

2019 MS4 Permit Renewal Storm Water Management Plan

City of Schertz



Lockwood, Andrews
& Newnam, Inc.
A LEO A DALY COMPANY

TBPE Firm No. 2614

Executive Summary

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1 Definitions and Acronyms

The following definitions of common storm water quality and management terminology have been copied for ease of reference from the TCEQ TPDES General Permit No. TXR040000:

1.1 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 Practice (BMPs) – Schedules of activities, prohibitions of practices, maintenance procedures, structural controls, local ordinances, and other management practices

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to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control runoff, spills or leaks, waste disposal, or drainage from raw material storage areas.

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

Classified Segment – refers to a water body this 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 phase, 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 request, or other similar documentation and activities.

Construction Activity – Soil disturbance, including clearing, grading, and excavating; and not including routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (e.g., the routine grading of 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 can also include 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) acre 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 can also include 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 or 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).

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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 discharge 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 the 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 constitute 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 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 had 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. pipeline 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:

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- (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 the geographical area of the state or the entire state as provided by Texas Water Code (TWC) §26.040.

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

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

Hyperchlorinated Water – Water resulting from 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 on the latest approved CWA §303(d) list as not meeting applicable state water quality standards. Impaired waters include waters with approved or established total maximum daily loads (TMDLs), and those where a TMDL has been proposed by TCEQ but has not yet been approved or established.

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 Section §1151 as: (a) All land within the limits of any Indian reservation under the jurisdiction of the United State (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 rights-of-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.

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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).

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

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

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

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

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

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

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

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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 or 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, man-made 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 publicly owned treatment works (POTW) as defined at 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 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 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 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.

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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 non-navigable, and including the beds and banks of all water-courses and bodies of surface water, that are wholly or partially inside or bordering the state or subject to the jurisdiction of the state; 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 water which are subject to the ebb and flow of the tide;
- (b) all interstate waters, including interstate wetlands;
- (c) all other waters such as interstate lakes, rivers, streams (including intermittent stream), 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 water 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

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- (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 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 CWA jurisdiction remains with EPA.

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1.2 Commonly Used Acronyms

BMP	Best Management Practice
CFR	Code of Federal Regulations
CGP	Construction General Permit, TXR150000
CWS	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
SW3P,	Stormwater Pollution Prevention Plan
SWPPP	
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TPDES	Texas Pollutant Discharge Elimination System
TWC	Texas Water Code

2 Introduction

2.1 Background

The Clean Water Act (CWA) enacted by the United States Congress in 1972 created the U.S. Environmental Protection Agency (EPA) which enforces the act under which it was created. The EPA is required to protect the water quality for natural waters throughout the United States. The intent of the CWA is to reduce or eliminate pollutants from the waters of the U.S., the EPA established the program known as the National Pollutant Discharge Elimination System (NPDES) to identify water pollution sources and eliminate them.

The EPA delegated responsibility for the NPDES program in Texas to the Texas Commission on Environmental Quality (TCEQ) through the issuance of a series of General Permits. These general permits authorize the TCEQ to discharge treated and non-treated water sources to Waters of the United States from traditional point sources, such as wastewater treatment plants and industry. TCEQ is also responsible for minimizing pollution from non-point sources, such as stormwater runoff from construction sites and municipal storm sewer systems (MS4). The authority to regulate non-point sources of pollution was delegated from TCEQ to operators of storm sewer systems through the general permit TXR040000.

On December 13, 2013, TCEQ issued a renewal to the 2007 General Permit TXR040000. Again, in 2019 TCEQ renewed the 2013 General Permit TXR040000 which became effective on January 24, 2019.

2.2 Requirements

The process of applying for coverage under and maintaining conformance to the General Permit begins with submitting a Notice of Intent (NOI) and an updated SWMP no later than **July 23, 2019**.

Included in the SWMP must be a discussion of the schedule by which the City will undertake required actions, including interim milestones and the frequency of the action throughout the permit term. Any remaining BMPs that were fundamental permit requirements that were not completed under the last permit term must remain and be included in the plan. New elements in the program must be completely implemented within five years following permit issuance.

A detailed, comprehensive schedule for the Implementation Program is provided in Appendix of this document.

The SWMP proposes the means to develop, implement, and enforce strategies which are aimed at reductions in the discharge of pollutants to the MEP. General permit requirements reflect the increasing potential and concentrations of pollutants as the population served by an MS4 increases through use of levels of permit requirements. A summary of the permit levels provided under the general permit are provided in **Table 1. The City of Schertz is a Level 2 permittee for the purposes of the 2019 General Permit TXR040000.**

Permit Level	Population within UA <i>(based on 2010 US Census)</i>
Level 1	Less than 10,000
Level 2	10,000 but less than 40,000
Level 3	40,000 but less than 100,000
Level 4	100,000 or greater

Table 1--Permit levels by population



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The general permit provides seven Minimum Control Measures (MCMs), one of which is optional, while the others have varying requirements based on the permit level:

1. **Public Education, Outreach, and Involvement** – Distribute educational materials, provide presentations to inform citizens about stormwater pollution and/or provide opportunities for citizens to participate in program development and implementation.
2. **Illicit Discharge Detection and Elimination (IDDE)** – Detect and eliminate illicit discharges to the storm system.
3. **Construction Site Stormwater Runoff Control** – Control erosion and sediment in non-municipal construction activities.
4. **Post-Construction Stormwater Management in New Development and Redevelopment** – Control pollutant discharges from new development and redevelopment areas.
5. **Pollution Prevention and Good Housekeeping for Municipal Operations** – Prevent or reduce pollutant runoff from municipal operations.
6. **Industrial Stormwater Sources** – Monitor and regulate as needed pollutants from industrial or commercial sites. **The City of Schertz is not a Level 4 permittee and is not required to include this MCM in the SWMP.**
7. **Authorization for Construction Activities where the Small MS4 is the Site Operator (Optional)** – Allows MS4 operator to seek coverage under TPDES CGP TXR150000 for construction projects. **The City of Schertz will not be seeking approval for this MCM in this permit.**

The City of Schertz must provide a description of the BMPs being used to meet the MCM requirements above. Each BMP must have measurable goals which are clear, specific, and measurable. Where appropriate, BMPs must include a schedule for implementation of the actions described. Further, activities which have a periodic component must also include a frequency of the action to be performed. Compliance with these requirements can be found in **Section 0 Requirement: If** the permittee determines that the small MS4 may discharge the pollutant(s) of concern to an impaired water body without an approved TMDL, the permittee shall ensure that the SWMP includes focused BMPs, along with corresponding measurable goals, that the permittee will implement, to reduce, the discharge of pollutant(s) of concern that contribute to the impairment of the water body.

Recommended Strategy: The City does not currently have a baseline for water quality data. In an effort to provide defensible data on its discharges, the City will seek to comply with this requirement after enough data over varying times of year, wet-dry cycles, and rainfall depths have been collected to make the determination.

