



**Municipal Separate Storm Sewer System (MS4) Plan
TPDES Phase II MS4 General Permit (TXR040000)
Brownsville Campus**

Five-Year Plan (2019-2023)



Outline
Municipal Separate Storm Sewer System (MS4) Plan
TPDES Phase II MS4 General Permit (TXR040000)

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Definitions

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

Classified Segment - refers to a water body that is listed and described in Appendix A or Appendix C of the Texas Surface Water Quality Standards, at 30 TAC ' 307.10.

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

Common Plan of Development or Sale - A construction activity that is completed in separate stages, separate phases, or in combination with other construction activities. A common plan of development or sale is identified by the documentation for the construction project that identifies the scope of the project, and may include plats, blueprints, marketing plans, contracts, building permits, a public notice or hearing, zoning requests, or other similar documentation and activities.

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

- (a) the person or persons that have operational control over construction plans and specifications (including approval of revisions) to the extent necessary to meet the requirements and conditions of this general permit; or
- (b) the person or persons that have day-to-day operational control of those activities at a construction site that are necessary to ensure compliance with a stormwater pollution prevention plan for the site or other permit conditions (e.g. they are authorized to direct workers at a site to carry out activities required by the Stormwater Pollution Prevention Plan or comply with other permit conditions).

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

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

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

- (a) All soil disturbing activities at the site have been completed and a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.
- (b) For individual lots in a residential construction site by either:

- (1) the homebuilder completing final stabilization as specified in condition (a) above; or
 - (2) the homebuilder establishing temporary stabilization for an individual lot prior to the time of transfer of the ownership of the home to the buyer and after informing the homeowner of the need for, and benefits of, final stabilization.
- (c) For construction activities on land used for agricultural purposes (e.g. pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to a surface water and areas which are not being returned to their preconstruction agricultural use must meet the final stabilization conditions of condition (a) above.

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

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

Illicit Discharge - Any discharge to a municipal separate storm sewer that is not entirely composed of stormwater, except discharges pursuant to this general permit or a separate authorization and discharges resulting from emergency fire fighting activities.

Indian Country - Defined in 18 USC Section (') 1151, means (a) all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation; (b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state, and (c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. This definition includes all land held in trust for an Indian tribe.

Industrial Activities - manufacturing, processing, material storage, and waste material disposal areas (and similar areas where stormwater can contact industrial pollutants related to the industrial activity) at an industrial facility described by the TPDES Multi Sector General Permit, TXR050000, or by another TCEQ or TPDES permit.

Large Construction Activity - Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than five (5) acres of land. Large construction activity also includes the disturbance of less than five (5) acres of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than five (5) acres of land. Large construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, and original purpose of a ditch, channel, or other similar stormwater conveyance. Large construction activity does not include the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities.

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

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

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

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

Outfall - For the purpose of this permit, a point source at the point where a municipal separate storm sewer discharges to waters of the United States (U.S.) and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels, or other conveyances that connect segments of the same stream or other waters of the U.S. and are used to convey waters of the U.S.

Permittee - The MS4 operator authorized under this general permit.

Permitting Authority - For the purposes of this general permit, the TCEQ.

Point Source - (from 40 CFR ' 122.22) any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

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

Redevelopment - Alterations of a property that changed the Afootprint@ of a site or building in such a way that there is a disturbance of equal to or greater than one (1) acre of land. This term does not include such activities as exterior remodeling.

Small Construction Activity - Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one (1) acre and less than five (5) acres of land. Small construction activity also includes the disturbance of less than one (1) acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one (1) and less than five (5) acres of land. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, and original purpose of a ditch, channel, or other similar stormwater conveyance. Small construction activity does not include the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities.

Small Municipal Separate Storm Sewer System (MS4) – refers to a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by the United States, a state,

city, town, borough, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under ' 208 of the CWA; (ii) Designed or used for collecting or conveying stormwater; (iii) Which is not a combined sewer; (iv) Which is not part of a publicly owned treatment works (POTW) as defined at 40 CFR ' 122.2; and (v) Which was not previously authorized under a NPDES or TPDES individual permit as a medium or large municipal separate storm sewer system, as defined at 40 CFR §§122.26(b)(4) and (b)(7). This term includes systems similar to separate storm sewer systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. This term does not include separate storm sewers in very discrete areas, such as individual buildings. For the purpose of this permit, a very discrete system also includes storm drains associated with certain municipal offices and education facilities serving a nonresidential population, where those storm drains do not function as a system, and where the buildings are not physically interconnected to an MS4 that is also operated by that public entity.

Stormwater and Stormwater Runoff - Rainfall runoff, snow melt runoff, and surface runoff and drainage.

Stormwater Associated with Construction Activity - Stormwater runoff from an area where there is either a large construction activity or a small construction activity.

Stormwater Management Program (SWMP) - A comprehensive program to manage the quality of discharges from the municipal separate storm sewer system.

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

Surface Water in the State - Lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state (from the mean high water mark (MHW) out 10.36 miles into the Gulf), and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or nonnavigable, and including the beds and banks of all water-courses and bodies of surface water, that are wholly or partially inside or bordering the state or subject to the jurisdiction of the state; except that waters in treatment systems which are authorized by state or federal law, regulation, or permit, and which are created for the purpose of waste treatment are not considered to be water in the state.

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

Urbanized Area (UA) - An area of high population density that may include multiple MS4s as defined and used by the U.S. Census Bureau in the 2000 decennial census.

