

City of Nolanville Storm Water Management Plan





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Appendices
APPENDIX A – Minimum Control Measures

ACRONYMS

BMP Best Management Practice

CWA Clean Water Act

EPA Environmental Protection Agency

MCM Minimum Control Measure

MEP Maximum Extent Practicable

MHWM Mean High Water Mark

MS4 Municipal Separate Storm Sewer System

NOC Notice of Change

NOI Notice of Intent

NOT Notice of Termination

NPDES National Pollutant Discharge Elimination System

POTW Publicly Owned Treatment Works

SWMP Storm Water Management Program

SWP3, Storm Water Pollution Prevention Plan

SWPPP

TCEQ Texas Commission on Environmental Quality

TMDL Total Maximum Daily Load

TPDES Texas Pollutant Discharge Elimination System

TWC Texas Water Code

UA Urbanized Area

DEFINITIONS

Arid Areas – *Areas with an average rainfall of less than ten (10) inches.*

Benchmarks – A benchmark pollutant value is a guidance level indicator that helps determine the effectiveness of chosen best management practices (BMPs). This type of monitoring differs from "compliance monitoring" in that exceedances of the indicator or benchmark level are not permit violations, but rather indicators that can help identify problems at the MS4 with exposed or unidentified pollutant sources; or control measures that are either not working correctly, whose effectiveness need to be re-considered, or that need to be supplemented with additional BMP(s).

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

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

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

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

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

Small Construction Activity is construction activity that results 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.

Large Construction Activity is construction activity that results 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.

Construction Site Operator - The entity or entities associated with a small or large construction project that meet(s) either of the following two criteria:

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

Control Measure - Any BMP or other method used to prevent or reduce the discharge of pollutants to water in the state.

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

Edwards Aquifer - As defined in 30 TAC §213.3 (relating to the Edwards Aquifer), that portion of an arcuate belt of porous, water-bearing, predominantly carbonate rocks known as the Edwards and Associated Limestones in the Balcones Fault Zone trending from west to east to northeast in Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, and Williamson Counties; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, Edwards Formation, and Georgetown Formation. The permeable aquifer units generally overlie the less-permeable Glen Rose Formation to the south, overlie the less-permeable Comanche Peak and Walnut Formations north of the Colorado River, and underlie the less-permeable Del Rio Clay regionally.

Edwards Aquifer Recharge Zone - Generally, that area where the stratigraphic units constituting the Edwards Aquifer crop out, including the outcrops of other geologic formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge of surface waters into the Edwards Aquifer. The recharge zone is identified as that area designated as such on official maps located in the offices of the TCEQ or the TCEQ website.

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

- (a) All soil disturbing activities at the site have been completed and a uniform (for example, evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.
- (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 (for example 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.
- (d) In arid, semi-arid, and drought-stricken areas only, all soil disturbing activities at the site have been completed and both of the following criteria have been met:
 - (1) Temporary erosion control measures (e.g., degradable rolled erosion control product) are selected, designed, and installed along with an appropriate seed base to provide erosion control for at least three years without active maintenance by the operator, and
 - (2) The temporary erosion control measures are selected, designed, and installed to achieve 70 percent vegetative coverage within three years.

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

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

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

proximity to sensitive aquifer recharge features, poor housekeeping practices, and discharge of pollutant(s) of concern to impaired water(s).

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

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

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

Impaired Water - A surface water body that is identified as impaired on the latest approved CWA §303(d) List or waters with an EPA approved or established TMDL that are found on the latest EPA approved Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d) which lists the category 4 and 5 water bodies.

Implementation Plan (I-Plan) – A detailed plan of action that describes the measures or activities necessary to achieve the pollutant reductions identified in the total maximum daily load (TMDL).

Indian Country - Defined in 18 USC § 1151 as: (a) All land within the limits of any Indian reservation under the jurisdiction of the United States (U.S.) 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 U.S. 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 rightsof-way running through the same. This definition includes all land held in trust for an Indian tribe.

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

Industrial Activity - Any of the ten (10) categories of industrial activities included in the definition of "stormwater discharges associated with industrial activity" as defined in 40 Code of Federal Regulations (CFR) §122.26(b) (14) (i) - (ix) and (xi).

Infeasible - For the purpose of this permit, infeasible means not technologically possible, or not economically practicable and achievable in light of best industry practices. The TCEQ notes that it does not intend for any small MS4 permit requirement to conflict with state water right laws.

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

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

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

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

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

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

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

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

Outfall - A point source at the point where a small MS4 discharges to waters of the U.S. and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels, or other conveyances that connect segments of the same stream or other waters of the U.S. and are used to convey waters of the U.S. For the purpose of this permit, sheet flow leaving a linear transportation system without channelization is not considered an outfall. Point sources such as curb cuts; traffic or right-or-way barriers with drainage slots that drain into open culverts, open swales or an adjacent property, or otherwise not actually discharging into waters of the U.S. are not considered an outfall.