Phased Implementation: After obtaining the water quality data, the City will begin determining likely sources and strategies in year 5 of the permit.

Schedule: In year 5 the City will assess which outfalls are sources of the highest discharges of E. Coli in preparation for the next MS4 permitting cycle.

2.2.1 Part II D.4. (b)(1)c.

Requirement: The permittee shall submit an NOC to amend the SWMP in accordance with Part II.E.6 to include any additional BMPs to

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address the pollutant(s) of concern. This requirement does not apply to BMPs implemented to address impaired waters that are listed after permit authorization pursuant to Part II.D.4.

Recommended Strategy: The City does not currently have a baseline for water quality data. In an effort to provide defensible data on its discharges, the City will seek to comply with this requirement after enough data over varying times of year, wet-dry cycles, and rainfall depths have been collected to make the determination.

Phased Implementation: After obtaining the water quality data, the City will begin determining likely sources and strategies in year 5 of the permit.


Schedule: In year 5 the City will assess which outfalls are sources of the highest discharges of E. Coli in preparation for the next MS4 permitting cycle.

2.2.2 Part II D.4. (b)(2)

Requirement: Where the impairment is for bacteria, the permittee shall identify potential significant sources and develop and implement focused BMPs for those sources. The permittee may implement the BMPs listed in Part II.D.4(a)(5) or proposed alternative BMPs as appropriate.

Recommended Strategy: The City will aim to reduce discharges of bacteria through the BMPs listed in this SWMP.

Schedule: Refer to each BMP for the schedule of implementation.

In addition to those requirements set forth above, the City of Schertz drains to impaired stream segments listed in the 2012 Texas Integrated Report Index of Water Quality Impairments (State WQ Report). The stream segments listed in the State WQ Report which receive runoff from the MS4 are: Mid Cibolo Creek (1913), Lower Cibolo Creek (1902), and the Dry Comal Creek (1811A). The Dry Comal is the only stream segment which is in the process of establishing a TMDL iPlan. Compliance with the general permit requirements for stream segments which will have an approved iPlan and those without an approved iPlan can be found in **Section 4 Discharges Directly to Water Quality Impaired Water Bodies with an Approved TMDL (II.D.4.(a))** and **Section Error! Reference source not found. Error! Reference source not found.**, respectively. A map of the cities outfalls, city boundary, watersheds, and 2012 State WQ Report can be found in .

A small portion of the northwest limits of the City of Schertz are within the Transition Zone of the Edwards Aquifer. Though no regulated activities within city limits are expected, the City acknowledges that all Construction Activity that discharges or may potentially discharge from the MS4 within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer must include a Water Pollution Abatement Plan (WPAP) required by Edwards Aquifer Rule (30 TAC Chapter 213) to be included or referenced on all construction stormwater pollution prevention plans.

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2.3 Existing Authority Affecting Permit

The City of Schertz is a chartered home-rule municipality which consists of a Mayor and seven at-large Councilmembers, elected by the people and responsible to the people, and a City Manager, appointed by and responsible to the City Council for proper administration of the affairs of the City. The Mayor and Council enact local legislation, adopt budgets and determine policies. There are various ordinances and codes which support aspects of the SWMP a brief summary of those are found in **Table 2**.

City of Schertz Codes			
Article	Section	Subsection	Subject

Table 2--Codes and Ordinances Affecting SWMP

As required by general permit Part III A.3.(a), the City will review existing ordinances and Unified Development Code (UDC) and consider additional ordinances as described in the SWMP.

2.4 Recordkeeping

The City must maintain records which demonstrate compliance with the methods described in the SWMP. This documentation goes beyond that which is required to be submitted in the annual report due each December to the TCEQ, more on the annual report can be found in Section . A brief summary of the documentation required to be maintained is provided below:

- Retain all records, a copy of the TCEQ general permit, and records of all data used to complete the NOI for a period of three years or for the term of the TCEQ permit, whichever is longer;
- Retain a copy of the SWMP and all supporting documentation at a single location accessible to the TCEQ and the public;
- Make the records, including the Notice of Intent (NOI) and SWMP, available to the public if requested to do so in writing. The SWMP must be made available within ten (10) working days following a written request. Other records must be provided in accordance with the Texas Public Information Act;
- The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

2.5 Notice of Non-Compliance

Any discharge of pollutants which enters the City which may endanger human health or safety, or the environment, in accordance with 30 TAC Chapter 305.125(9), must be reported by the City to the TCEQ. Oral or written notification of the event must be made within 24 hours of the City becoming aware of the issue. A written report must be provided to the TCEQ within five working days. Additionally, the MS4 must promptly submit to TCEQ any facts or information relevant to an NOI, NOT, NOC, or any permit required reporting related to the entity responsible for the discharge.

2.6 Annual Report

The City will submit an annual report to the TCEQ within 90 days of the end of each reporting year which coincides with the last day of the City's fiscal year which is September 30. Therefore, each annual report will be due on December 29 which is the 90th day following September 30. The annual report must address the progress made in the prior year toward implementation of the BMPs which are detailed in this SWMP.

The annual report will include:

1. The annual reporting form which is updated from time-to-time by the TCEQ. The latest form is available at: <https://www.tceq.texas.gov/assistance/water/stormwater/sw-ms4.html>;
2. The status of the compliance with permit conditions, an assessment of the appropriateness of the identified BMPs, progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, the measurable goals for each of the MCMs, and an evaluation of the success of the implementation of the measurable goals. For convenience tables have been provided in Appendix [REDACTED] for ease of reporting;
3. A summary of the results of information collected and analyzed during the reporting period including monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP. For convenience tables have been provided in Appendix [REDACTED] for ease of reporting;
4. A summary of the stormwater activities the MS4 operator plans to undertake during the next reporting year;
5. Proposed changes to the SWMP including changes to any BMPs or any identified measurable goals that apply to the program elements. Note, any proposed changes will require a NOC.

2.7 SWMP Changes

The City may desire to modify or change BMPs from time-to-time to reflect the changing conditions under which this permit is managed. Those changes should be made to enhance activities conducted by the City to reduce pollutant discharges. As a result, the general permit makes allowance for these changes through the NOC process.

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

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

- Adding BMPs
- Replacing a BMP with a BMP that is substantially similar in nature to the BMP
- Making non-substantive changes, such as minor clarifications to the SWMP (for example, updating for department reorganization, minor clarifications of BMPs, or correction of typographical errors)
- Adding or subtracting areas such as by annexation or de-annexation (**DISCLAIMER:** *regardless of requirements to submit an NOC the City should determine if annexation will*

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result in a change in permit level through the addition of residents TXR040000 Part II, Section A.5. Additional requirements may apply to satisfy the increase in permit level.)