Waters of the United States - (from 40 CFR ' 122.2) Waters of the United States or waters of the U.S. means:

- (a) all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (b) all interstate waters, including interstate wetlands;
- (c) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds that the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 - (1) which are or could be used by interstate or foreign travelers for recreational or other purposes;
 - (2) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (3) which are used or could be used for industrial purposes by industries in interstate commerce;
- (d) all impoundments of waters otherwise defined as waters of the United States under this definition;
- (e) tributaries of waters identified in paragraphs (a) through (d) of this definition;
- (f) the territorial sea; and
- (g) wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR ' 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

B. Commonly Used Acronyms

BMP	Best Management Practice
CFR	Code of Federal Regulations
CGP	Construction General Permit, TXR150000
CWA	Clean Water Act
DMR	Discharge Monitoring Report
EPA	Environmental Protection Agency
FR	Federal Register
IP	Implementation Procedures
MCM	Minimum Control Measure
MSGP	Multi-Sector General Permit, TXR050000

MS4	Municipal Separate Storm Sewer System
NOC	Notice of Change
NOD	Notice of Deficiency
NOI	Notice of Intent
NOT	Notice of Termination (to terminate coverage under a general permit)
NPDES	National Pollutant Discharge Elimination System
SWMP	Stormwater Management Program
SWP3,	Stormwater Pollution Prevention Plan
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TPDES	Texas Pollutant Discharge Elimination System
TWC	Texas Water Code

1. OBJECTIVES

This Municipal Separate Stormwater System (MS4) plan addresses operations at the University of Texas – Rio Grande Valley (UTRGV) at the following campus

**Brownsville Campus
One West University Blvd.
Brownsville, Texas 78520**

It has been developed to meet the requirements of the general permit issued by the State of Texas for Municipal Separate Stormwater System discharges; TPDES Phase II MS4 General Permit (TXR040000).

This MS4 plan describes The University of Texas – Rio Grande Valley and its operations, identifies targeted potential sources of stormwater pollution from the campus, adopts appropriate Best Management Practices (BMPS) with scheduled completion dates, and provides for periodic review of this MS4 Plan. The primary goal of this MS4 plan is to improve the quality of surface waters by reducing the amount of pollutants potentially contained in stormwater runoff to the maximum extent practicable (MEP).

2. SITE DESCRIPTION

University of Texas Rio Grande Valley –Brownsville Campus

The UTRGV Brownsville Campus location has a student population of approximately 7,000 and an employee population of approximately 700. It is primarily an academic based institution comprised of 16 buildings which include teaching facilities, research, teaching and clinical laboratories, libraries, cooling plant, restaurant,, and an apartment complex. More than 50% percent of the campus is covered by buildings, parking lots, sidewalks or streets and is impervious to stormwater infiltration.

UTRGV Brownsville is situated inside the city limits of Brownsville, Texas both of which are located in Cameron County, population 406,000. The University lies adjacent to the following waters of the U.S. known as “Resacas”: Fort Brown Resaca and Lozano Banco Resaca. There are a total of nine (9) outfalls that discharge storm water into the Resaca’s: six (6) outfalls into Fort Brown Resaca and three (3) outfalls into Lozano Banco Resaca. All of the Resaca’s flow into the Brownsville Resaca Watershed.

Brownsville Resaca Watershed and CWA Impaired Waters

Section 303(d) of the Clean Water Act (CWA) directs states to identify and prioritize waters which do not meet water quality standards – called “impaired” – and for which a total maximum daily load (“TMDL”) must be developed. A TMDL is the total amount of a pollutant that can be discharged to a water body without causing the water body to be impaired.

Water draining from the campus storm drains flow into the Brownsville-Resaca Watershed (see figure 1 and 2) and primarily into the Lower Laguna Madre / Brownsville Ship Channel Subwater sheds. This area includes several TCEQ “impaired” classified segments (2014 Texas Integrated Report Index of Water Quality Impairments). The list of impaired waters are included in table 1 and include Lower Laguna Madre, (Segment 2491_03), the Lower Laguna Madre (Segment 2491_01), the Brownsville Ship Channel (Segment 2494), Port Isabel Fishing Harbor (Segment 2494A), the Lower Laguna Madre (Segment 2491A), and South Bay (Segment 2493). This watershed includes the City of Brownsville and numerous townships in the surrounding area including UTRGV Brownsville. Though the Arroyo Colorado is included in the far north border of the watershed, its not likely that water draining from the Brownsville campus would affect the Arroyo Colorado (see Figure 2.).

