Stormwater Management Program

for the

City of Dalworthington Gardens

for a

Texas Commission on Environmental Quality

Texas Pollutant Discharge Elimination System
General Permit TXR040000

December, 2019

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I. INTRODUCTION

Polluted stormwater runoff from urbanized area is a major cause of impairment to our Nation's waterways. Under the authority of the Clean Water Act, the Environmental Protection Agency (EPA) developed a stormwater permitting program with the goal of significantly reducing this pollution source. The City of Dalworthington Gardens has been designated by the EPA as an urbanized area and, therefore, must make application to discharge stormwater to waters of the United States. The EPA passed the permitting authority for the State of Texas on to the Texas Commission on Environmental Quality (TCEQ). In order to become authorized under the new TCEQ permit Dalworthington Gardens has developed a stormwater management program and intends to implement best management practices (BMP's) that are designed to:

1. Reduce the discharge of pollutants to the "maximum extent practicable";
2. Protect water quality; and
3. Satisfy the appropriate water quality requirements of the Clean Water Act.

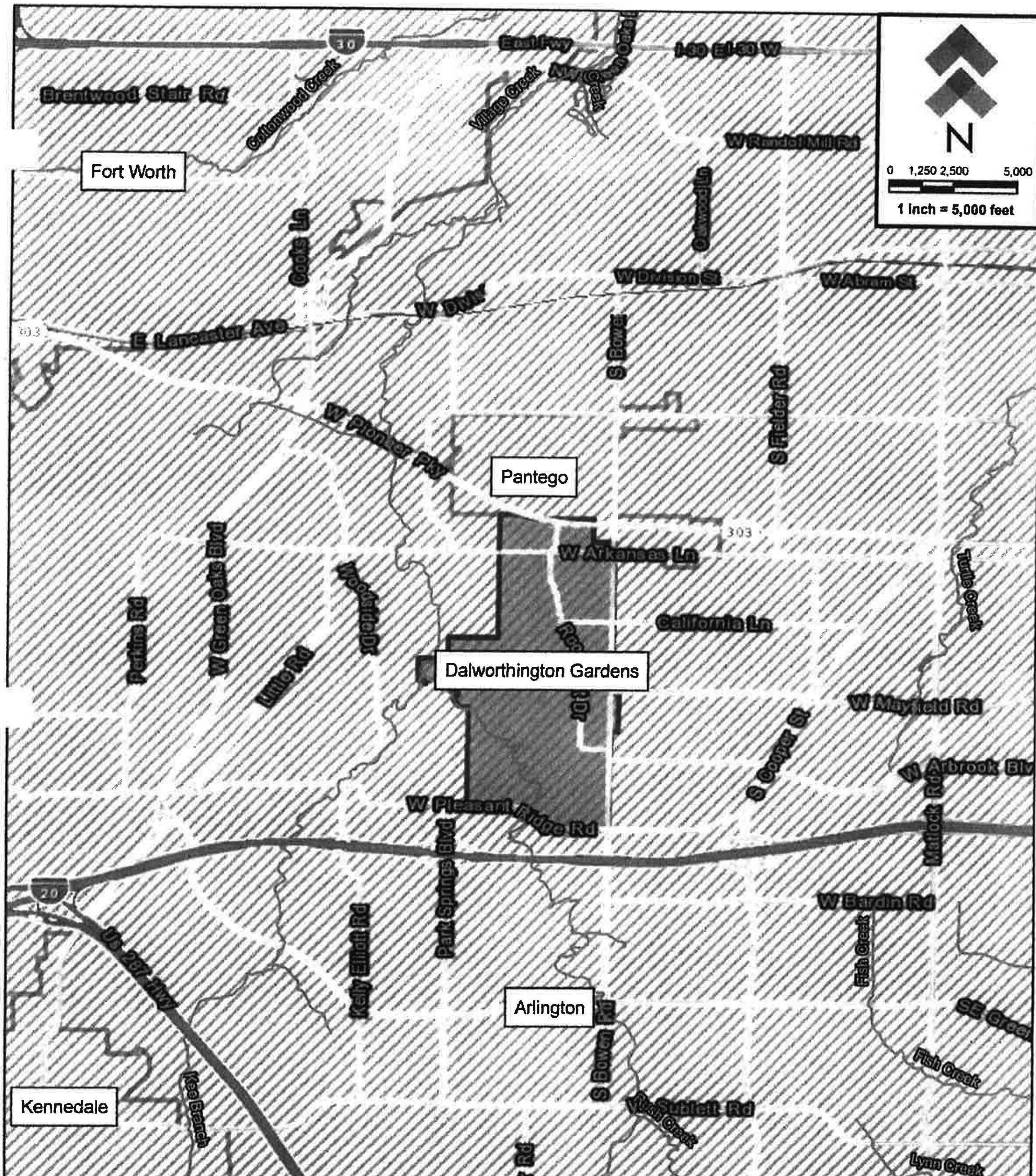
PERMIT BACKGROUND

Several national comprehensive studies have indicated that stormwater runoff pollution within highly urbanized areas is a major contributor to water pollution in the United States. As rain falls and stormwater runoff collects and travels over urban lands it picks up and carries pollutants through municipal separate storm sewer systems (MS4's) and ultimately into streams, lakes, rivers, and other water sources impairing water quality. The 1987 amendments to the Clean Water Act required EPA to develop a comprehensive stormwater permitting program to regulate these types of stormwater discharges to waters of the United States. This stormwater program was developed over two phases. In 1990 Phase I of the program was developed and regulated runoff from medium and large MS4s (population > 100,000) and large construction sites (area > 5 acres). Phase II of the program was developed in 2007 and regulates runoff from small MS4s (population = 1,000 to 100,000) and small construction sites (area = 1 acre to 5 acres).