Permittee - The MS4 operator authorized under this general permit.

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

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

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

Semiarid Areas - Areas with an average annual rainfall of at least ten (10) inches, but less than 20 inches.

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

- (a) Owned or operated by the U.S., 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 CWA § 208;
- (b) Designed or used for collecting or conveying stormwater;
- (c) Which is not a combined sewer;
- (d) Which is not part of a POTW as defined in 40 CFR § 122.2; and
- (e) Which was not previously regulated under a National Pollutant Discharge Elimination System (NPDES) or a Texas Pollutant Discharge Elimination System (TPDES) individual permit as a medium or large municipal separate storm sewer system, as defined in 40 CFR §§122.26(b)(4) and (b)(7).

This term includes systems similar to separate storm sewer systems at military bases, large hospitals 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 a small 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 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 (MHWM) 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.

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

Urbanized Area (UA) - An area of high population density that may include multiple small MS4s as defined and used by the U.S. Census Bureau in the 2000 and the 2010 Decennial Census.

Waters of the United States - (According to 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 the CWA are not waters of the U.S. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the U.S. (such as disposal area in wetlands) nor resulted from the impoundment of waters of the U.S. Waters of the U.S. 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 CWA, the final authority regarding the CWA jurisdiction remains with the EPA.

I. INTRODUCTION

1.01 Storm Water Regulatory Requirement

Growing public awareness and concern for controlling water pollution into the waters of the United States led to the enactment of the Federal Water Pollution Control Act Amendments of 1972, more commonly known as the Clean Water Act (CWA). The CWA became the catalyst for regulating the discharges of pollutants into the waters of United States. The 1972 amendment created the National Pollutant Discharge Elimination System (NPDES) permit program requiring permits to be submitted by point source water pollution entities such as municipal sewage and industrial process wastewater and was successful in improving the overall water quality and was administered by the Environmental Protection Agency (EPA). Although the NPDES program improved the overall water quality, it did not address other significant sources of water pollution such as agricultural and storm water runoff.

In 1987 Congress amended the CWA and required the EPA to establish NPDES requirements for storm water discharges. As a result of this amendment a two phase storm water pollution program was established and in 1990 the EPA published the Phase I Municipal Storm Water Program. The Phase I program uses the NPDES permit coverage to address storm water runoff from medium and large Municipal Separate Storm Sewer Systems (MS4's), serving a population of 100,000 or greater.

In 1999 the Phase II Municipal Storm Water Program rule was published by the EPA for MS4's with less than a population of 100,000 to address storm water runoff and in August 2007 this program was adopted requiring MS4's affected by Phase II to submit a Notice of Intent (NOI) and a Storm Water Management Plan (SWMP) by February 11, 2008. This program is being administered by the Texas Commission on Environmental Quality (TCEQ) and all NOI's and SWMP's are submitted to them. Phase II requires all small MS4's to implement programs and practices to control polluted storm water runoff through the Texas Pollution Discharge Elimination System (TPDES) permit program. This program requires that the City of Nolanville:

- Specify Best Management Practices (BMPs) for six (6) minimum control measures (MCMs) and implement them to the maximum extent practicable (MEP)
- Identify measurable goals for the BMP control measures
- Implement these BMPs over a period of five (5) years
- Manage storm water quality activities through a SWMP

1.02 Storm Water Management Plan

The City of Nolanville has developed a SWMP in accordance with the requirements set forth by the TPDES General Permit TXR040000 dated August 15, 2024 for discharging storm water directly into waters of the United States. The SWMP is the instrument the City of Nolanville will use in order to reduce the amount of pollutants in storm water to the maximum extent practicable as required by the TPDES General Permit.

The SWMP that was developed for the City of Nolanville describes specific activities that will be instituted over a five (5) year period in order reduce the amount of pollutants in storm water