Figure 1. Brownsville – Resaca Watershed

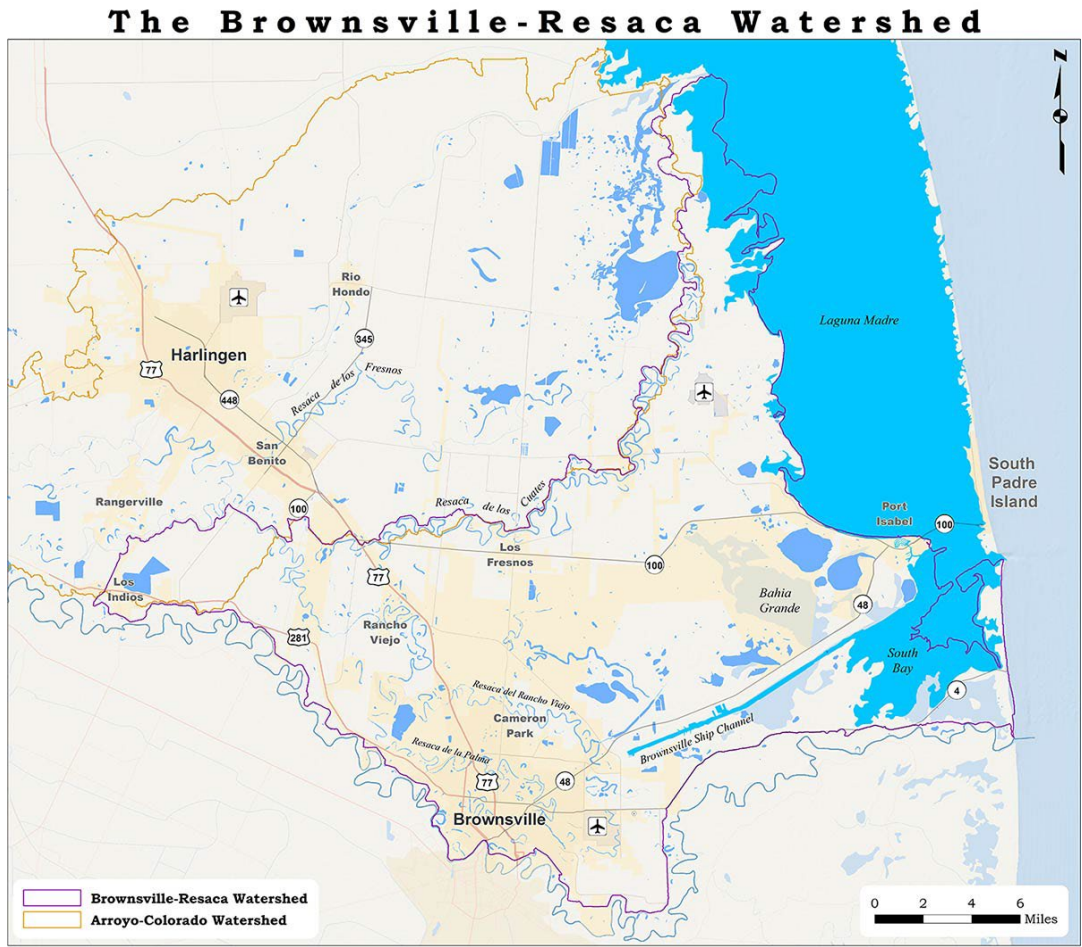


Figure 2. Brownsville Resaca Watershed Directional Water Flow

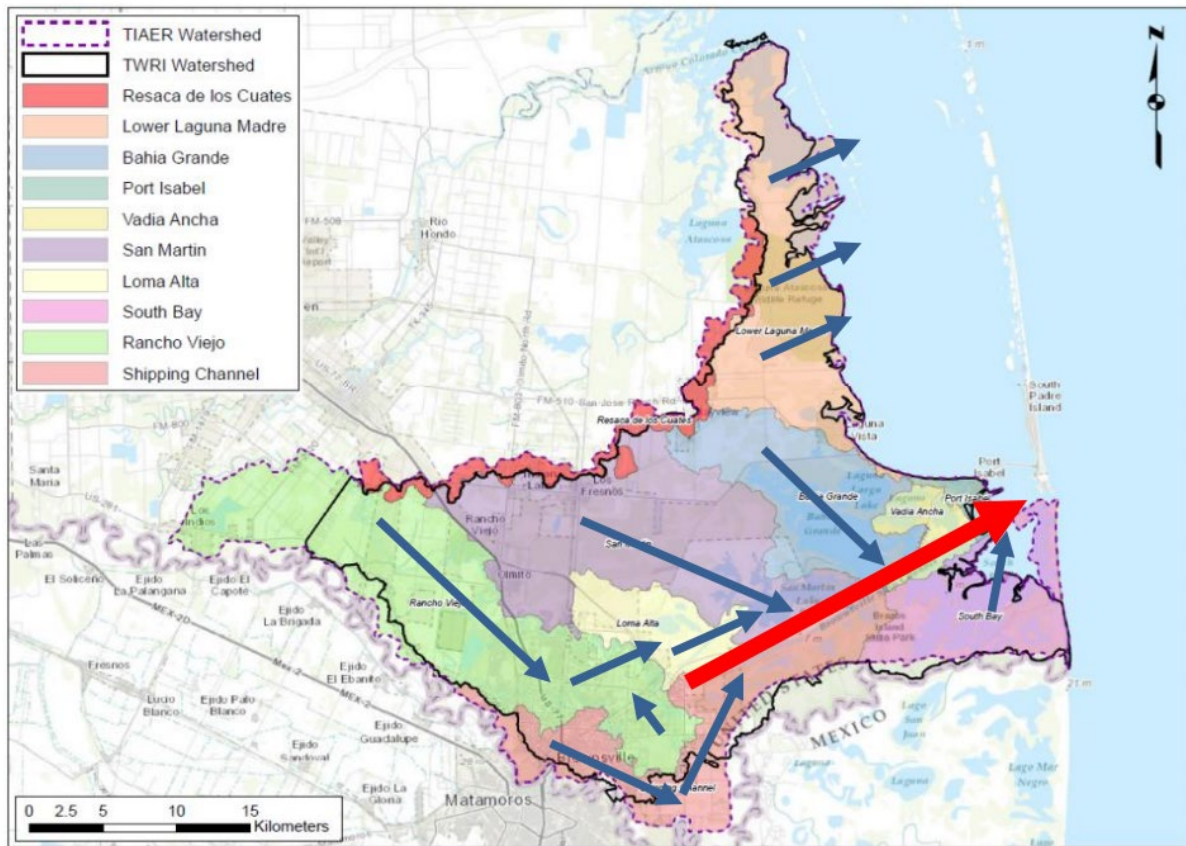


Table 1. List of Impaired Waters that either directly or indirectly receive stormwater discharges from the UTRGV – Brownsville campus.

Name	Seg ID	303(d) Impairment Parameter	Category (2)
Laguna Madre	2491_01 2491_02	Bacteria ; Dissolved Oxygen	5c ; 5b
Laguna Madre (oyster waters)	24910W	Bacteria	5c
South Bay	2493	Bacteria	5c
Brownsville Ship Channel	2494	Bacteria	5c
Port Isabel Shipping Harbor	2494A_01	Bacteria	5c

(1) (2014 Texas Integrated Report Index of Water Quality Impairments)

(2) 5a – TMDL required; 5b- Being Addressed by EPA TMDL; 5c - Being addressed by other action other than TMDL

STORMWATER MANAGEMENT TEAM

A Stormwater Management Team has been established to develop, implement, maintain and provide for the enforcement of the MS4 plan. They involve stakeholders from all areas of the institution whose actions directly or indirectly influence storm water management and are listed in Table 1.