The EPA authorized the TCEQ to develop and manage the permitting program for the State Texas. The TCEQ program requires that all regulated MS4s seek authorization to discharge stormwater under the Texas Pollutant Discharge Elimination System (TPDES) General Permit TXR040000. A copy of the TPDES permit requirements is located in Appendix B of this document. To become authorized under the Phase II TPDES permit, all small MS4s must develop a stormwater management program that includes certain best management practices or BMP's that have the ultimate goal of improving the quality of stormwater runoff. The permit will authorize small MS4s to discharge stormwater for a period of five years. The first permit term was from August 2007 to August 2012. The permit was administratively continued until the issuance of this current permit. The current permit effective date is December 13, 2013, and all small MS4s are required to prepare and submit to TCEQ a renewed stormwater management program (SWMP) and Notice of Intent form to satisfy the conditions of the permit. This renewed SWMP will permit stormwater discharges from the City of Dalworthington Gardens from December 2019 until this permit expires in December 2024, or later date as specified in any amendment(s) by TCEQ. A copy of the Notice of Intent for the City of Dalworthington Gardens is provided in Appendix A of this report.

The stormwater permit requirements herein developed to minimize pollution in stormwater to the maximum extent practicable and effectively prohibiting illicit discharges to the storm sewer system. The Dalworthington Gardens program contains a variety of structural and non-structural BMP's that have been selected to provide specific stormwater quality improvements and satisfy this six (6) minimum control measures (MCM's) that are required by the permit. The six (6) quality minimum controls are as follows:

1. Public Education, Outreach, and Involvement
2. Illicit Discharge Detection and Elimination
3. Construction Site Stormwater Runoff Control
4. Post-Construction Stormwater Management in New Development and Redevelopment
5. Pollution Prevention/Good Housekeeping for Municipal Operations
6. Industrial Stormwater Sources (if applicable)



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City of Dalworthington Gardens - Urbanized Area Map

DWG

Legend

- Streams (NCTCOG)
- 2010 Urbanized Areas
- Dalworthington Gardens

City of Dalworthington Gardens
Stormwater Management Program

This stormwater management program contains information about the BMP's that have been selected to satisfy the six (6) MCMs. The program contains a description of the selected BMPs, a schedule for implementation and measurable goals to evaluate and track the BMP implementation. As the stormwater management program is evaluated and tracked, the City of Dalworthington Gardens may find that some BMPs have become ineffective BMPs with better practices that are deemed more appropriate for the MCM. The permit has flexibility within its guidelines for MS4s to make improvements to the program that will most benefit stormwater quality.