- discharges to the maximum extent practicable. The activities listed in the SWMP are known as BMP. The SWMP must set measurable goals and provide a schedule for the implementation of each BMP. The BMP are specifically developed for six (6) minimum control measures (MCMs) that are required by the Phase II program. The five MCMs are as follows:
- ❖ Public Education and Outreach Develop and Implement a Public Education and Outreach Program, or equivalent outreach activities, to distribute education materials to the community and conduct equivalent outreach about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.
- ❖ Public Involvement / Participation Develop and Implement a Public Involvement / Participation Program, or equivalent outreach activities, involve the public, and, at minimum, comply with any state and local public notice requirements in the planning and implementation activities related to developing and implementing the SWMP. Create opportunities, or support activities that are coordinated by citizen groups, for residents and others to become involved with the SWMP. Activities/BMPs must demonstrate an impact on stormwater runoff by improving water quality.
- ❖ Illicit Discharge Detection and Elimination (IDDE) Develop, implement and enforce a program to investigate, detect and eliminate illicit discharges into the small MS4. The program must include a plan to detect and address non-stormwater discharges, including illegal dumping to the small MS4.
- ❖ Construction Site Stormwater Runoff Control Develop, implement and enforce a program to select, install, implement, and maintain stormwater control measures that prevent illicit discharges to the MEP. The program must include the development and implementation of an ordinance or other regulatory mechanism, as well as sanctions to ensure compliance to the extent allowable under state, federal, and local law, to require erosion and sediment control.
- ❖ Post-Construction Stormwater Management in New Development and Redevelopment Develop, implement and enforce a program, to the extent allowable under state, federal, and local law, to control stormwater discharges from new development and redeveloped sites that discharge into the small MS4 that disturb one acre or more, including projects that disturb less than one acre that are part of a larger common plan of development or sale. The program must be established for private and public development sites. The program may utilize an offsite mitigation and payment in lieu of components to address this requirement. Utilize an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects. Require owners or operators of new development or redeveloped sites design, install, implement, and maintain a combination of structural and non-structural BMPs appropriate for the community and that protects water quality.
- ❖ Pollution Prevention and Good Housekeeping for Municipal Operations Develop and implement an operation and maintenance program that has the goal of preventing and reducing storm water pollutants from municipal operations; this includes employee training seminars on storm water management and BMP.

II. CITY OF NOLANVILLE BACKGROUND

2.01 Background

The City of Nolanville is located in Central Texas and is situated between the City of Belton to the east and the City of Harker Heights to the west. Nolanville is situated on U.S. Highway 190 (I-14) and covers approximately 3.5 square miles and the 2020 census has the City's population at 5,917. Estimation of current population is 7,010. Nolanville is adjacent to Nolan Creek.

2.02 Watershed

The City of Nolanville has one (1) primary watershed. The sole watershed the City's storm water runoff contributes to is the Nolan Creek Watershed.

Nolan Creek is located to the south of US Highway 190 (I-14) and the downtown area of Nolanville. The majority of the developed residential and commercial properties is to the north of Nolan Creek and US Highway 190 (I-14). Nolan Creek is currently undeveloped along it banks through the City. The Nolan Creek Watershed consists largely of residential housing, but is also influenced by some commercial properties as well as U.S. Highway 190 (I-14).

Nolan Creek segment 1218_02 is the portion of South Nolan Creek from confluence with North Nolan / Nolan Creek fork upstream to confluence with Liberty Ditch in city of Killeen in Bell County. It is listed on the 2024 Texas Integrated Report - Texas 303(d) List (Category 5) for impaired waters. It is labeled as a Category 5r meaning a WPP is under development or accepted by EPA for this parameter. The pollutant identified is bacteria and this segment was first identified as impaired in 1996. Potential contaminates to the watershed have been identified as parks, residential properties and manholes.

III. STORM WATER MANAGEMENT PLAN DEVELOPMENT

3.01 General

The specific hydrology and water quality concerns for the City of Nolanville were considered when preparing this Storm Water Management Plan. This plan was prepared under the guidance of the City Staff, TCEQ and the EPA. The BMP that have been identified will not only have a significant impact on the way the City currently operates, but will also impact industrial and commercial businesses, construction companies, developers, Killeen Independent School District (which includes the City of Nolanville), Bell County and residents of the City of Nolanville. Some areas of operations where the City of Nolanville will be affected are as follows:

- Drainage Systems
- Street Services
- Equipment Maintenance
- City Inspections
- Code Enforcement
- Police Department
- Planning & Development

3.02 Minimum Control Measures

The minimum control measures (MCMs) required by the Phase II rule describes BMPs developed to address the storm water pollutants that were identified as problematic within the City of Nolanville watersheds. The six (6) required MCMs are listed below along with each BMP developed for the MCMs:

Public Education and Outreach:

- Education of Nolanville residents by providing information on the City website.
- Education of Nolanville residents by posting information on at least one social media platform.
- Place public service announcements on the City marquee to educate residents and visitors.

Public Involvement / Participation:

- Support an annual event for clean up of local streams / waterways; litter / trash cleanup events such as Adopt-A-Highway, Adopt-A-Spot, Adopt-A-Street, Adopt-A-Stream, etc.
- Plan an event for tree planting, invasive vegetation removal, or stream restoration.
- Have a speaker present on stormwater-related topics/issues.

Illicit Discharge Detection & Elimination:

- Maintain a current and accurate MS4 map as described in Part IV.D.3.(c)(1).
- Conduct training for all the permittee's field staff as described in Part IV.D.3.(c)(2). Training may be conducted in person or using self-paced training materials such as videos or reading materials.
- Maintain and publicize a public reporting method for the pubic to report illicit discharges, illegal dumping, or water quality impacts associated with discharges into or from the small

MS4 such as a reporting hotline, online for, or other similar mechanism as described in Part IV.D.3.(c)(3). Develop protocol to identify, investigate and eliminate illicit discharges (Non-Stormwater). Review this protocol annually to update based of new rules and regulations and protocol's effectiveness to identify, investigate and eliminate illicit discharges.