Table 1. UTRGV Stormwater Management Team

Name	Title	Department
Richard Costello	Director – EH&S	Environmental Health, Safety and Risk Management
Juan Huerta	Manager – Environmental Protection	Environmental Health, and Safety and Risk Management
Martin Cortez	Assistant Director	Facilities Planning, Construction
Abraham Hernandez	Operations and Maintenance	Operations and Maintenance
Sergio Martinez	Director – Residence Life	Enrollment and Student Services

3. POTENTIAL POLLUTANTS AND ACTIVITIES

In addition to instruction and research, activities conducted at the UTRGV campus, in support of these efforts include building construction, landscape maintenance, vehicle maintenance, vehicle washing, and chemical and material storage. Table 3 outlines activities associated with the UTRGV environment and the potential pollutants that can be released to the stormwater if not managed in the appropriate manner. The Stormwater control methods, referenced in Section 5, will be implemented in an effort to eliminate the risk of the release of these contaminants to the stormwater, or in the event of an accidental release minimize any potential impact.

Table 3. Potential Pollutants released from UTRGV activities.

Activity	Potential Pollutants
Building Maintenance	Sediment, Trash, Metals, Bacteria, Oil and Grease, Organics, Pesticides, Oxygen Demanding Substances.
Grounds and Landscape Maintenance ;	Sediment, Trash, Bacteria, Oil and Grease, Pesticides, Oxygen Demanding Substances.
Parking / Storage Area Maintenance	Sediment, Trash, Metals, Bacteria, Oil and Grease, Organics, Oxygen Demanding Substances.
Vehicle Maintenance	Sediment, Trash, Metals, Oil and Grease, Organics,
Vehicle and Equipment Washing	Sediment, Trash, Metals, Oil and Grease, Organics, Oxygen Demanding Substances.
Outdoor storage of materials	Sediment, Trash, Metals, Oil and Grease, Organics, Oxygen Demanding Substances.
Construction	Sediment, Trash, Metals, Oil and Grease, Organics,
Hazardous waste collection, treatment, storage and disposal	Metals, Bacteria, Oil and Grease, Organics, Pesticides,

4. STORMWATER CONTROLS

Stormwater management controls, which include (Best Management Practices (BMPs) will be developed, implemented and enforced to prevent pollution in the stormwater discharged from the UTRGV campus. Texas State TPDES General Permit TXR 40000 mandate the establishment of six minimum control measures. The six control measures addressed by this MS4 plan include:

- MCM 1. Public Education, Outreach, and Involvement**
- MCM 2. Illicit Discharge Detection and Elimination**
- MCM 3. Construction Site Stormwater Runoff Control**
- MCM 4. Post-Construction Stormwater Management in New Development and Redevelopment.**
- MCM 5. Pollution Prevention and Good Housekeeping for Municipal Operations**

Stormwater controls designed to specifically address the pollutants that contribute to the “impairment” of the waters identified as impaired include the following:

Bacteria

E. coli bacteria are a group of fecal coliform bacteria found in the lower intestine of warm-blooded organisms such as humans, livestock, wildlife, including mammals and birds, and domesticated animals. The presence of these bacteria in a river or stream indicates the water has been contaminated with the fecal material of humans or animals. An evaluation of the potential sources of bacteria on the Edinburg Campus include the following:

Sanitary Sewer System Failures

A sanitary sewer failure can result in a release to the environment and ultimately to the storm sewer if not addressed immediately. The potential for this type of release can be via a sanitary sewer line break, or a sewer backup that is either released inside one of the institution’s buildings, or outside in a buried pipe. Those that occur inside a building can be easily identified and corrected through a quick response by the facilities group. For those releases that occur outside the building, because all of the buildings are located underground, identification of this type of release is identified generally by a water and sewer saturated ground, sewer system backup, accompanied by a raw sewage smell. The Minimum Control measures for this type of release are included in MCM 5, entitled Pollution Prevention Housekeeping for Municipal Operations. The BMPs include the following

- 1) Education in how to identify this type of release and adequate response. .
- 2) Conducting routine inspections as part of the comprehensive MS4 inspection program.

Portable Toilets

Storm water runoff originating from portable toilets are generally located at any of the university’s construction sites. The BMP’s associated with ensuring this type of release are included in MCM 3 entitled Construction Site Storm Water Runoff Control. The primary BMP used to ensure that bacterial matter is not released through the storm sewer is through initial and routing inspections of the porta potties as part of the comprehensive inspection program.

They are described in detail in the following:

1. MCM 1 - Public Education, Outreach, and Involvement

A public education and outreach program will be developed and designed to directly inform the UTRGV community about the impacts that stormwater run-off can have on water quality, hazards associated with illegal discharges and improper disposal of waste, and the steps that they can take to reduce pollutants in stormwater runoff. The public education programs and outreach materials will be tailored to those specific target audiences that have the potential to either directly impact the stormwater through actual releases at the UTRGV campus, or at their specific residences. The following stakeholders have been identified:

Description	Strategies
UTRGV Faculty	General awareness in science related classes. Specific instructions for those faculty members such as in engineering and science whose activities can directly impact the stormwater.
UTRGV Staff	General awareness Specific Instruction for those staff members such as physical plant whose activities can directly impact the stormwater
UTRGV Students	General awareness Specific Instruction for those staff members such as residence hall occupants whose activities can directly impact the stormwater.
Contractors/Vendors	Specific Instruction for those contractors such as construction contractors or plant maintenance vendors whose activities can directly impact the stormwater.
Visitors	General awareness

The following BMPs will be utilized to accomplish this MCM:

- a. Classroom education
 - i. Stormwater education classes for physical plant employees will be conducted targeting specific practices to reduce contaminants to the stormwater, primarily those specified in the Pollution Prevention /Good Housekeeping measures for Municipal Operations.
 - ii. Guest speakers in science, biology, environmental related classes.
- b. Use of Media
 - i. Stormwater information will be printed in the following newspapers that are part of the UTRGV campus:
 1. The Rio Grande Valley School Student Newspaper
 2. Staff Newspaper
- c. Webpage
 - i. The UTRGV webpage will be used as a tool for broadcasting information regarding the MS4 mandates for both the municipal and

residential populations. The main web page will be used primarily for the residential populations. The UTRGV EHSRM webpage will be used for primarily for commercial based information (policies and procedures), but also include the residential based operation. Included on the webpage will be information for public input. A link on the webpage will afford persons reading the information the ability report an illicit discharge or simply ask a question. SWMP and annual reports will be available on this website: www.utrgv.edu/ehs

d. Promotional Giveaways

- i. Mouse pads with stormwater information will be distributed to the university community.