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

3 Development of SWMP

City staff from Development Services, Engineering, Public Works, and Administration met in June 2019 to discuss and evaluate the BMPs included in the 2014 SWMP. The first of three meetings was used to evaluate the performance of the BMPs in three specific areas: 1) effectiveness at reducing pollutant discharges; 2) ability to maintain clear documentation toward demonstrating the measurable goal criteria; 3) assessing level of completeness of the BMP. Results of this evaluation can be found on the following pages. The second of the three meetings was used to rank and evaluate the BMPs in an effort to determine if other BMPs would better meet the operating conditions of the City of Schertz. The last meeting was used to finalize the BMPs which became a part of this SWMP and determine a timeline for implementation.

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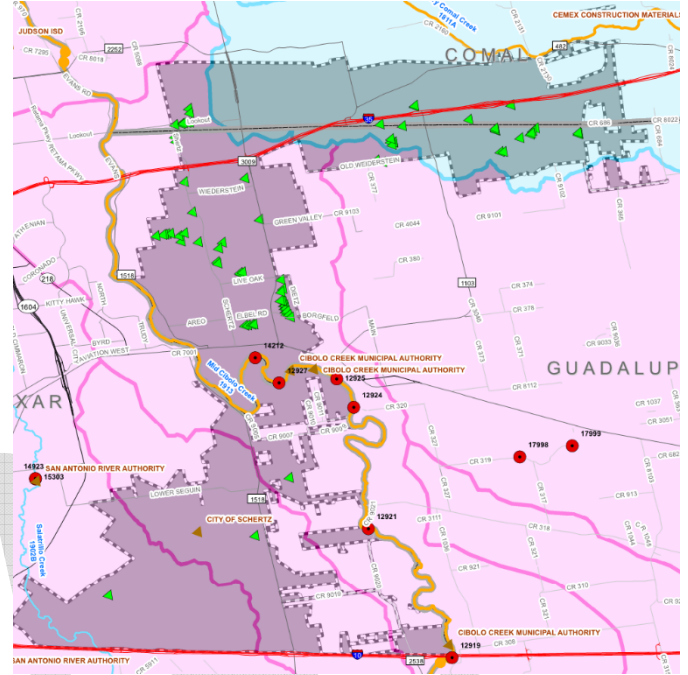
BMP		Status	Evaluation	Include in Proposed Changes	
ID	BMP			SWMP	and Justification
MCM 1 Public Education, Outreach, and Involvement					
1.1	Brochures and Fact Sheets	On-going	Difficult to maintain an accurate count of the number of brochures or fact sheets. There are other programs in the City that may be more effective.	NO	Replace BMP to utilize existing PR channels which City has invested in. Namely, Schertz Magazine and utilize utility billing inserts in both electronic and print formats. The audience is wider and the documentation to demonstrate measurable goal criteria is more easily obtained.
1.2	Speakers to Address Public Groups	On-going	Very time intensive for staff to organize speakers to attend events and public meetings. Additionally, there has been very minimal interest by citizens to attend same.	NO	Remove from SWMP. Eliminate BMP in new SWMP. City will focus the attention on providing greater numbers of presentations to school groups.
1.3	School Educational Program and Public Service Announcement Planning	On-going	There was limited success with this BMP in the last permit cycle. The feedback was good.	YES	Will look for greater opportunities to give presentations to school groups and increase attendance at those events.
1.4	Drain Marking	Completed	All existing drains within the City limits have been marked.	NO	Replace BMP to reflect that existing drains have been marked and focus will be on maintaining current stormwater details which include "drains to stream" logo.
1.5	Questionnaires	Not Completed	The City conducts other city-wide surveys and receives a relatively low percentage of responses. There was limited interest by staff to invest in additional surveys with the suspicion that minimal feedback would be received.	NO	Remove from SWMP. Minimal feedback from other surveys, the financial cost of providing, and administrative burden of preparing surveys is not reflected in a measurable impact in pollutant discharge.
1.6	NOI and NOC Public Comment	Completed	The City conducted the public hearing and notices as required and had no NOCs.	NO	Remove from SWMP. The public hearing is a requirement and no NOCs are proposed. There are other proposed BMPs which will solicit feedback for changes.
1.7	Recurring Public Comment	On-going	A copy of the SWMP has been kept at City Hall, The Visitor's Center, Public Works, and the Library. Although we do not receive Public comment we do have it available at our Council meetings.	NO	Change BMP to maintain a copy at the Public Library and start a forum on the City website to solicit review and comment by citizens. Current BMP isn't effective, thought is that by adding electronic comment may gain greater interest.
1.8	Volunteer Projects	Not Completed	Volunteer organizations did not express an interest in conducting stormwater activities.	NO	Remove from SWMP.
MCM 2 Illicit Discharge Detection and Elimination (IDDE)					
2.1	Storm Sewer Map	On-going	Current BMP was used to complete mapping of storm sewer system.	YES	Change BMP to reflect the complete existing mapping is complete and that the focus is now on maintaining the map and inventory.
2.2	Illicit Discharge Detection Plan	On-going	Staff has responded to 311 complaints however, has had difficulty establishing routine inspections.	YES	Change BMP to establish a percentage of the system which will be monitored in a given year. Sampling will be reserved for source tracking if ID are suspected.
2.3	Illicit Discharge Ordinance	Completed	City adopted ordinances which prohibit illicit discharges.	YES	Change BMP to reflect that staff is establishing a BMP to complete a bi-annual code and ordinance review. IDDE will be a part of the review.
2.4	Illicit Discharge and Dumping Hotline	On-going	City maintains a 311 hotline for reporting various storm water complaints and concerns.	YES	City will modify evaluation criteria to better depict the documentation which is kept to demonstrate compliance.