- Develop and maintain procedures for responding to illicit discharges, illegal dumping, and spills as described in Part VI.D.3.(c)(4).
- Source investigation and elimination of illicit discharges and illegal dumping as described in Part IV.D.3.(c)(5).
- Corrective action to eliminate illicit discharges and illegal dumping as described in Part IV.D.3.(c)(5).
- *Inspection Procedures as described in Part IV.D.3.(c)(6).*
- Inspection in response to complaints as described in Part IV.D.3.(c)(6).

Construction Site Stormwater Runoff Control:

- Develop and maintain an ordinance or other regulatory mechanism as described in Part IV.D.4.(a).
- *Prohibit discharges as described in Part IV.D.4.(b)(2).*
- Maintain and implement site plan review procedures that describe which plans will be reviewed as well as when an operator may begin construction as described in Part IV.D.4.(b)(3).
- Implement procedures for inspecting large and small construction projects as described in Part IV.D.4.(b)(4).
- Conduct construction site inspections as described in Part IV.D.4.(b)(4).
- Develop, implement, and maintain procedures for receipt and consideration of information submitted by the public as described in Part IV.D.4.(b)(5).
- Conduct training for all the MS4 staff whose primary job duties related to implementing the construction stormwater program as described in Part IV.D.4.(b)(6). Training may be conducted in person or using self-paced training materials such as videos or reading materials.

Post-Construction Stormwater Management in New Development and Redevelopment:

- Develop and maintain an ordinance tor other regulatory mechanism as described in Part IV.D.5.(a)(2).
- Document and maintain records of enforcement actions and make them available for review by the TCEQ as described in Part IV.D.5.(b)(1).
- Ensure the long term operation and maintainance of structural stormwater control measures installed as described in Part IV.D.5.(b)(2).

Pollution Prevention/Good Housekeeping for Municipal Operations:

- *Permittee-owned Facilities and Control Inventory as described by Part IV.D.6.(b)(1).*
- Training and Education as described in Part IV.D.6.(b)(2). Training may be conducted in person or using self-paced training materials such as videos or reading materials.
- *Disposal of Waste Material as described in Part IV.D.6.(b)(3).*
- Contractor Requirements and Oversight as described in Part IV.D.6.(b)(4).
- Develop an evaluation for the potential discharge of pollutants in stormwater as a result of Assessment of permittee-owned operations as described in Part IV.D.6.(b)(5)a.
- *Identify pollutants of concern as described in Part IV.D.6.(b)(5)b.*

- Pollution Prevention Measures as described in Part IV.D.6.(b)(5)c.
- Inspection of Pollution Prevention Measures as described in Part IV.D.6.(b)(5)d.
- Structural Control Maintenance as described by Part IV.D.6.(b)(6).

The six (6) required MCMs along with each BMP and BMP goal is in Appendix A.

3.03 Public Review

The City of Nolanville's Storm Water Management Plan will be available for public review in accordance with the TPDES General Permit TXR040000 at City Hall located at 100 North Main Street; Nolanville, TX 76559. It will also be available for review on the City's website at www.nolanvilletx.gov no later than 30 days after the approval date.

3.04 Record Keeping

As required by the TPDES General Permit TXR040000 the City of Nolanville will retain a copy of all records, a copy of this TPDES general permit and records of all data used to complete the application (NOI) for this general permit and make this information available to the public if requested to do so in writing.

