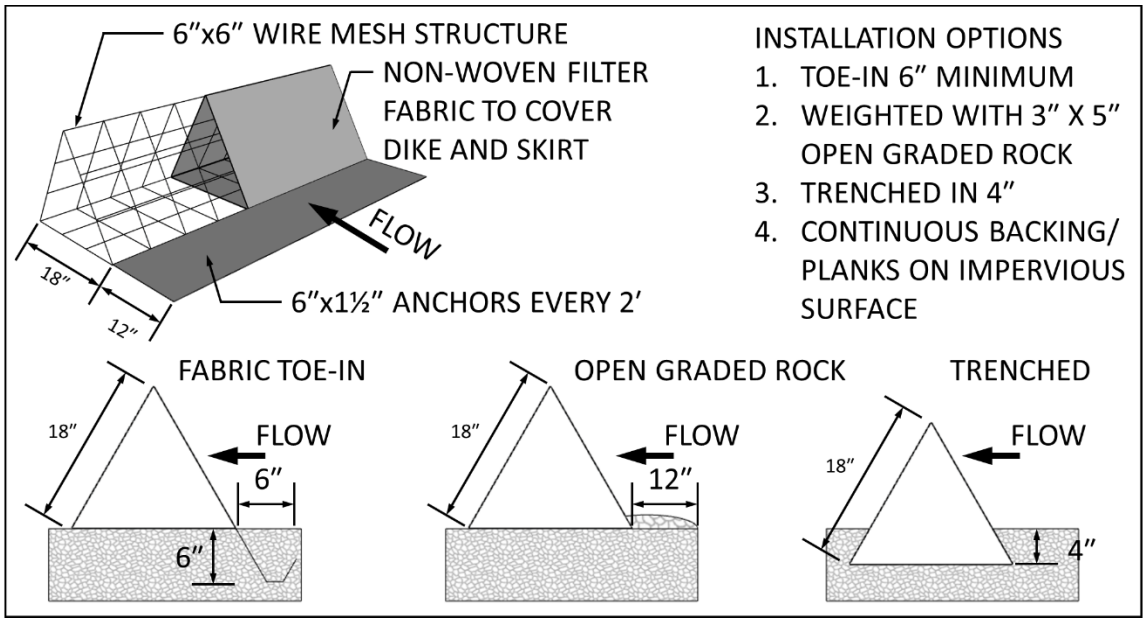
1. USE ONLY OPEN GRADED 3 INCH X 5 INCH ROCK FOR STREAM FLOW CONDITIONS. USE 3 INCH X 5 INCH OPEN GRADED ROCK FOR OTHER CONDITIONS.
2. SECURE THE ROCK BERM WITH A WOVEN WIRE SHEATHING HAVING A MAXIMUM 1 INCH OPENING AND A MINIMUM 20-GAUGE WIRE DIAMETER. ANCHOR ROCK BERMS IN CHANNEL APPLICATIONS FIRMLY INTO THE SUBSTRATE A MINIMUM OF 6 INCHES WITH TEE POSTS OR WITH #5 OR #6 REBAR WITH A MAXIMUM SPACING OF 48 INCHES ON CENTER.
3. INSPECT THE ROCK BERM WEEKLY. REPLACE THE STONE, FABRIC CORE-WOVEN SHEATHING, OR BOTH WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC, ETC.
4. WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 6 INCHES, WHICHEVER IS LESS, REMOVE THE SILT AND DISPOSE OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SILTATION PROBLEM.
5. INSPECT SEVERE SERVICE ROCK BERMS DAILY AND REMOVE SILT WHEN ACCUMULATION REACHES 6 INCHES.
6. WHEN THE SITE IS COMPLETELY STABILIZED, REMOVE THE ROCK BERM AND ACCUMULATED SILT AND DISPOSE OF IN AN APPROVED MANNER.