e. Storm Drain Stenciling

- i. All storm drains on UTRGV campus will be posted with “Do not dump – flows to the Laguna Madre!” stencil or similar.

f. Stormwater Educational Materials

- i. Stormwater education materials will be distributed at the following events in order to reach the student population:
 1. New Student Orientation
 2. Annual Student Health Workshop

The stakeholders (public) have and will continue to participate in the development, implementation, and enforcement of MS4 program. Public involvement will be facilitated through the use of direct action, educational, and volunteer programs for the campus community. Groups such as the UTRGV Environmental Awareness club, as well as the respective environmental related formal committees on the campus will be invited to participate in promoting environmental causes and be given opportunities to participate in the stormwater management program. The following BMPs for accomplishing this MCM will be utilized:

g. Stakeholder meetings

- i. A stormwater subcommittee will be established and meet periodically to evaluate and update the plan.
- ii. Stormwater issues will be discussed and will be a formal agenda item at the following committees:
 1. Campus Facility and Planning Council
 2. Environmental Health, and Safety and Risk Management Council
- iii. Stakeholder meetings will be held to allow input from the campus community.

- h. Coordination with school groups
 - i. Groups such as the UTRGV Environmental Awareness club, as well as the respective environmental related formal committees on the campus will be invited to participate in promoting environmental causes and be given opportunities to participate in the MS4 program.
 - ii. School groups (sororities, fraternities) will be asked to adopt and mark campus storm drains for general awareness and to prevent illicit discharge.
- i. Public slogan campaign
 - i. In conjunction with the art department, a public awareness campaign to design a slogan for UTRGV stormwater management will be held.
- j. Storm drain stenciling program
 - i. All storm drains on UTRGV campus will be posted with “Only Rain to the Drain” stencil or similar.

2. **MCM 2 - Illicit Discharge Detection and Elimination**

The UTRGV will develop, implement, and enforce a program to detect and eliminate illicit discharges that will contain the following elements:

- a. Develop a storm sewer system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those outfalls.
- b. Inform the UTRGV community of hazards associated with illegal discharges and improper disposal of waste.
- c. Prohibit non-stormwater discharges into your storm sewer system and implement appropriate enforcement procedures and actions,
- d. Develop and implement a plan to detect and address non-stormwater discharges, including illegal dumping, to our system;

The following BMPs will be followed to accomplish this MCM:

- e. List of non-stormwater discharges that will not be considered illicit

The UTRGV will construct a list of discharges into the stormwater/sewer system that are allowable. This list includes occasional, incidental non-stormwater discharges that the university does not expect to be a significant contributor of pollutants to the stormwater/sewer system. The list includes the following releases which will be included in the educational related classes for the campus

community:

- i. water line flushing
- ii. landscape irrigation
- iii. uncontaminated groundwater infiltration
- iv. uncontaminated pumped groundwater
- v. discharges from potable water sources
- vi. water feature blowdown leaks
- vii. foundation drains
- viii. roof drainage from precipitation
- ix. air conditioning/steam condensate
- x. water from crawl space/tunnel pumps
- xi. water from external pumps and pumps in support of loading docks
- xii. footing drains
- xiii. small scale vehicle washing
- xiv. discharges from fire sprinkler system maintenance
- xv. discharges from fire extinguisher related classes
- xvi. swimming/exercise pool discharges
- xvii. sidewalk/street wash sweeping water
- xviii.** discharges or flows from emergency fire fighting activities
- xix. discharges from fire pump testing
- xx. insignificant losses from cooling tower operation and maintenance

f. Public outreach and education programs regarding illicit discharges
/Identification of illicit discharges

A program to promote, publicize, and facilitate public reporting of illicit discharges, primarily through the distribution of outreach materials will be developed. This aspect of the program will identify what constitutes an illicit discharge.

g. Procedures to address illicit dumping

A HOP policy will be developed that will effectively prohibit, non-stormwater discharges into the storm sewer system and reference implement appropriate enforcement procedures and actions. The HOP policy will be distributed to the campus community via a campus email from the UTRGV compliance officer and will also be posted on the EHSRM website informing the stakeholders of the hazards associated with illegal discharges and improper disposal of waste.

Procedures for locating priority areas likely to have illicit discharges; procedures for tracing the source of an illicit discharge; procedures for removing the source of the discharge; and procedures for program evaluation and assessment will be developed that will include the following:

- i. Visual screening of the outfalls during dry weather and , if necessary, conducting field tests of selected pollutants as part of the procedures for locating priority areas.
- ii. Routine inspections of the storm drains.
- iii. Quantification of items found in storm drains for assessment and source discovery.

h. Publicize and facilitate public reporting

A program to promote, publicize, and facilitate public reporting of illicit discharges, primarily through the distribution of outreach materials will be developed. Illicit discharge information, including the identification of what constitutes an illicit discharge will be incorporated into the outreach materials.

i. Identification of illicit discharges

The UTRGV will rely on multiple methods to identify illicit discharges as quickly as possible. Investigation and mitigation measures are implemented upon detection to identify possible sources of illicit discharge, and to either prevent or reduce adverse impacts to stormwater runoff and the environment. Discovery and reporting methods include the following:

- i. A hotline will be developed for the reporting of illicit discharges.
- ii. Reports can also be phoned in from the campus community to the University Police Department (UAPD), or to Environmental Health, and Safety and Risk Management.
- iii. UTRGV staff, through outreach training, will identify what constitutes an illicit discharge, and the mechanisms for reporting one which will in turn increase the probability of proper and timely reporting.
- iv. Illicit discharge information, including the identification of what constitutes and illicit discharge will be incorporated into the outreach materials.

j. Investigation of illicit discharges

All illicit discharge reports will be forwarded to Environmental Health, and Safety and Risk Management department to coordinate investigation and mitigation if warranted. Investigation of illicit discharges will commence as soon as practicable, but always within 15 working days of the initial discovery or report. A written report will be prepared to document each illicit discharge investigation. Reports will include the nature of the discharge, possible sources, and documentation regarding methods for identifying the perpetrator.