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BMP ID	BMP	Status	Evaluation	Include in SWMP	Proposed Changes and Justification
MCM 3 Construction Site Stormwater Runoff Control					
3.1	Technical Manual for Construction Runoff	Completed	Public Works Specifications Manual maintains standard notes and details for storm water pollution prevention.	NO	Change BMP to reflect that criteria has been established. Focus will be on reviewing criteria to make improvements to address issues with current criteria or non-compliance noted during the prior plan year.
3.2	Site Plan Review Program	Completed	A program for review of erosion control plans as a part of the site permit process has been established.	YES	City will modify evaluation criteria to better depict the documentation which is kept to demonstrate compliance.
3.3	Construction Site Inspection Program	On-going	Staff have been assigned for completing storm water inspections.	YES	No changes proposed.
3.4	Construction Stormwater Management Ordinance	Completed	City adopted ordinances which prohibit storm water discharges which include pollutants associated with construction.	YES	Change BMP to reflect that staff is establishing a BMP to complete a bi-annual code and ordinance review. Construction storm water discharges will be a part of the review.
3.5	Construction Runoff Hotline	On-going	City maintains a 311 hotline for reporting various storm water complaints and concerns.	YES	City will modify evaluation criteria to better depict the documentation which is kept to demonstrate compliance.
MCM 4 Post-Construction Stormwater Management in New Development and Redevelopment					
4.1	Technical Manual for Post-Construction Runoff	Not Completed	Criteria for post-construction WQ BMPs has not been established.	NO	Remove from SWMP. Eliminate BMP in new SWMP. City will evaluate adoption of additional criteria for certain discharges which contribute to discharges of bacteria and allow or incentivize Low Impact Development (LID) or other forms of Green Infrastructure (GI).
4.2	Site Review Program for Post-Construction Runoff	Not Completed	Prior SWMP text was duplicative of construction site stormwater BMP 3.2.	YES	Will focus efforts on site plan reviews to incorporate criteria established by BMP 4.1 as appropriate.
4.3	Long-Term Inspection and Maintenance Plan for Post-Construction Runoff	On-going		YES	Staff will develop and maintain a list of permitted BMPs and develop a process for inspection following installation.
4.4	Post-Construction Stormwater Management Ordinance	Completed	City passed ordinance to modify UDC Chapter 13.5 which is called Control of Storm Water Runoff.	YES	Change BMP to reflect that staff is establishing a BMP to complete a bi-annual code and ordinance review. Post-construction storm water discharges will be a part of the review.
MCM 5 Pollution Prevention and Good Housekeeping for Municipal Operations					
5.1	Municipal Employee Pollution Prevention Manuals	On-going	Public works has developed SOPs for managing discharges of pollutants. Staff is working with other City departments	YES	
5.2	Municipal Employee Training	In-Process	Public works staff have attended training and been certified however, other department trainings have not yet been conducted.	YES	City will modify evaluation criteria to better depict the documentation which is kept to demonstrate compliance.
5.3	Sediment Trap Planning	Not Completed		NO	Remove from SWMP. The investment in providing criteria and the administrative burden of compliance does not result in a measurable impact in pollutant discharge.
5.4	Trash Trap Planning	Not Completed		NO	Remove from SWMP. The investment in providing criteria and the administrative burden of compliance does not result in a measurable impact in pollutant discharge.
5.5	Street Sweeping	On-going	City routinely conducts street sweeping activities.	YES	City will modify evaluation criteria to better depict the documentation which is kept to demonstrate compliance.

4 Discharges Directly to Water Quality Impaired Water Bodies with an Approved TMDL (II.D.4.(a))

Part II D.4.(b) of the General Permit provides additional permittee requirements for discharges to water quality impaired water bodies without an approved TMDL. Each of the additional requirements are aimed at determining if the discharges from the City are a source of the impairment. Compliance with these requirements can only be completed through obtaining water quality sampling at the outfalls from the City into the impaired stream segments. Those segments are listed below and the watersheds, outfalls, along with the regulated industrial and wastewater point sources are shown in Figure [redacted].



{Insert table of creek segments and impairment}

The City has participated in the planning processes for Watershed Protection Plans (WPP) for both the Cibolo Creek and Dry Comal. The WPP for Cibolo Creek is in draft form and is anticipated to be submitted to TCEQ on _____ and approved by the EPA after comments are addressed on _____. WPPs are developed through input by stakeholders-who represent landowners, businesses, municipalities, elected officials, and residents who live and work within the watershed area. These stakeholder driven processes are used to develop strategies that make sense for the community to identify sources of and reduce pollutant discharges.

WPP Program elements are very similar to that of the MS4 program however are typically combined with more qualitative assessment of WQ either through added sampling or modeling or both. Results of these early qualitative assessments are used to identify potential sources of pollutant loads, then BMPs are identified to target those sources. Those BMPs are discussed in a public form to solicit stakeholder feedback on their appropriateness. Load reduction curves are applied to WQ models to simulate the anticipated reductions in pollutant loading to arrive at an anticipated impact on overall stream health.

WPP participation is voluntary however, it is a method of maintaining local control of the water quality BMPs used to reduce pollutant loads with the goal of delisting an impaired stream. By participating in the WPP BMP strategies a community could avoid the requirements that come with an approved TMDL i-Plan.

Stream Segment	Listed Impairment
Mid Cibolo (1913_02)	Depressed dissolved oxygen
Lower Cibolo Creek (1902_01)	Bacteria
Lower Cibolo Creek (1902_02)	Bacteria Impaired fish community
Lower Cibolo Creek (1902_03)	Bacteria
Dry Comal Creek (1811A_01)	Bacteria

Table 3--Stream impairments by segment

This SWMP was developed with the intent to comply with the BMPs identified in both WPP's which are appropriate to

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the suburban nature of the City. A summary of the BMPs identified which are appropriate to the City are included in the following sections. Additionally, recommendation

4.1 Dry Comal Creek and Comal River WPP

The WPP for the Dry Comal Creek was approved by the EPA in September 2018. Many of the BMPs are reflective of the rural nature of much of the watershed for the Dry Comal. The few BMP's which are appropriate to the suburban nature of the City follow in Table [redacted]. Note that funding and technical assistance can be provided for these BMPs within the limits of the Dry Comal watershed:

BMP	Description
OSSF	
OSSF Education and Assistance Programs	Watershed Partnership will provide education and assistance programs on proper operation and maintenance of OSSFs.
Mandatory OSSF Inspection and Maintenance Program	Comal County will be expanding its inspection and identification programs.
Stormwater	
Stormwater Outreach and Education	Watershed Partnership will educate on FOG and bacteria education through outreach and educational activities targeted to businesses and HOA's.
Engineering Analysis of Opportunities for Structural Stormwater BMPs	Retrofitting existing developments with WQ BMPs, stream restoration, and LID projects.
Pet Waste	
Pet Owner Outreach and Education	Provide education at pet vaccination and adoption centers. Focuses on pet waste as a source of bacteria.
Pet Waste Stations	Installation of pet waste stations, limited to City of New Braunfels only.
Pet Code Enforcement	Enforcement of existing ordinances which limit pet populations and require owners to collect and dispose of waste, limited to City of New Braunfels.
Tailored Pet Solutions	Provisions for adding pet waste stations at private locations where high density pet populations exist (e.g. apartment complex), limited to City of New Braunfels.