Effective management of stormwater is important to the City of Dalworthington Gardens and its citizens. Communities that develop effective stormwater management programs can revitalize their surface waters, improve quality of life, and create places where businesses and residents want to locate. The City of Dalworthington Gardens' goal for this stormwater program is to meet the requirements of the permit and ultimately improve water quality in receiving streams and lakes. Dalworthington Gardens has actively participated in stormwater quality improvements for years and seeks to continue that trend through the continued development and implementation of this stormwater management program.

CITY OF DALWORTHINGTON GARDENS BACKGROUND

In order to determine the most effective BMP's for the City of Dalworthington Gardens, the background, water resources, and current land use were all taken into consideration. These factors were used to help guide the development of this stormwater management program and help influence what BMP's should be implemented to provide the best approach in reducing pollution in stormwater. This program was developed on what works best for Dalworthington Gardens.

Dalworthington Gardens is located in the north central Texas region within the limits of Tarrant County just north of Interstate 20. Dalworthington Gardens is within the Dallas-Fort Worth-Arlington urbanized area and shares city boundaries with the City of Arlington and Town of Pantego. Dalworthington Gardens' city limits are identified in Figure 1. Dalworthington Gardens is also located in the West Fork Trinity River basin. The main receiving stream for the City is Rush Creek. The State classified water body that ultimately receives the discharge from Dalworthington Gardens is the Lower West Fork Trinity River (Segment #0841).

The City of Dalworthington Gardens is a small city that has maintained a rural atmosphere and incorporates approximately 1.8 square miles. According to the North Central Texas Council of Governments (NCTCOG) demographics, approximately 20% of the City is undeveloped and over 50% of the City is single family residential. The 2010 census population of Dalworthington Gardens was 2,259, and the current population is approximately 2,387 (2017 estimate).

II. DEFINITIONS

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

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 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 that is listed and described in Appendix A or Appendix C of the Texas Surface Water Quality Standards, at 30 TAC § 307.10.

Clean Water Act (CWA) – The Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972, Pub. L. 92-500, as amended Pub. L. 95-576, 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, 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 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 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 meets either of the following two (2) 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.

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 disturbed, 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 measure (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 into 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 firefighting 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.

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

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

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 as it applies to small MS4s is found at 40 CFR § 122.34.

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

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):

> 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 district 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;
>
> That is designed or used for collecting or conveying stormwater;
>
> That is not a combined sewer; and
>
> 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 based, 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 water 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 water 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 drainage slots that drain into open culvert, open swales or an adjacent property, or otherwise not actually discharging into water of the U.S. are not considered an outfall.

Permittee – The MS4 operator authorized under this general permit.

Permitting Authority – For the purpose of the general permit, the TCEQ.

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

Pollutant(s) of Concern – 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 or greater than one (1) acre of land. This term does not include such activities as exterior remodeling.

Semiarid Areas – Areas with an average annual rainfall of at least ten (10") inches, but less than twenty (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, gutter, 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 district 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 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 non-residential 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 from an area where there is either a large construction activity or a small construction activity.

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

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

Structural Control (or Practice) – A pollution prevention practice that requires the construction of a device, or the use of a device, to capture or prevent pollution in stormwater runoff. Structural controls and practices may include but are not limited to wet ponds, bioretention, infiltrations basins, stormwater wetlands, silt fences, earthen dikes, drainage swales, vegetative line 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 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 MS4s as defined and used by the U.S. Census Bureau in the 2010 decennial census.

Water of the United States – (from 40 CFR § 122.2) Waters of the United States or waters of the U.S. means:

(a) all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(b) all interstate waters, including interstate wetlands;

(c) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds that the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters;

(1) which are used or could be used by interstate or foreign travelers for recreational or other purposes;

(2) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(3) which are used or could be used for industrial purposes by industries in interstate commerce.