In addition to methods for identifying and reporting illicit discharges , the UTRGV will also implemented the following methods for trying to reduce the possibility of illicit discharges from the campus community.

k. Recycling programs

The UTRGV has in place a recycling program for the following recyclable items:

- i. Used oil
- ii. Paper
- iii. Cans
- iv. Plastic.

The program is limited in nature and concentrates on the large generators of the respective items which are building specific. The plan will be expanded to address a greater area of the campus community which should result in the

potential for further reduction in pollutants to the stormwater.

l. Used oil collection center

UTRGV will establish a used oil collection center where members of the campus community can bring in used oil from their respective residences free of charge. This will encourage stakeholders to utilize this method instead of potentially pouring it down a storm sewer.

m. Household hazardous waste

On an annual basis, the UTRGV EHSRM will sponsor a household hazardous waste collection event and encourage the UTRGV community to bring their household hazardous waste to a specified collection point. The EHSRM will, in turn use a hazardous waste disposal vendor to dispose of the collected waste streams.

3. MCM 3 - Construction Site Storm water Runoff Control

A program has been developed and implemented to reduce pollutants in stormwater runoff from construction activities that result in a land disturbance of greater than or equal to one acre, including construction activities disturbing less than one acre if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. The plan includes the establishment of the following BMPs in order to achieve this MCM:

a. Requirement to comply with TPDES

The UTRGV is already in compliance with TCEQ General Permit TXR15000, established in 2003, which authorizes discharges of waste related to construction activities. The UTRGV has developed, and implemented a SWMP under this general permit for in house construction projects, and requires it from offsite contractors who may perform work also have a SWMP before doing any work on the UTRGV campus. .

Onsite construction activities are either conducted in-house or the through the UT System Office of Facilities Planning and Construction.

b. Staff to review construction site plans and Information from the public

All construction activities are required to be evaluated for compliance with SWMP management by the Department of Environmental Health, and Safety and Risk Management, the Office of Facilities Planning and Construction, and Physical Plant Operations and Maintenance. Any complaints from the public related to construction activities will be investigated and a report would be created, any follow up action by the EHS department will be tracked in files that are available to the TCEQ for review.

c. Notification of discharger responsibilities under TPDES and requirement to obtain TPDES permit coverage.

Any project referenced above is required to implement a stormwater management plan.

- i. Incorporated into the wording of each construction contract is the requirement to assess the need for a construction stormwater management plan. This requires a site plan review which incorporates consideration of potential water quality impacts.
 - ii. The Contractor is also required to submit a letter stating that they will comply with all Federal and State regulations regarding stormwater runoff, and if warranted, each construction project is required to draft a Construction stormwater.
 - iii. In addition to the requirement for the establishment of a SWMP, specific wording is incorporated into the contract that requires construction site operators to control waste such as discarded building materials, building products, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to the environment.
 - iv. The contractor is required to implement the appropriate erosion and sediment control and if applicable the appropriate soil stabilization measure measures; and to minimize the discharge of pollutants from spills and leaks.
 - v. The contractor is also required to ensure compliance with all rules and regulations pertaining to the disposal of all regulated waste streams.
 - vi. The Contractor is also required to keep their staff training records regarding MS4 training.
- d. Overall construction site waste management. Perform site inspections and enforcement.

Construction site activities involving protecting of the environment are incorporated into the overall management of the construction site. UTRGV has retained an inspector charged with ensuring compliance with TPDES mandates for stormwater activities. Formal site inspections are conducted on a weekly basis or after every major rainfall. The site inspector, however, is onsite on a daily basis and is apprised of what constitutes stormwater violations.

In addition to stormwater mandates, the inspector also requires the contractor to maintain proper housekeeping on the construction site and to dispose of any regulated waste streams in the appropriate manner.

- i. Failure to comply with stormwater mandates results in a report to the Institutional Compliance Officer who will in turn enforce the applicable regulations.

- ii. Failure to comply with stormwater mandates results in compromising the contractors' ability to get future work with UTRGV based on a grading system that factors compliance.

4. MCM 4 - Post-Construction Stormwater Management in New Development and Re-development.

The UTRGV has developed and implemented a plan to address runoff from new development and redevelopment projects that disturb greater than or equal to one acre 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 or more acres. In the plan is incorporated steps to ensure controls are in place to address run-off, based on both structural and non-structural BMPs, compliance with the City of Brownsville ordinances, as well as long term operation of the BMPs. The UTRGV utilizes the following BMPs to achieve this MCM:

a. Guidance Document for developers to utilize

Stormwater runoff from new development and new redevelopment projects is addressed in the planning and design phases of University projects. Initial planning is guided by the University Master Drainage Plan and the University's Manual of Design and Specification Standards. The design of University projects is reviewed by planning, risk management, design, and construction and maintenance departments, including the Surface Water Working Group, a committee made up of representatives from all these departments, to ensure that appropriate BMPs are incorporated into projects.

b. Local ordinance in place – City of Brownsville

All projects conducted at the University are evaluated by the City of Brownsville architects and engineers to ensure adherence with the Cities and Counties Drainage Master Plan. The UTRGV will also comply with the City of Brownsville MS4 plan when design and planning projects.

c. List of appropriate BMPs provided to operators

The UTRGV's is a part of the UTRGV's Facilities Design & Construction office, who, in the majority of the new development and re-development projects contract offsite architects and engineers. Incorporated into the design of each project are the UTRGV's requirement for BMP's that :