Table 4--Dry Comal WPP BMPs applicable to Schertz

4.1.1 Cibolo Creek Watershed WPP

The WPP for Cibolo Creek is still in development, the information provided within this section was taken from a draft of the WPP dated March 22, 2019. The identification of pollutant sources was completed in 2018 which confirmed that the upstream limits of the Mid Cibolo are the predominate sources of the bacteriological impairment. Much of the focus of the stakeholder meetings was placed on identifying strategies to mitigate the impacts of the urbanization of this portion of the watershed. The strategies developed, though not finalized, follow in Table [redacted]. Note that funding and technical assistance can be provided for these BMPs within the limits of the Dry Comal watershed:

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BMP	Description
Management Measure 3—Identify and repair or replace failing OSSFs	
OSSF Education and Assistance Programs	SARA, AgriLife, TWRI will conduct education, training, and training for installers and homeowners.
Mandatory OSSF Inspection and Maintenance Program	County's will identify, inspect, and repair OSSF's as funding allows.
Feasibility/Programming Extension of Gravity Sewer Service	Municipalities, SARA, and utility districts will identify possibilities for extending gravity sewer service.
Management Measure 4—Increase proper pet waste management	
Pet Spay/Neuter Subsidies	Municipalities will allow dog and cat owners to have pets spayed or neutered at low or no cost.
Pet Code Enforcement	Enforcement of existing ordinances which limit pet populations and require owners to collect and dispose of waste.
Pet Waste Stations	Municipalities and HOA's will obtain maintenance, supplies, and pet waste stations (50 stations).
Pet Owner Outreach and Education	Provide education on pet waste as a source of bacteria.
Management Measure 5—Implement and expand urban and impervious surface stormwater runoff management	
Permanent Stormwater BMPs	Identify and install stormwater BMPs as funding becomes available.
Green Infrastructure Education	AgriLife/TWRI will deliver education and outreach.
Management Measure 6—Manage SSOs and Unauthorized Discharges	
Identify sources of SSOs	AgriLife/TWRI and municipalities will develop programs to identify and program replacement of limited capacity and poor condition sanitary sewer collection systems.
SSO Outreach and Education	Municipalities and AgriLife/TWRI will provide education on fats, oils, and grease (FOG) disposable wipes, and the causes of SSOs to citizens.
Management Measure 7—Planning and Implementation of Wastewater Reuse	
Extend Recycled Water	SARA and CCMA will identify and prioritize sites for extension of recycled water service.
Management Measure 8—Illicit & Illegal Dumping	
Illicit Dumping Education	Counties will develop and deliver education and outreach materials to residents.

Table 5--Cibolo Creek WPP BMPs applicable to Schertz

4.2 Recommendations to Meet Permit Requirements

4.2.1 Part II D.4. (b)(1)a.

Requirement: Permittee shall determine whether the small MS4 may be source of the pollutant of concern by determining if discharges from MS4 would be likely to contain pollutant of concern at levels of concern.

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Recommended Strategy: The City should begin planning for baseline water quality sampling at regular intervals to determine significant areas or sources of bacteria which is the cause of impairment in both the Dry Comal and the Cibolo Creek.

Phased Implementation: The City will complete an assessment of the locations and frequencies of sampling. Once completed the City will contract with either GBRA or SARA to perform either or both sampling and testing. The results will be logged once the sampling phase has begun and will be reported in the MS4 annual report.

Schedule: Years 1 and 2 of the permit the City will undertake the planning, budgeting, and manpower estimating required to meet this requirement. Years 3 and 4 will be used to catalog the results of the sampling. In year 5 the City will assess which outfalls are sources of the highest discharges of E. Coli in preparation for the next MS4 permitting cycle.

Evaluation:

1. Maintain a copy of the planning and programming report or memorandum (years 1 & 2);
2. Produce a map of testing locations with naming or numbering nomenclature (years 3 through 5);
3. Maintain results of water quality samples indicating location, date, time, temperature, rainfall received, time delivered to testing facility, refrigerated or non, and results in cfu/100 mL (years 3 through 5);
4. Evaluate sample results to determine if the MS4 is a source at a level of concern for further development of BMPs in next annual permitting cycle;

4.2.2 Part II D.4. (b)(1)b.

Requirement: If the permittee determines that the small MS4 may discharge the pollutant(s) of concern to an impaired water body without an approved TMDL, the permittee shall ensure that the SWMP includes focused BMPs, along with corresponding measurable goals, that the permittee will implement, to reduce, the discharge of pollutant(s) of concern that contribute to the impairment of the water body.

Recommended Strategy: The City does not currently have a baseline for water quality data. In an effort to provide defensible data on its discharges, the City will seek to comply with this requirement after enough data over varying times of year, wet-dry cycles, and rainfall depths have been collected to make the determination.

Phased Implementation: After obtaining the water quality data, the City will begin determining likely sources and strategies in year 5 of the permit.

Schedule: In year 5 the City will assess which outfalls are sources of the highest discharges of E. Coli in preparation for the next MS4 permitting cycle.

4.2.3 Part II D.4. (b)(1)c.

Requirement: The permittee shall submit an NOC to amend the SWMP in accordance with Part II.E.6 to include any additional BMPs to address the pollutant(s) of concern. This requirement does not apply to BMPs implemented to address impaired waters that are listed after permit authorization pursuant to Part II.D.4.

Recommended Strategy: The City does not currently have a baseline for water quality data. In an effort to provide defensible data on its discharges, the City will seek to comply with this requirement after enough data over varying times of year, wet-dry cycles, and rainfall depths have been collected to make the determination.

Phased Implementation: After obtaining the water quality data, the City will begin determining likely sources and strategies in year 5 of the permit.

Schedule: In year 5 the City will assess which outfalls are sources of the highest discharges of E. Coli in preparation for the next MS4 permitting cycle.

4.2.4 Part II D.4. (b)(2)

Requirement: Where the impairment is for bacteria, the permittee shall identify potential significant sources and develop and implement focused BMPs for those sources. The permittee may implement the BMPs listed in Part II.D.4(a)(5) or proposed alternative BMPs as appropriate.

Recommended Strategy: The City will aim to reduce discharges of bacteria through the BMPs listed in this SWMP.

Schedule: Refer to each BMP for the schedule of implementation.

5 Minimum Control Measure No. 1 – Public Education, Outreach, and Involvement

All permittees shall develop, implement, and maintain a comprehensive stormwater education and outreach program to educate public employees, businesses, and the general public of hazards associated with the illegal discharges and improper disposal of waste and about the impact that stormwater discharges can have on local waterways, as well as the steps that the public can take to reduce pollutants in stormwater. (Part III B.1.)

5.1 Brochures and Fact Sheets Schertz Magazine & Water Utility Billing

The City produces a magazine, Schertz Magazine, which is sent monthly directly to all residents of Schertz in addition to local businesses. The City will develop various educational and informative articles and/or infographics to illustrate various topics in stormwater. Periodically the articles will focus on sources of bacteria and household and business best practices which reduce those discharges. Some of the information that may be used may come from partnerships with the Dry Comal Watershed Partnership and/or Texas AgriLife, SARA, or Texas Water Resources Institute (TWRI). Additionally, the City will utilize maintain a website for the storm water utility

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operations and post similar articles to those in print. Periodically the City will utilize utility bill inserts in both electronic and paper forms.