3.05 Reporting

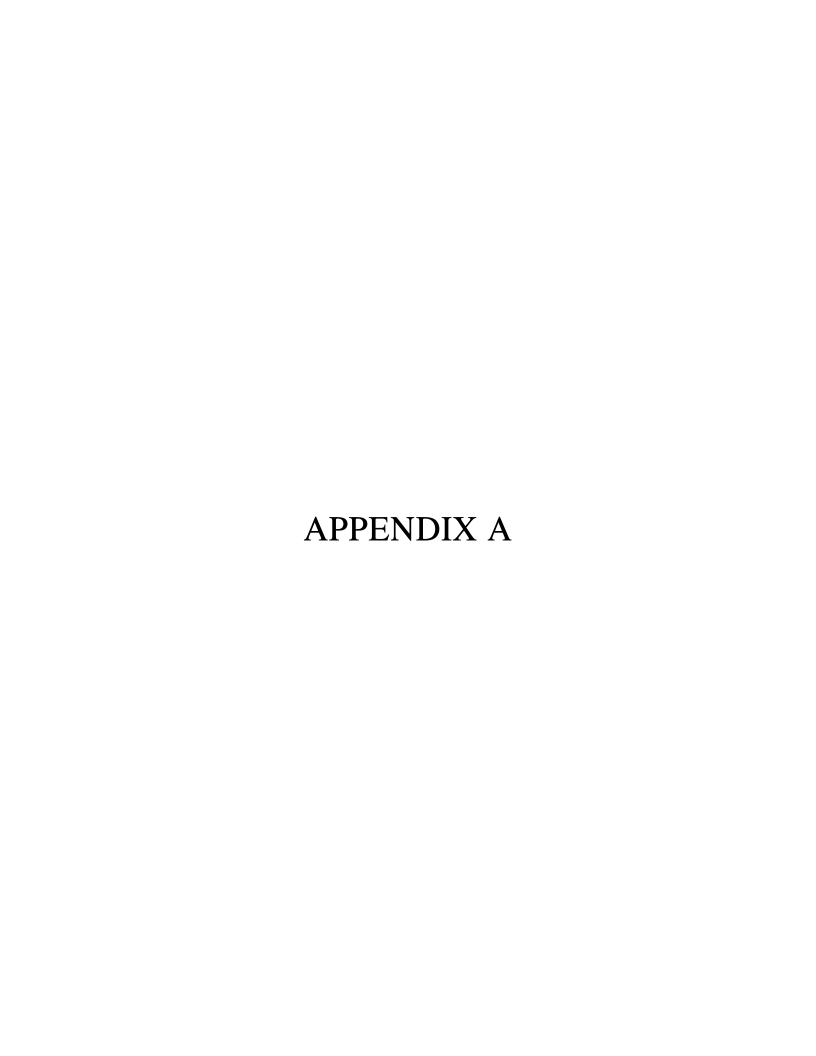
The City of Nolanville will submit a concise annual report to TCEQ within 90 days of the end of each permit year. The first permit year for annual reporting will begin on the date of the permit issuance. The annual report will address the previous permit year and will include the following:

- Status of compliance with the permit conditions;
- Assessment of the appropriateness of the identified BMPs;
- Progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP;
- The measurable goals of the MCMs;
- Evaluation of the success of the implementation of the measurable goals;

Other areas the annual report will address are:

- Status of any additional control measures implemented by the City, if applicable;
- Any MCM activities initiated before the permit issuance may be included;
- Summary of the results of information, including monitoring data, collected and analyzed, if any;
- Summary of the storm water activities the City operator plans to undertake during the next reporting cycle;
- The number of municipal construction activities authorized under this general permit and the total number of acres disturbed;
- The number of non-municipal construction activities that occurred within the jurisdiction of the City;
- Notice that the City operator is relying on another government entity to satisfy some of its permit obligations, if applicable.

The SWMP will be posted on the City's website no later than 30 days after the approval date. The annual report will be posted on the City's website no later than 30 days after the due date.



MCM 1: PUBLIC EDUCATION AND OUTREACH

ВМР	BMP Description	Target Audience	Measurable Goals	Public/Private Partner's	Implementation Date	Deadline
1.1: Educate	Provide information on the MS4 operator's website.	Residents	1. Maintain a webpage (City's webpage) with current and accurate information and working links. Maintain for the full year, each year.		May-25	Dec. 2025- Dec. 2029
Residents	weosite.		2. All links shall be checked, and the page shall be updated as necessary at a minimum of once annually.			Bec. 2029
	e Post information on on at least one social media platform	Residents 2	1. Message shall address ways audience can minimize or avoid adverse stormwater impacts or practices to improve the quality of stormwater runoff.		May-25	Dec. 2025- Dec. 2029
1.2: Educate Residents			2. Messages shall be seasonally appropriate.	Keep Nolanville Beautiful		
			3. Must make a minimum of one post per quarter and all quarterly posts must be visible by attendees for the full year, each year.			
			1. Develop topics that address activities or pollutants of concern.			
1.3: Advertising Campaign	Place public service announcement on City marquee.	Nolanville Residents	2. Advertisement must be active for a minimum of three weeks each year; or must have an estimated public exposure for the duration of the advertising campaign that is equal to twice the population for the small MS4 area (based on the most recent U.S. Census Bureau decennial population value for hte small MS4 area).		May-25	Dec. 2025- Dec. 2029