EXHIBIT D – SILT FENCE DETAIL



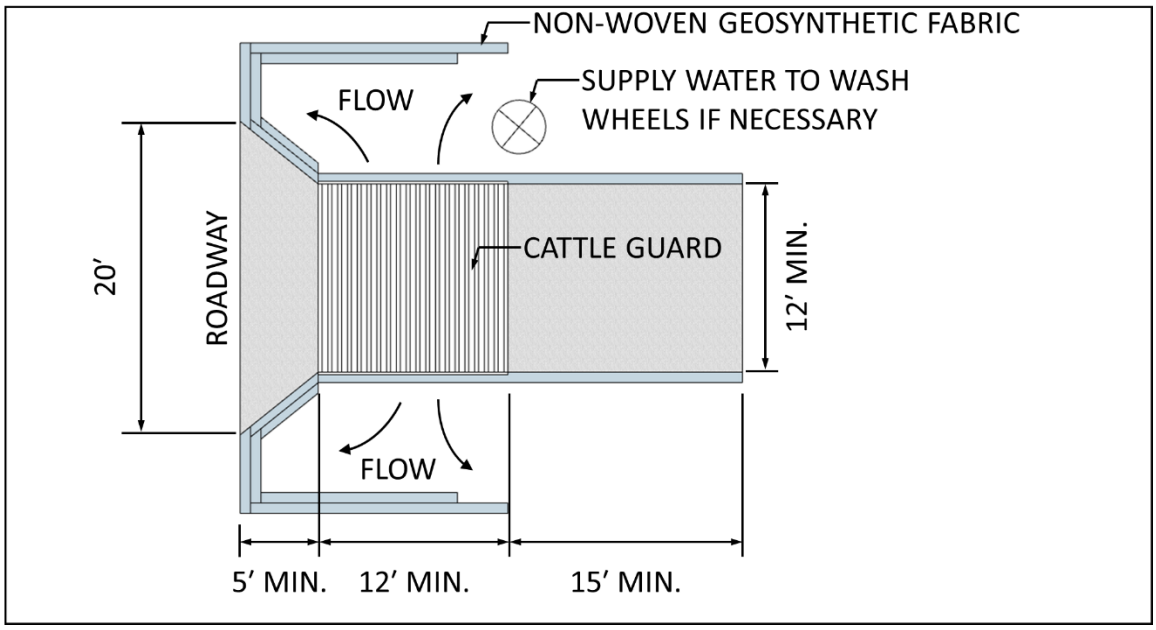
1. 1INSTALL STEEL POSTS THAT SUPPORT THE SILT FENCE ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 12 INCHES.
2. TRENCH IN THE TOE OF THE SILT FENCE WITH A SPADE OR MECHANICAL TRENCHER SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF THE FLOW. WHERE FENCE CAN NOT BE TRENCHED INTO THE SURFACE, (E.G., PAVEMENT), WEIGHT THE FABRIC DOWN WITH ROCK OR 1" X 4" LUMBER SECURELY FASTENED TO THE SURFACE. PLACE ON THE UPSTREAM SIDE TO PREVENT FLOW UNDER THE FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE FILTER FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. FASTEN THE FILTER FABRIC SECURELY TO THE WOVEN WIRE BACKING, AND IN TURN FASTEN IT SECURELY TO THE STEEL FENCE POST.
5. REMOVE ACCUMULATED SILT WHEN IT REACHES A DEPTH OF 6 INCHES, DISPOSE OF THE SILT ON AN APPROVED SITE AND IN SUCH A MANNER THAT IT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
6. INSPECT THE SILT FENCE WEEKLY AND REPAIR OR REPLACE PROMPTLY IF NEEDED.
7. WHEN THE SITE IS COMPLETELY STABILIZED, REMOVE THE SILT FENCE.

EXHIBIT E – TRIANGULAR DIKE DETAIL



1. PLACE DIKES IN A ROW WITH EACH END TIGHTLY ABUTTING THE ADJACENT DIKE.
2. THE FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS WRAPPING OF NON-WOVEN GEOTEXTILE. THE SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE.
3. WEIGHT THE SKIRT WITH A CONTINUOUS LAYER OF 3 INCH X 5 INCH OPEN GRADED ROCK, 1 INCH X 4 INCH SECURELY FASTENED LUMBER, OR TOED-IN 6 INCHES WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, TRENCH IT IN 4 INCHES IN DEPTH.
4. ANCHOR DIKES AND SKIRT SECURELY IN PLACE USING 6 INCH WIRE STAPLES ON 2 FOOT CENTERS ON BOTH EDGES OF SKIRT, OR STAKE USING 3/8 INCH REBAR WITH TEE ENDS.
5. LAP FILTER MATERIAL OVER ENDS 6 INCHES TO COVER DIKE TO DIKE JOINTS. FASTEN JOINTS WITH GALVANIZED HOG RINGS.
6. THE DIKE STRUCTURE SHALL BE 6-GAUGE 6 INCH X 6 INCH WIRE MESH, 18 INCHES ON A SIDE.
7. REMOVE ACCUMULATED SILT WHEN IT REACHES A DEPTH OF 6 INCHES, AND DISPOSE OF IT IN A MANNER THAT WILL NOT CAUSE ADDITIONAL SILTATION.
8. INSPECT DIKES WEEKLY AND REPAIR OR REPLACE PROMPTLY AS NEEDED.
9. AFTER THE SITE IS COMPLETELY STABILIZED, REMOVE THE DIKES AND ANY REMAINING SILT.