- i. Development of strategies which include a combination of structural and/or non-structural BMPs designed to limit post construction run-off of any potential contaminants.

d. Long term operation and maintenance of BMPs

Once the project is completed, the UTRGV's Operation and Maintenance team is charged with ensuring that structural and non-structural BMPs are included into the maintenance program to ensure long term operation and maintenance. The

O&M department utilizes sophisticated scheduling software for this purpose. This program consists of :

1. Routine maintenance of the BMPs
2. Routine inspections of the BMPs

5. **MCM 5 - Pollution Prevention and Good Housekeeping for Municipal Operations**

An operation and maintenance (O&M) program will be implemented for the ultimate goal of preventing or reducing pollutant runoff from municipal operations. Specific to UTRGV are operations conducted by the UTRGV's physical plant and consist of activities such as ground maintenance, fleet and building maintenance, and stormwater system maintenance. In addition, housekeeping measures are to be incorporated. The following BMPs are included in the plan:

UTRGV Facilities Inventory

The UTRGV will maintain a campus map and list all areas associated with municipal operations. This list will serve as a basis for establishing a list of facilities subject to applicable MCM's and establish priorities. The map is maintained by Facilities.

Training and Education

A training program will be developed to insure that all appropriate employees involved in implementing pollution prevention and good housekeeping practices are reminded that they are responsible to follow and comply with the applicable BMPs. All personnel associated with activities that have the potential for releases to the stormwater will be trained on an annual basis

Assessment and Implementation of BMPs for Maintenance Activities (pollution prevention measures)

a. Fleet vehicle maintenance

- i. Vehicle maintenance work such as fluid changes are conducted indoors.
- ii. Vehicles are monitored for leaks and fixed immediately. Pans are placed under leaks to collect the fluids for proper disposal or recycling.
- iii. All used fluids are placed immediately into recycling containers for collection and disposal by the EHSRM staff.
- iv. Pouring of waste down floor drains, sinks, or outdoor storm drain inlets is strictly prohibited.
- v. Drain mats are used to cover stormwater drains in the event of a spill.
- vi. Batteries are placed in leakproof secondary containment.
- vii. There is an emergency response plan in place to address emergency spills.
- viii. Parts are cleaned in stand alone centralized solvent recycler.

b. Fleet vehicle fueling

- i. Fleet vehicle fueling operations are conducted offsite at local gas stations.
- ii. Golf cart / small utility vehicle operations are conducted in accordance with the following recommended practices:

1. There is a designated covered fuel area specifically designed to prevent stormwater runoff and spills. It is paved with concrete. There is a berm that prevents run-of of stormwater.
2. The fuel dispensing area is covered.
3. All persons who refuel vehicles are trained to do the following and report immediately :
 - a. Spills or overfills
 - b. Failure of any piping system
 - c. Leaks or spills during pumping of liquids
- iii. The fuel dispensing area which consists of two 250 gallon tank containing diesel fuel and gasoline are incorporated into the institutions Spill Prevention and Control Contingency (SPCC) plan, which includes a necessary spill kit and emergency response procedures.
 1. The following is incorporated into the UTRGV's preventive maintenance schedule:
 - a. Visual inspection for loose fittings, poor welds, and improper or poorly fitted gaskets.
 - b. Visual inspection of tank foundations, connections, coatings, tank walls, and piping systems.

c. Fleet Vehicle Washing

- i. Upon approval from the local water authority, a designated wash area will be designated to contain and direct wash water to a sump connected to the sanitary sewer or to a holding tank, process treatment system, or enclosed recycling system. The designated area will be designed to recycle wash water.
- ii. The following good housekeeping practices will also be utilized to reduce the risk of vehicle wash water discharges to the stormwater :
 1. Detergents will be avoided whenever possible. If detergents are necessary, a phosphate-free, non-toxic, biodegradable soap will be used.
 2. As described in Section I storm drains in the vicinity of physical plant will stenciled to remind employees to wash vehicles within the designated wash area.
 3. Signage will be posted with this message with a message asking persons to wash vehicles in designated areas only.
 4. Spill kits with absorbent containment materials and instructions will be placed in the vicinity of the car wash so that spills can be immediately contained.
- iii. Use of a commercial car washing facility.
 1. If the appropriate minimum control measures are not in place to limit flow of vehicle wash to the stormwater, then
 - a. a commercial facility will be utilized or:
 - b. precautions will be taken to avoid wash water discharges to the storm drain such as the use of a berm, or a wet/dry vacuum to capture the wash water for discharge to the sanitary sewer.

d. Landscaping and lawn care

- i. Planning and Design. The UTRGV has developed a landscape plan that recognizes the property's natural conditions, taking into consideration the site's topography and existing vegetation, the sites intended use, and efficient group p planting based on water needs. The landscape plan will promote natural vegetation growth and minimize water loss and contamination. The UTRGV chooses local or regional plants when developing an environmentally friendly landscape.
- ii. Practical Turf Areas. UTRGV grounds will plant turfs with a type of grass that can withstand drought and that becomes dormant in hot, dry seasons. In addition, the grass will not be cut shorter than 3 to 4 inches in height. Mulched clippings are left on the lawn as a natural fertilizer.
- iii. Efficient Irrigation. Low-volume watering approaches such as drip-type or sprinkler systems are used at the UTRGV when possible.
- iv. Use of Mulches. Plant materials from grounds maintenance activities are converted to mulch and used on the UTRGV campus to replace fertilizers.
- v. Fertilizers. The UTRGV use fertilizer sparingly to ensure that they are not over applied. Additionally, less toxic alternatives are used such as composting materials. Strategies such as using slow-release organic fertilizers, and tilling fertilizers into moist soil to move the chemicals directly into the root zone are used to reduce mobilization by the ground water. Care is taken to ensure that fertilizer is not applied on windy day or immediately before a heavy rain.

e. Pest management practices

- i. Pesticides. Pesticides are used sparingly on UTRGV grounds and only when necessary. When using pesticides, the least toxic pesticide that targets the specific pest in question is chosen.

f. Used oil recycling

- i. All oil collected at the university is recycled through the UTRGV's department of Environmental Health, and Safety and Risk Management. All personnel are trained in the proper collection and disposal methods.

g. Park maintenance

- i. Trash cans are placed at strategic locations throughout the campus to encourage the use of trash cans and reduce the possibility of trash placed on the ground and potentially into the stormwater.

h. Waste materials management

- i. All regulated waste streams are collected, stored, treated, and disposed of in accordance with any and all applicable rules and regulations.
- ii. Generators of waste are afforded an efficient mechanism for the disposal of all regulated waste streams which is facilitated by the request collection via a hazardous waste line, or by email.