MCM 2: PUBLIC INVOLVEMENT/PARTICIPATION

BMP	BMP Description	Target Audience	Measurable Goals	Public/Private Partner's	Implementation Date	Deadline
2.1: Stream Cleanup	Support annual event for clean up of local streams/waterways; litter/trash cleanup events such as Adopt-A-Highway, Adopt-A Spot, Adopt-A-Street, Adopt-A-Stream, etc.	Residents	Pick up trash in an area of no less than 2-acres or 400 yards of stream/streambank/riparian area or two miles of roadside. May be a combination of the three options.		May-25	Dec. 2025- Dec. 2029
	Tree planting; Invasive Vegetation removal; Stream restoration.	Residents	1. Support a minimum of one event consisting of the following: project size minimum of 0.5 acreas or 25 yards; may occur in streams, parks, areas adjacent to public waterways, or other green space; may be a combination of locations and areas.		May-25	Dec. 2025- Dec. 2029
	Have a speaker present on stormwater-related topics/issues.	Residents	1. Provide or support a minimum of one session.		May-25	Dec. 2025- Dec. 2029

MCM 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

ВМР	BMP Description	Measurable Goals	Public/Private Partner's	Implementation Date	Deadline
3.1: MS4 Mapping	Maintain a current and accurate MS4 map as described in Part IV.D.3.(c)(1).	1. Review and update, as necessary, at least one time annually to include features which have been added, removed, or changed.		May-25	Dec. 2025- Dec. 2029
3.2: Illicit Discharge Staff Training	Conduct training for all the permittee's field staff as described in Part IV.D.3.(c)(2). Training may be conducted in person or using self-paced training materials such as videos or reading materials.	1. Conduct a minimum of one training annually for 100% of MS4 field staff that may come into contact with or otherwise observe an illicit discharge, illegal dumping, or illicit connection to the small MS4 as part of their normal job responsibilities.		May-25	Dec. 2025- Dec. 2029
Discharge Awareness Campaign	Maintain and publicize a public reporting method for the pubic to report illicit discharges, illegal dumping, or water quality impacts associated with discharges into or from the small MS4 such as a reporting hotline, online for, or other similar mechanism as described in Part IV.D.3.(c)(3).	1. Maintain a minimum of one public reporting mechanism 100% of the time during the permit term. 2. Publicize the public reporting mechanism a minimum of two times annually in a method designed to reach the majority of the intended audience. Develop and implement a tracking system to estimate what percentage of the intended audience is reached for determining BMP effectiveness. 3. In addition, if the MS4 operator has a public website, the public reporting mechanism must be publicized on the public website 100% of the time during the permit term.		May-25	Dec. 2025- Dec. 2029

MCM 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

ВМР	BMP Description	Measurable Goals	Public/Private Partner's	Implementation Date	Deadline
3.4: Illicit Discharge Response Procedures	Develop and maintain procedures for responding to illicit discharges, illegal dumping, and spills as described in Part VI.D.3.(c)(4).	1. Review and update the procedures at least one time annually to address changes and make improvements to the established procedures where applicable.		May-25	Dec. 2025- Dec. 2029
3.5: Illicit Discharge Detection and Elimination (Non- Stormwater)		1. Respond to 100% of known illicit discharges and illegal dumping incidents each year to investigate sources (or some Level 2b MS4s must notify the appropriate agency with the authority to act). 2. Respond to 100% of high priority discharges each year, such as sanitary sewer discharges within 24 hours (or some Level 2b MS4s must notify the appropriate agency with the authority to act). 3. For 100% of known illicit discharges or illegal dumping incidents where the small MS4 does not have jurisidiction, notify the adjacent MS4 operator or the applicable TCEQ regional office each year. 4. Notify TCEQ immediately of 100% of illicit flows believed to be an immediate threat to human health or the environment throughout the permit term.		May-25	Dec. 2025- Dec. 2029

MCM 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

ВМР	BMP Description	Measurable Goals	Public/Private Partner's	Implementation Date	Deadline
	Corrective action to eliminate illicit	For 100% of illicit discharges or illegal dumping where a source has been determined, notify the responsible party of the problem within 24 hours. Require the responsible party to perform all necessary corrective actions to eliminate the illicit discharge.		Sep-25	Dec. 2025- Dec. 2029
3.7: Illicit Discharge Inspection	inispection inoccurres as described in	1. Review and update the procedures at least one time annually to address changes and make improvements to the established procedures where applicable.		Sep-25	Dec. 2025- Dec. 2029
3.8: Illicit Discharge Inspection	Inspection in response to complaints as described in Part IV.D.3.(c)(6)	1. Conduct inspections in response to 100% of complaints each year according to the established procedures (or some Level 2b MS4s must notify the appropriate agency with the authority to act). Conduct follow up inspections in 100% of cases each year where necessary as described in the established procedures (except for some Level 2b MS4s without the appropriate authority to act).		Sep-25	Dec. 2025- Dec. 2029