Measurable Goals:

1. Schertz Magazine—Monthly article publication
2. Storm Water Website—Annual updates to website with links to EPA resources for homeowners and businesses
3. Utility Billing Inserts—Quarterly

Evaluation:

- Copy of each article published in Schertz Magazine
- Screen capture of the website showing links available
- Copy of utility billing inserts

5.2 School Educational Program

The City will coordinate with the Schertz-Cibolo-Universal City Independent School District to implement an educational program, targeting 4th and 5th grade students. This program will utilize assemblies with targeted information related to the water cycle, sources of pollution, and the consequences of this pollution.

Measurable Goals:

- Develop and distribute outreach materials for 4th and 5th grade students.

Evaluation:

- Track and report the school location, number of students in attendance, and a copy of the presentations given.

5.3 Drain Marking

The City will require new construction to include the storm drain manhole covers with a message such as “No Dumping – Drains to Creek” in the construction process. Additional EPA styled “drains to stream” buttons may be added by a community outreach activity with volunteers and organizations, such as HOAs and student groups. The signage and manhole covers remind the public of the connection between the drain and local waterways. Rainfall runoff can wash soil, yard waste, fertilizer, motor oil, and other contaminants into waterways.

Measurable Goals:

- Use combination of City staff and volunteer organizations to place placards on all inlets installed in the prior year.
- Require contractors to install “drains to stream” logo manholes in new development.

Evaluation:

Record the location, date, existence of plaque, and activity pertaining to each inlet in the document file. {Utilize GIS inventory of accepted infrastructure for installed date as record of drains marked, modify details to meet criteria “drains to stream”}

5.4 Household Hazardous & Bulk Waste Days

The City will coordinate with their solid waste services provider to implement and hold a bi-annual hazardous waste day where residents can drop off household hazardous waste for

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disposal. This can include automotive supplies, paints & solvents, motor oil, unrestricted pesticides, hobby supplies, and household cleaners. Additionally, the City will host a bi-annual bulk waste day to collect items which may otherwise be dumped.

Measurable Goals:

- Collect Household Hazardous Waste on designated dates and report amount of waste collected.
- Collect bulk wastes on designated dates and report amount of waste collected.

Evaluation:

- Track and report the quantity of HHW collected during events.
- Track and report the quantity of bulk waste collected during events.

5.5 Maintain Stormwater Page on City Website

The City will host a storm water focused page on the City website. The SWMP will be posted along with a public comment forum. Additionally, the website will offer an online “report a concern” forum. Where appropriate, updates to the information contained on this site will be made a part of City-wide social media postings.

Measurable Goals:

- Maintain a storm water page on the City website;
- Create an online forum for feedback on SWMP and programs associated with the MS4 permit;
- Utilize social media to post updates on SWMP and programs associated with the MS4 program.

Evaluation:

- Maintain a copy of comments received related to items posted;
- Maintain a memorandum of updates to website made each permit year;
- Maintain a copy of comment received from social media posts, if any;

5.6 Public Notice for Stormwater Management Program Development

Staff will conduct a bi-annual review meeting on various MS4 permitted activities. Any proposed changes or revisions will be brought before a board, commission, or Council as appropriate. A summary of all the public participation activities will be included in an annual report. This will also include any updates or revisions to the SWMP.

Measurable Goals:

- Publish the annual report on the storm water website for review and comment.
- Make annual report available to citizens at the Public Library.
- Post public notice for public meetings related to SWMP activities

Evaluation:

- Maintain minutes from bi-annual staff workshop on SWMP activities;
- Maintain copies of public notices;
- Maintain a record of public comments received.

6 Minimum Control Measure No. 2 – Illicit Discharge Detection and Elimination (IDDE)

All permittees shall develop, implement, and enforce a program to detect, investigate, and eliminate illicit discharges into the small MS4. The program must include a plan to detect and address non-stormwater discharges, including illegal dumping to the MS4 system. (Part III B.2.)

6.1 Storm Sewer Map

The City has completed its inventory of the MS4 outfalls. The current map has been provided in Appendix [REDACTED]. The City will continue to make updates to the map to include other improvements to mapping and inventory in support of other BMPs and the WQ monitoring recommended. The City will evaluate making the mapping available to the public through ArcGIS online.

Measurable Goals:

- Geolocate and inventory inlets and outfalls added through public and private construction each year;
- Evaluate the cost and administrative burden related to providing public access to mapping through ArcGIS online.

Evaluation:

- Maintain log of items added to storm water GIS layers to include location and date added;
- Maintain documentation related to evaluation of ArcGIS online. If not posted online during permit, maintain a current copy of the map at the end of each permit year.

6.2 Field Staff Training

The City will develop a program for informing and training employees in recognizing and reporting illicit discharges and connections to the MS4. The training will include the requirements developed for internal processes in other IDDE BMPs.

Measurable Goals:

- Develop a list of employee positions to be trained on the identification and reporting of illicit discharges and other reporting requirements of the SWMP.
- Develop a training program, including materials and internal reporting forms and procedures.
- Develop a training schedule and conduct training of identified personnel 2 times per year.
- Conduct training for new and additional employees.

Evaluation:

- Maintain a list of dates of training and the names of employees in attendance. The sign-in sheet used for the event satisfies this requirement;
- Maintain a copy of the training materials used during the training event;
- If outside training events are used to satisfy this requirement a completion certificate indicating the name of the event, employee trained, and date of the event for each employee trained in the permit year will satisfy this requirement.

6.3 IDDE Source Tracking SOP

The City will develop a standard of practice (SOP) for the procedures to be used by field staff in determining the source of an illicit discharge. The SOP will identify the authority granted by ordinance to conduct surveys and inspections related to this effort. Additionally, the SOP will identify the contracts or accounting procedures required to obtain WQ samples if required to conduct proper source tracking. SOP procedures could include contact information for support agencies which provide source tracking support. Additionally, the SOP will identify when reporting to TCEQ is required and times limits for reporting. If forms are developed to aid in the process these will be made a part of the SOP.

Measurable Goals:

- Complete an SOP using internal workshops to gain consensus from the MS4 responsible party and the field staff responsible with execution;
- Complete a review of the document with the City Attorney;
- Post the SOP and any formwork developed in the Public Works breakroom;

Evaluation:

- Maintain a current copy of the SOP at the end of each permit year.

6.4 IDDE Source Removal SOP

The City will develop a SOP to remove sources of illicit discharge once sources are identified. The SOP will identify the authority granted by ordinance for removals including procedures for documenting that authority with the property owner. In addition to authority, the schedule for removal from time of source identification will be provided in the SOP. After removal notification requirements and those responsible within the City for performing these tasks will be identified. Further, any documentation requirements before, during, and after source removal will be identified and any formwork developed will be attached to the SOP.

In the event the source is an SSO, a CIP adopted by a board, commission, or authority will satisfy this requirement.

Measurable Goals:

- Complete an SOP using internal workshops to gain consensus from the MS4 responsible party and the field staff responsible with execution;
- Complete a review of the document with the City Attorney;
- Post the SOP and any formwork developed in the Public Works breakroom;

Evaluation:

- Maintain a current copy of the SOP at the end of each permit year.