- iii. The EHSRM department has a facility specifically designed to store waste streams until ultimate disposal to a TSDF.

Contractor Requirements and Oversight

Contractors hired by UTRGV to perform maintenance activities on university owned facilities will be contractually required to comply with all of the storm water control measures, good housekeeping practices, and facility-specific storm water management operating procedures. The university will provide project manager oversight of contractor activities to ensure they are using appropriate control measures and complying with university MS4 procedures. All major contractors which comprise the majority of maintenance related projects will be trained on an annual basis on MS4 policies along with basic safety related training.

Regulated Waste Material

All regulated waste streams from the MS4 are removed and properly disposed in an efficient, timely manner in compliance with all rules and regulations applicable to the workplace and the environment. Employees will continued to be informed proper procedure and oversight when reporting or removing waste from job sites.

- a. All regulated waste streams (Hazardous Waste, Universal Waste, Biological Waste, and Solid Waste) are managed by the EHSRM and collected, stored, treated, and disposed of in accordance with any and all applicable rules and regulations. UT System or local contracts for the disposal of regulated waste streams including, but not limited to hazardous waste, batteries, oil and pesticides and antifreeze are in place to ensure compliance
- b. Generators of waste are afforded an efficient mechanism for the disposal of all regulated waste streams. Requests for the collection of waste are via a hazardous waste line, email or by the phone. In areas where large volumes of recurring waste are generated, are conducted on a routine basis
- c. The EHSRM department has a facility specifically designed to store waste streams until ultimate disposal to a TSDF. The facility has secondary containment. Any waste streams that are stored outside have secondary containment.

Inspection of Municipal/Facilities

All sights included in the inventory of Municipal/Facilities related operations will be inspected on a monthly basis. In addition, activities related to Municipal/Facilities operations will be conducted on a monthly basis. These activities are related to field activities that are not conducted at the specific facilities identified in the inventory. Results of the inspection will be submitted to the Operations and Maintenance Director, the Assistant Director specific to that Trade, and the Storm Water Protection Committee.

6. MEASURABLE OUTCOMES AND GOALS

MCM 1. Public Education, Outreach, and Involvement

BMP	Measurable Outcome	Timeline (completion date)
Classroom Education	Educational Literature/ Sign In sheets	12/2019 and Annual thereafter
Use of media	Media output	12/2019 initial and two times a year thereafter
Webpage	Update Webpage; post the SWMP and Annual Report	12/2019 Review and update annually
Promotional Giveaways	Giveaway	3/2020 and Annual thereafter
Storm Drain Signage	Place signage on 25% of the total inlets	5/2020
Educational Materials- brochures	Written documentation/ Physical verification	9/2019 and Annual thereafter
Stakeholder Meetings	Meeting minutes	11/2019 and Annual thereafter

MCM 2. Illicit Discharge Detection and Elimination

BMP	Measurable Outcome	Timeline
Stormwater Sewer Map	Review and update map	4/2020
Public Outreach and education programs regarding illicit discharges /Identification of illicit discharge	Written Documentation	6/2020
Procedures to address illicit dumping	Review HOP Policy	8/2020
Publicize and facilitate public reporting	Written documentation	8/2020
Identification of Illicit Discharges	Written documentation	8/2020
Illicit Discharge Detection	Review and update procedure to detect and eliminate illicit discharges	4/2020
Recycling Programs	Written/physical documentation	10/2020
Used Oil Collection Center	Records of oil disposal from campus community	Continuous
Household Hazardous Waste	Implement BOPA collection program on an annual basis	11/2019

MCM 3. Construction Site Stormwater Runoff Control

BMP	Measurable Outcome	Timeline
Requirement to comply with TPDES General Permit TXR150000	All contractors must provide a written SWMP	Continuous; based on projects
Notification of Discharger Responsibilities under TPDES	Written documentation	Continuous
Staff to review construction site plans	Written documentation	Continuous
Overall Construction Site Management Perform site inspections and enforcement	Compliance with TPDES mandates per project basis. Inspection reports	Continuous

MCM 4. Post-Construction Stormwater Management in New Development and Re-Development.

BMP	Measurable Outcome	Timeline
Project Design	Review and update guidance document for developers to utilize	12/2019
Local ordinance in place – City of Brownsville	Written documentation	Continuous; based on projects
List of appropriate BMPs provided to contractors	Written documentation	Continuous; based on projects
Long term operation and maintenance of BMPs	Written documentation (TMA work orders)	Annual basis

MCM 5. Pollution Prevention and Good Housekeeping for Municipal Operations

BMP	Measurable Outcome	Timeline
Fleet Vehicle Maintenance	Physical documentation	Continuous
Fleet Vehicle Washing	Physical documentation	Continuous
Fleet Vehicle Fueling	Physical documentation	Continuous
Landscaping and lawn Care	Physical documentation	Continuous
Pesticide Application	Physical documentation	Continuous
Used Oil Recycling	Physical documentation	Continuous
Waste Materials Management	Physical documentation/Written document	Continuous

7. SUMMARY

The UTRGV will, on an annual basis evaluate the MS4 plan. Failure to meet any of the established timelines, specific objectives, or performance based objectives will be evaluated by the Stormwater Management Committee and the appropriate corrections will be made. The plan will be updated in accordance to the specifications in the general permit.