MCM 4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

ВМР	BMP Description	Measurable Goals	Public/Private Partner's	Implementation Date	Deadline
4.1: Stormwater Ordinance for Construction Site Runoff Control	Develop and maintain an ordinance or other regulatory mechanism as described in Part IV.D.4.(a).	1. Review and update the ordinance or other regulatory mechanism at least one time during the permit term to address changes and make improvements to the ordinance where applicable.		May-25	Dec. 2025
	Prohibit discharges as described in Part IV.D.4.(b)(2).	Develop and maintain an ordinance or other regulatory mechanism to prohibit these discharges. Review and update the ordinance or other regulatory mechanism at least one time during the permit term to address changes and make improvements to the ordinance where applicable.		May-25	Dec. 2025 - Dec. 2029
4.3: Plan Review	Maintain and implement site plan review procedures that describe which plans will be reviewed as well as when an operator may begin construction as described in Part IV.D.4.(b)(3).	 Review and update site plan review procedures at least one time annually to address changes and make improvements to the established procedures where applicable. Implement site plan review procedues for 100% of new construction site plans recevied each year. 	Central Texas Home Builders Association	May-25	Dec. 2025 - Dec. 2029

MCM 4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

ВМР	BMP Description	Measurable Goals	Public/Private Partner's	Implementation Date	Deadline
4.4: Site Inspection	and small construction projects as	1. Review and update inspection procedures at least one time annually to address chagnes and make improvements to the established procedures where applicable.	Central Texas Home	May-25	Dec. 2025 - Dec. 2029
4.5: Site Inspection		1. Conduct inspections at a minimum of 80% of active construction sites annually according to the established procedures (or some Level 2b small MS4s must notify the appropriate agency with the authority to act). 2. Each year, conduct follow up inspections in 100% of cases where necessary as described in the established procedures (except for some Level 2b small MS4s without the appropriate authority to act).	Central Texas Home Builders Association	May-25	Dec. 2025 - Dec. 2029
4.6: Receipt of Information from the Public	Develop, implement, and maintain procedures for receipt and consideration of information submitted by the public as described in Part IV.D.4.(b)(5).	Review and update procedures for the receipt and consideration of information submitted by the public at least one time annually to address changes and make improvements to the established procedures where applicable. Maintain one webpage, hotline, or similar methode for receipt of information submitted by the public throughout the permit term.	Central Texas Home Builders Association	May-25	Dec. 2025 - Dec. 2029

MCM 4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

ВМР	BMP Description	Measurable Goals	Public/Private Partner's	Implementation Date	Deadline
4.7: MS4 Staff Training	Conduct training for all the MS4 staff whose primary job duties related to implementing the construction stormwater program as described in Part IV.D.4.(b)(6). Training may be conducted in person or using self-paced training materials such as videos or reading materials.	primary job duties are related to implementing the construction stormwater program.		May-25	Dec. 2025 - Dec. 2029

MCM 5: POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

ВМР	BMP Description	Measurable Goals	Public/Private Partner's	Implementation Date	Deadline
Construction	Develop and maintain an ordinance tor	1. Review and update the ordinance or other regulatory mechanism at least one time during the permit term to address changes and make improvements to the ordinance where applicable.		May-25	Dec. 2025
Keeping of Encforment	Document and maintain records of enforcement actions and make them available for review by the TCEQ as	2 Make 100% of enforcement records		May-25	Dec. 2025- Dec. 2029

MCM 5: POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

ВМР	BMP Description	Measurable Goals	Public/Private Partner's	Implementation Date	Deadline
5.3: Long Term Operation and Maintenance of Stormwater Control Measures	maintainance of structural stormwater control measures installed as described in Part IV.D.5.(b)(2).	requirement for any structural control	Central Texas Home Builders Association	May-25	Dec. 2025 - Dec. 2029

ВМР	BMP Description	Measurable Goals	Public/Private Partners	Implementation Date	Deadline
6.1: Storm Sewer & Drainage Way Operation & Maintenance Program	Permittee-owned Facilities and Control Inventory as described by Part IV.D.6.(b)(1).	 Develop and maintain an annual inventory for 100% of the small MS4 owned and operated facilities and controls in the small MS4 area. Review and update the inventory at least one time annually to address changes or additions to the facilities and controls where applicable. 		Jul-25	Dec. 2025 - Dec. 2029
	Training and Education as described in Part IV.D.6.(b)(2).	1. Conduct a minimum of one training annually for 100% of employees involved in implementing pollution prevention and good housekeeping practices.			
	Training may be conducted in person or	2. For small MS4s which use only contractors to implement pollution prevention and good housekeeping practices, ensure training of 100% of applicable contract staff is conducted at least one time annually using contract language or another similar method.		Jul-25	Dec. 2025 - Dec. 2029
	Disposal of Waste Material as described in Part IV.D.6.(b)(3).	1. Ensure that 100% of waste from the MS4 is disposed of in accordance with 30 TAC Chapters 330 or 335, as applicable each year.		Sep-25	Dec. 2025- Dec. 2029