6.5 OSSF Inspection and Maintenance Program

The City currently contracts with the counties for OSSF approval. The City will review the interlocal agreement in-place with the counties to determine if OSSF inspection and maintenance programs can be developed with the counties. If a program cannot be developed through the county, the City will evaluate developing its own inspection and maintenance program requirements to reduce the potential of discharges of untreated waste to receiving streams.

Measurable Goals:

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- Review ILA with counties to determine if program support for inspections can be added to avoid need for financial or resource impacts to City;
- If necessary, develop an inspection program to include identifying OSSFs within MS4, establishment of fees to cover cost of program, implementation timeframe, needed ordinance authority, and other program execution requirements;

Evaluation:

- Maintain a copy of the current ILA with counties or, as necessary, City policies for OSSF inspections;
- Maintain a copy of inspection reports conducted by permit year within city limits;
- Maintain a copy of re-inspection reports if deficiencies are noted;

6.6 Illicit Discharge Ordinance

The City will review, revise and pass any changes to the ordinance which, to the extent allowable under state and local law, will further identify illicit discharges, prohibit illicit discharges, and establish enforcement procedures for removing the sources of illicit discharges.

Measurable Goals:

- Utilize the Building and Standards Commission to review authorization and code annually;
- Conduct review with City Attorney to monitor compliance with other legislation which may impact authority provided.

Evaluation:

- Maintain any redlines of and adopted resolutions which alter existing authority.

6.7 Illicit Discharge and Dumping Hotline

The City utilizes the “311” system to obtain citizen reporting of community concerns. Currently the “311” staff are trained to enter storm water complaints into the work order tracking system used throughout the City. The City will continue to use this process and maintain documentation of inspections and follow-up inspections to address the concerns received through this system.

Measurable Goals:

- Maintain internal procedures and training for 311 and storm water staff related to documenting concerns received through the hotline, follow-up, and documentation requirements.

Evaluation:

- Maintain a log of the concerns received and the documentation related to inspections performed, follow-up completed, and disposition of the concern (i.e. closed, open, etc.) by permit year.

7 Minimum Control Measure No. 3 – Construction Site Stormwater Runoff Control

All permittees shall develop, implement, and enforce a program requiring operators of small and large construction activities, as defined in Part I of this general permit, to select, install, implement, and maintain stormwater control measures that prevent illicit discharges to the MEP. The program must include the development and implementation of an ordinance or other regulatory

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mechanism, as well as sanctions to ensure compliance to the extent allowable under state, federal, and local law, to require erosion and sediment control. (Part III B.3.)

7.1 Review and Update Criteria for Construction Runoff

The City has developed requirements which are documented in the Public Works Specifications. In conjunction with the bi-annual review of all MS4 programs and requirements staff will review by internal staff to address concerns noted in field.

Measurable Goals:

- Conduct review of criteria on bi-annual basis to ensure criteria results in elimination of construction site pollutant discharges.

Evaluation:

- Maintain copy of minutes from review meetings and a redlined copy of criteria along with adopted revisions by permit year.

7.2 Construction Plan Review Procedures

The City has established criteria for review and permitting of construction activities. As a part of those reviews the permittee is required to submit temporary and permanent erosion control plans (often landscape plans) in order to obtain permit approval. In conjunction with the bi-annual review of all MS4 programs and requirements staff will review by internal staff to address routine comments made during the permit review process.

Measurable Goals:

- Conduct review of criteria on bi-annual basis to ensure criteria results in elimination of construction site pollutant discharges.

Evaluation:

- Maintain copy of minutes from review meetings and a redlined copy of criteria along with adopted revisions by permit year.

7.3 Construction Site Inspection and Enforcement Procedures

The City will develop and implement updated written procedures outlining the inspection and enforcement policies that have been adopted by the Council. The procedures for inspection and enforcement will be developed along with the MS4 responsible party and the field staff responsible for enforcement. The policies will be posted in the Public Works breakroom for review. The field staff assigned to construction site inspection and enforcement compliance will maintain a written record of the time, date, location, and deficiencies noted during inspection. Follow-up inspections will be conducted when deficiencies are noted and written records will be maintained for those inspections as well.

Measurable Goals:

- Update and implement written procedures for inspecting construction sites and enforcement requirements;
- Review ordinances, codes, and regulations in development of policies. If necessary, recommend updates;
- Complete written documentation of inspections and re-inspections, as necessary;

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- Conduct annual training of field staff on policies, procedures, regulations, and authority granted by Council;

Evaluation:

- Maintain a copy of written policies and procedures;
- Maintain a sign-in sheet and a copy of training materials used in annual training;

7.4 Construction Site Inspection and Enforcement Program

The City will conduct inspections of construction sites to determine if there are any conditions which are a threat to water quality, such as: soil erosion potential; site slope; project size and type; sensitivity of receiving waterbodies; proximity to receiving waterbodies; non-stormwater discharges; and past record of non-compliance by the operators of the construction site.

Measurable Goals:

- Conduct inspections of construction sites on a weekly basis and post-rain events;
- Conduct re-inspections of non-compliant construction sites within one week of the note non-compliance;

Evaluation:

- Maintain a copy of inspection reports conducted in each permit year;
- Maintain a copy of re-inspection reports conducted in each permit year;

7.4.1 BMP 3.4: Construction Stormwater Management Ordinance

The City will review, revise and pass any changes to the ordinance which, to the extent allowable under state and local law, will further prohibit construction pollution discharges, and establish enforcement procedures for remedying same discharges.

Measurable Goals:

- Conduct review with City Attorney to monitor compliance with other legislation which may impact authority provided.

Evaluation:

- Maintain any redlines of and adopted resolutions which alter existing authority.

7.5 Construction Runoff Hotline

The City utilizes the “311” system to obtain citizen reporting of community concerns. Currently the “311” staff are trained to enter storm water complaints into the work order tracking system used throughout the City. The City will continue to use this process and maintain documentation of inspections and follow-up inspections to address the concerns received through this system.

Measurable Goals:

- Maintain internal procedures and training for 311 and storm water staff related to documenting concerns received through the hotline, follow-up, and documentation requirements.

Evaluation:

- Maintain a log of the concerns received and the documentation related to inspections performed, follow-up completed, and disposition of the concern (i.e. closed, open, etc.) by permit year.