EXHIBIT F – STABILIZED CONSTRUCTION EXIT

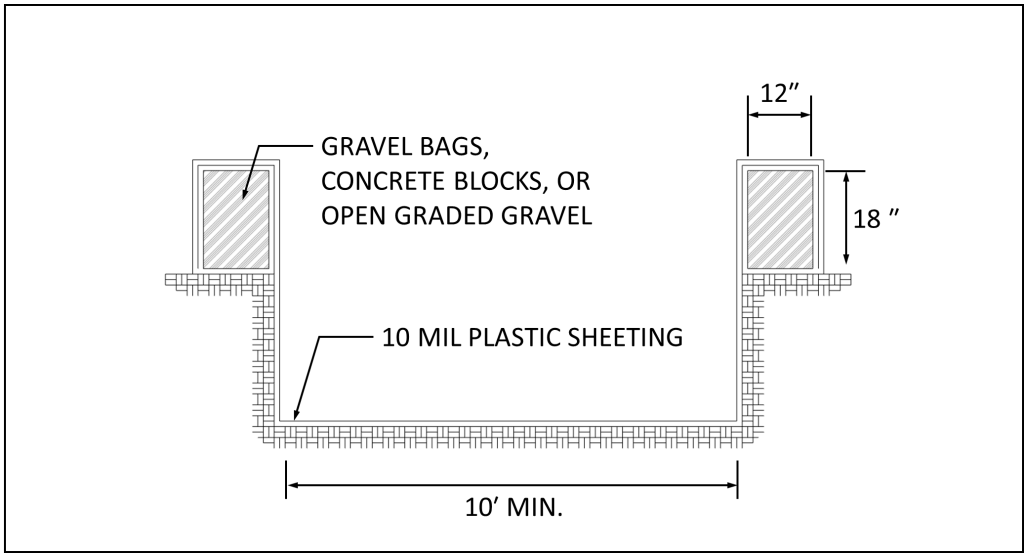


1. THE GRID CONSISTS OF PIPES OR TUBES WITH A MINIMUM DIAMETER OF 3 INCHES AND SPACED SUCH THAT THERE IS A MINIMUM CLEAR DISTANCE OF 4 1/2 INCHES BETWEEN THEM. ELEVATE THE GRID ABOVE THE GROUND SURFACE A MINIMUM OF 8 INCHES TO ALLOW WATER, DEBRIS AND SOIL TO DRAIN.
2. THE GRID SHALL BE DESIGNED TO SUPPORT THE WEIGHT OF ANY AND ALL VEHICLES ENTERING AND LEAVING THE CONSTRUCTION SITE.
3. THE GRID SHALL BE FIRMLY PLACED IN THE GROUND AT THE EXIT AND SHALL BE OF SUFFICIENT LENGTH THAT THE AGITATION WILL REMOVE THE SOIL FROM THE TIRES, OR A MINIMUM OF 12 FEET.
4. AT THE STREET SIDE APPROACH OF THE GRID, THERE SHALL BE AN IMPERVIOUS SURFACE OR IT SHALL CONSIST OF 3" X 5" ANGULAR CRUSHED STONE/ROCK 5 FEET IN LENGTH MINIMUM, AND 8 INCHES DEEP, MINIMUM. ON THE JOB SITE SIDE OF THE GRID, THERE SHALL BE 3" X 5" ANGULAR CRUSHED STONE/ROCK 15 FEET IN LENGTH, MINIMUM, 8 INCHES DEEP, MINIMUM. THE STEEL GRID WILL BE BETWEEN THE STREET SIDE APPROACH AND THE JOB SITE CRUSHED STONE/ROCK. ALL CRUSHED STONE/ROCK SHALL HAVE FILTER FABRIC PLACED BENEATH IT.
5. THE STEEL GRID AREA SHALL BE USED AS THE TIRE WASH AREA. WHEN TIRE WASH IS IN USE (RAINY OR MUDDY DAYS), THE AREA SHALL BE STAFFED AND THE TIRES SHALL BE WASHED USING A HIGH-PRESSURE HOSE/NOZZLE.
6. THE AREA BENEATH THE GRID SHALL BE SLOPED SUCH THAT DEBRIS, SOIL AND WATER SHALL BE DIVERTED BACK ON TO THE CONSTRUCTION SITE OR TO A SEDIMENT BASIN. NO WATER, SOIL OR DEBRIS SHALL LEAVE

EXHIBIT F – STABILIZED CONSTRUCTION EXIT

THE CONSTRUCTION SITE, AND THE RESULTING DISCHARGE SHALL BE DISPOSED OF PROPERLY.