ВМР	BMP Description	Measurable Goals	Public/Private Partners	Implementation Date	Deadline
	Contractor Requirements and Oversight as described in Part IV.D.6.(b)(4).	1. Each year, ensure that 100% of contractors hired by the MS4 to perform maintenance activities on permittee-owned facilities is contractually required to comply with all of the stormwater control measures, good housekeeping practices, and facility-specific stormwater management operating procedures described in Parts IV.D.6.(b)(2)-(6). 2. Implement oversight procedures of contractor activities in 100% of contracts to ensure that contractors are using appropriate control measures and SOPs each year. 3. Oversight procedures must be maintained on-site 100% of the time and made available for review by TCEQ within 24 hours of request.		Dec-25	Dec. 2025- Dec. 2029

ВМР	BMP Description	Measurable Goals	Public/Private Partners	Implementation Date	Deadline
O&M Activities at MS4	-	1. Evaluate 100% of O&M activities, in conjunction with procedure reviews if appropriate, for their potential to discharge pollutants in stormwater annually including, but not limited to: a. Road and parking lot maintenance, including such areas as pothole repair, pavement marking, sealing, and re-paving; b. Bridge maintenance, including such areas as re-chipping, grinding, and saw cutting; c. Cold weather operations, including plowing, sanding, and application of deicing and anti-icing compounds and maintenance of snow disposal areas; and d. Right-of-way maintenance, including mowing, herbicide and pesticide application, and planting vegetation.		Dec-25	Dec. 2025- Dec. 2029

ВМР	BMP Description	Measurable Goals	Public/Private Partners	Implementation Date	Deadline
	Identify pollutants of concern as described in Part IV.D.6.(b)(5)b.	 Identify pollutants of concern that could be discharged from all of the O&M activities described in Part IV.D.6.(b)(5)b and maintain a list of 100% of the pollutants identified. Including for example, metals; chlorides; hydrocarbons such as benzene, toluene, ethyl benzene, and xylenes; sediment; and trash. Review and update the pollutants of concern list at least one time annually to address changes or additions to the O&M activities where applicable. 		May-25	Dec. 2025- Dec. 2029

1. Develop and implement a set of pollution prevention measures that will reduce the discharge of pollutants in stormwater from th permittee-owned operations. Implement at least two of the following pollution prevention measures:	ВМР	BMP Description	Measurable Goals	Public/Private Partners	Implementation Date	Deadline
a. Replace at least 50% of the MS4's materials and chemicals with more environmentally friendly materials or methods by the end of the permit term; b. Track 100% of the application of deicing and anti-icing compounds in the MS4 area and record the amount of compound used for each application annually; c. Use suspended tarps, booms, or vacuums to capture paint, solvents, rust, paint chips and other pollutants during 80% of regular bridge maintenance each year; and d. Place barriers around or conduct runoff away from 100% of deicing chemical storage areas to prevent discharge into surface waters each year.		Pollution Prevention Measures as described in Part IV.D.6.(b)(5)c.	pollution prevention measures that will reduce the discharge of pollutants in stormwater from the permittee-owned operations. Implement at least two of the following pollution prevention measures: a. Replace at least 50% of the MS4's materials and chemicals with more environmentally friendly materials or methods by the end of the permit term; b. Track 100% of the application of deicing and anti-icing compounds in the MS4 area and record the amount of compound used for each application annually; c. Use suspended tarps, booms, or vacuums to capture paint, solvents, rust, paint chips and other pollutants during 80% of regular bridge maintenance each year; and d. Place barriers around or conduct runoff away from 100% of deicing chemical storage areas to prevent discharge into			Dec. 2029

ВМР	BMP Description	Measurable Goals	Public/Private Partners	Implementation Date	Deadline
6.8: MS4 Facilities and Stormwater Controls	Inspection of Pollution Prevention Measures as described in Part IV.D.6.(b)(5)d.	1. At least one time annually, visually inspect 100% of the pollution prevention measures implemented at permittee-owned facilities to ensure they are working properly. 2. Develop and maintain written procedures that describe the frequency of inspections and how they will be conducted. 3. Review and update the inspection procedures at least one time annually to address changes or additions to the pollution prevention measures. 4. Maintain a log of 100% of the inspections conducted annually and make the log available for review by the TCEQ within 24 hours of a request.		Aug-25	Dec. 2025- Dec. 2029

ВМР	BMP Description	Measurable Goals	Public/Private Partners	Implementation Date	Deadline
	Structural Control Maintenance as described by Part IV.D.6.(b)(6).	1. At least one time annually, perform maintenance of 100% of the structural controls which require maintenance. Maintenance must follow a plan and schedule developed by the small MS4 operator to be consistent with maintaining the effectiveness of the BMP. 2. The permittee shall develop and maintain written procedures that define the frequency of inspections and how they will be conducted. 3. Review and update the maintenance procedures at least one time annually to address changes or additions to the pollution prevention measures.		Aug-25	Dec. 2025- Dec. 2029