8 Minimum Control Measure No. 4 – Post-Construction Stormwater Management in New Development and Redevelopment

All permittees shall use, to the extent allowable under state, federal, and local law and local development standards, an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects. The permittees shall establish, implement, and enforce a requirement that owners or operators of new development and redeveloped sites design, install, implement, and maintain a combination of structural and non-structural BMPs appropriate for the community and that protects water quality. If the construction of permanent structures is not feasible due to space limitations, health and safety concerns, cost effectiveness, or highway construction codes, the permittee may propose an alternative approach to TCEQ. **(Part III B.4.)**

8.1 Evaluate adoption of Low Impact Development (LID)/Green Infrastructure (GI)

The City will conduct a public comment period via the UDC amendment/update process, conduct internal criteria and financial impact assessment, and provide a memo to the City Manager's office for review. The purpose of this BMP is to begin the process of implementing post-construction BMPs which will limit the discharge of E. Coli and potentially reduce storm water runoff discharge temperatures to address impairments in the Cibolo and Dry Comal Creeks.

Measurable Goals:

- Work internally with staff to develop recommendations and potential implementation strategies in the first year of the permit;
- Present a potential strategy for implementation of LID/GI to Planning & Zoning and Council;
- Based on the feedback received, adjust the implementation and prepare a budgetary and staff impact analysis for submittal to the City Manager by the second year of the permit;
- Submit an NOC for any strategies added and adjust evaluation criteria for success in related categories.

Evaluation:

- Maintain minutes of internal work group meetings related to LID/GI;
- Maintain a copy of the memo provided to the City Manager with recommendations by Staff clearly noted;
- Maintain copy of NOC.

8.2 Post-Construction BMP Permitting & Inspections Criteria Development

The City does not currently have requirements for post-construction BMPs which limit the discharge of E. Coli or TSS. As additional criteria are developed, the City will develop a permitting process for each BMP installed and begin inspecting BMP performance. The City will establish the process and permitting methods and potential penalties for non-compliance.

Measurable Goals:

- Develop permitting methods using modifications to existing permits issued;
- Develop inspection criteria using other field staff inspection criteria and frequencies as a guide;

Evaluation

- Maintain a copy of the permit process developed;
- Maintain a copy of the SOP developed for post-construction BMP inspections.

8.3 Post-Construction Stormwater Management Ordinance

The City will review, revise and pass any changes to the ordinance which, to the extent allowable under state and local law, will further limit post-construction discharges of E. Coli and TSS and establish criteria, procedures, and penalties for remedying same discharges.

Measurable Goals:

- Conduct review with City Attorney to monitor compliance with other legislation which may impact authority provided.

Evaluation:

- Maintain any redlines of and adopted resolutions which alter existing authority.

9 Minimum Control Measure No. 5 – Pollution Prevention and Good Housekeeping for Municipal Operations

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

9.1 Municipal Facilities and Stormwater Control Inventory

The city will inventory and map city-owned and operated facilities and stormwater controls. The pollutant discharge potential of each facility will be assessed as a part of this inventory.

Measurable Goals:

- Inventory all municipal facilities and stormwater controls.
- Map municipal facilities and stormwater controls inventoried.
- Assess the pollutant discharge potential of each facility.
- Document the results of the assessment.

Evaluation:

- Maintain either through ArcGIS Online or a physical map of municipal facilities and stormwater controls.

9.2 Training and Education

The City will develop and implement an employee training program that addresses stormwater quality issues, pollution prevention, and good housekeeping procedures for city operations.

Measurable Goals:

- Develop a list of departments/divisions and employee positions to be trained in implementing pollution prevention and good housekeeping practices.
- Develop a training program, including materials and internal reporting forms and procedures.
- Develop a training schedule and conduct training of identified personnel.
- Conduct training for new and additional employees.

Evaluation:

- Maintain a sign-in sheet and a copy of training materials used in annual training.

9.3 Contractor Requirements and Oversight

The city will initiate contractual requirements in contracts that require vendors to comply with Pollution Prevention & Good Housekeeping BMPs adopted by the city while working within city limits.

Measurable Goals:

- Work with Purchasing to draft contract provisions that establish contractual requirements for compliance with Pollution Prevention and Good Housekeeping practices and facility-specific stormwater management operating procedures;
- Review requirements with City Attorney;
- Implement contract requirements in new contracts and by amendment to existing contracts.

Evaluation:

- Maintain a copy of the current vendor contract.

9.4 City Operations Assessment

Evaluate operations and maintenance (O&M) activities for potential to discharge pollutants.

Measurable Goals:

- Evaluate pavement repair and maintenance operations.
- Develop procedures and documentation for inspection of pollution prevention measures at city-owned facilities.
- Perform inspections of pollution prevention measures at city owned and operated facilities.

Evaluation:

- Maintain a copy of SOPs developed to prevent discharge of pollutants from hazardous materials. When MSDS sheets include spill prevention or containment procedures, these may be used in lieu of specific SOP development.

9.5 Provide City Vehicle Washing Areas that are Served by Appropriate BMPs

The City generates several sources of potentially highly polluted discharges which include: emergency response vehicle washing, vacuum truck cleaning, and street sweeping waste. These discharges should be directed into a grit and oil water separator before being discharged to the sanitary sewer for treatment. The City will evaluate the ability to utilize regionalized facilities with other entities, construction of City only facilities, or a combination of smaller facilities combined with commercial vehicle washing solutions for emergency vehicles. The financial impact and amount of waste generated will be assessed.

Measurable Goals:

- Develop a list of departments which require a facility;
- Work with surrounding public entities to see if shared facilities would be possible;
- Determine cost and location of facilities;
- Enter into agreements, where appropriate, for commercial washing services.

Evaluation:

- Maintain a copy of the programming report developed which addresses need, cost, location, and alternatives with associated costs. The programming report must contain a recommendation for compliance with this requirement.

9.6 Street Sweeping

The city presently operates a program of street sweeping for streets of each classification. The city will continue the street sweeping program to reduce accumulations of sediment and litter on city streets.

Measurable Goals:

- Continue sweeping up to all public streets each year.

Evaluation:

- Maintain mileage logs showing odometer readings, street segments, dates, and times for the permit year.

10 Minimum Control Measure No. 6 – Industrial Stormwater Sources

This MCM would identify and control pollutants in stormwater discharges to the small MS4 from the landfills; other treatment, storage, or disposal facilities for municipal waste (for example transfers stations and incinerators); hazardous waste treatment, storage, disposal, and recovery facilities and facilities that are subject to Emergency Planning and Community Right-to-Know Act (EPCRA) Title III, Section 313; and any other industrial or commercial discharge the permittee determines are contributing a substantial pollutant load to the small MS4. However, this MCM is not required for a Level 2 small MS4 and **the city has elected not to use this MCM**. The City does have in place ordinances that allow for the enforcement of monitoring on all sites discharging to the small MS4 and ability to reasonably inspect these same sites.

If the City elects to implement this MCM in the future a NOC would have to be submitted notifying the executive director of the change. Since the city elects no to implement this

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MCM, no documentation will be retained unless required under MCM No. 2: Illicit Discharge Detection and Elimination (IDDE).

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Appendix A—Implementation Schedule

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Appendix B—Implementation Schedule

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