EXHIBIT G – CONCRETE/PAINT/STUCCO/EQUIPMENT WASHOUT



1. THE EXCAVATION FOR THE CONCRETE TRUCK WASHOUT SHALL BE A MINIMUM OF 10 FEET WIDE AND OF SUFFICIENT LENGTH AND DEPTH TO ACCOMMODATE 7 GALLONS OF WASHOUT WATER AND CONCRETE PER TRUCK PER DAY AND/OR 50 GALLONS OF WASHOUT WATER AND CONCRETE PER PUMP TRUCK PER DAY.
2. IN THE EVENT THAT THE CONCRETE TRUCK WASHOUT IS CONSTRUCTED ABOVE GROUND, IT SHALL BE 10 FEET WIDE AND 10 FEET LONG, WITH THE SAME REQUIREMENTS FOR CONTAINMENT AS DESCRIBED IN ITEM 1.
3. THE CONTAINMENT AREA SHALL BE LINED WITH 10 MIL PLASTIC SHEETING WITHOUT HOLES OR TEARS. WHERE THERE ARE SEAMS, THESE SHALL BE SECURED ACCORDING TO MANUFACTURERS' DIRECTIONS.
4. THE BERM CONSISTING OF GRAVEL BAGS, CONCRETE BLOCKS OR OPEN GRADED ROCK SHALL BE NO LESS THAN 18 INCHES HIGH AND NO LESS THAN 12 INCHES WIDE.
5. THE PLASTIC SHEETING SHALL BE OF SUFFICIENT SIZE SO THAT IT WILL OVERLAP THE TOP OF THE CONTAINMENT AREA AND BE WRAPPED AROUND THE GRAVEL BAGS, CONCRETE BLOCKS OR OPEN GRADED ROCK AT LEAST 2 TIMES.
6. THE GRAVEL BAGS OR CONCRETE BLOCKS SHALL BE PLACED ABUTTING EACH OTHER TO FORM A CONTINUOUS BERM AROUND THE OUTER PERIMETER OF THE CONTAINMENT AREA.
7. THE WASHOUT MATERIAL IN THE CONTAINMENT AREA SHALL NOT EXCEED 50 PERCENT OF CAPACITY AT ANY ONE TIME.
8. SOLIDS SHALL BE REMOVED FROM CONTAINMENT AREA AND DISPOSED OF PROPERLY. ANY DAMAGE TO THE PLASTIC SHEETING SHALL BE REPAIRED OR SHEETING REPLACED BEFORE THE NEXT USE.

END OF SECTION 01 57 23 - UTA CONSTRUCTION STANDARD TEMPORARY STORM WATER POLLUTION CONTROLS

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Appendix D: Public Education and Outreach, Storm Drain Labeling Program

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UTA's Public Education and Outreach control measure from the original MS4 permit had implemented a storm drain labeling program in an effort to educate students, staff, faculty, contractors and campus visitors that storm drains discharge directly to surface water without treatment. Labeling storm drains assists to educate campus users which drains on campus drain directly to surface water and are not to be used for dumping potential pollutants into them for disposal.

The original program was implemented in 2000 and consisted of UTA EH&S staff surveys of campus storm drains inlets in order to identify and determine the type, and location of storm drains inlets needing labels. Over the past almost two decades, various staff members, have maintained the drain labels to replace broken or removed labels and to label new storm drains due to new or redevelopment construction projects.

Storm Drain Marking

Water entering storm drains at UTA flows directly to a tributary stream that flow into Johnson Creek, untreated. Because the water is untreated, pollutants introduced into the storm drain system can cause water problems.

Placing a placard on storm drain inlets helps to remind students, faculty, staff and contractors not to dump potential pollutants in storm drains. In addition to the placards, UTA will develop other materials to help reinforce the message of preventing pollution.

Common Pollutants

The following are all common pollutants that enter the storm drain system and degrade the quality of water in our ponds, creeks, and Joe Pool Lake:

Cigarette butts
Fertilizers
Grass clippings
Leaves
Motor oil and other automotive fluids
Pesticides
Pet wastes

UTA utilizes a 4" Round Storm Drain Markers to label or drain.

Large plastic decal type markers are also used on larger storm drains where high visibility is needed but due to pedestrian activity a flatter marker is needed to avoid a tripping hazard.

EH&S employees monitor campus regularly to ensure storm drains are marked. A program to document the drains that have been labeled and the type will be re-implemented in 2020.

This is an ongoing control measure as drain markers wear out due to elemental exposure, and vehicular and pedestrian traffic. EH&S staff makes every effort to install markers on newly constructed inlets and maintain those that wear out. The efforts are tracked through the use of storm drain utility maps and survey forms of areas of the campus.