(d) all impoundments of waters otherwise defined as waters of the United States under this definition;

(e) tributaries of waters identified in paragraphs (a) through (d) of this definition;

(f) the territorial sea; and

(g) wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

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

City of Dalworthington Gardens
Stormwater Management Program

COMMONLY USED ACRONYMS

BMP	Best Management Practice
CFR	Code of Federal Regulations
CGP	Construction General Permit, TXR 150000
CWA	Clean Water Act
EPA	Environmental Protection Agency
FR	Federal Register
MCM	Minimum Control Measure
MSGP	Multi-Sector General Permit, TXR050000
MS4	Municipal Separate Storm Sewer System
NOC	Notice of Change
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
SWMP	Stormwater Management Program
SWP3, SWPPP	Stormwater Pollution Prevention Plan
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TMDL	Total Maximum Daily Load
TPDES	Texas Pollutant Discharge Elimination System
TWC	Texas Water Code

III. PROGRAM RATIONALE

REGULATORY REQUIREMENTS

The TCEQ TPDES General Permit Number TXR040000 requires small MS4s to apply for authorization to discharge stormwater to Surface Waters in the State of Texas. The general permit is issued pursuant to Section 26.040 of the Texas Water Code and Section 402 of the Clean Water Act. Application for coverage under this permit includes the submittal of a Notice of Intent (NOI) form and preparation of a Stormwater Management Program (SWMP). The TPDES permit will provide coverage for a five-year period and requires an annual report submittal to TCEQ.

CATEGORIES OF REGULATED SMALL MS4s

The permit further defines MS4 operators according to levels, based on the 2010 U.S. Census population within the urbanized area. The level will not change during the permit term due to populations fluctuation, but may change if the MS4 operator acquires or gives up regulated area. The levels are defined by TCEQ as follows:

(a) Level 1: Traditional MS4s with a population less than 10,000

(b) Level 2: Traditional MS4s with a population between 10,000 and 39,999. Also includes non-traditional MS4s.

(c) Level 3: Traditional MS4s with a population between 40,000 and 99,999.

(d) Level 4: Traditional MS4s with a population over 100,000.

With a 2010 Census population of 2,259, the City of Dalworthington Gardens must meet all requirements of a Level 1 Traditional MS4. Level 1 MS4s are not required to implement additional BMP's that are required for Level 2, Level 3, and Level MS4s.

BEST MANAGEMENT PRACTICES

The SWMP must provide a listing and description of best management practices (BMPs) developed to prevent stormwater pollution to the maximum extent practicable. BMPs are required to be developed to satisfy six (6) stormwater quality minimum control measures, as applicable.

1. Public Education, Outreach, and Involvement
2. Illicit Discharge Detection and Elimination
3. Construction Site Stormwater Runoff Control
4. Post-Construction Stormwater Management in New Development and Redevelopment
5. Pollution Prevention/Good Housekeeping for Municipal Operations
6. Industrial Stormwater (Not Applicable to Levels 1-3)

Each MCM must contain an appropriate quantity and type of BMP to satisfy the permit requirements of "maximum extent practicable". The permit regulations state that existing programs or BMPs may be used to satisfy the requirements of this SWMP. Dalworthington Gardens intends to continue many of the successful BMPs that were previously developed and add new BMPs to this program to continue advancing efforts to protect stormwater quality. BMPs must include a schedule of implementation during the five-year permit period and a determination of measurable goals to evaluate the effectiveness of the BMP. A description of how each measurable goal will be evaluated must also be provided.

It was the intent of the TCEQ to provide a general permit for small MS4s with enough flexibility to create a stormwater program to meet the unique, individual needs of smaller systems. The program is intended to be developed by the MS4 operator such that it effectively reduces pollutants to the receiving waters and ultimately improves water quality.

IMPAIRED WATER BODIES AND TOTAL MAXIMUM DAILY LOAD (TMDL) REQUIREMENTS

The renewed TCEQ Phase II Stormwater Permit includes very specific TMDL requirements that must be considered with the development of a stormwater management plan. A TMDL is the total amount of substance that a water body can assimilate and still meet the Texas surface Water Quality Standards. A water body is impaired for purposes of the permit if it has been identified, pursuant to the latest TCEQ and EPA approved CWA 303(d) list, as not meeting Texas Surface Water Quality Standards. Discharges of the pollutant(s) of concern to impaired water bodies for which there is a TCEQ and EPA approved TMDL are not eligible for the permit unless they are consistent with the approved TMDL.

The main receiving stream within the City of Dalworthington Gardens is Rush Creek. The classified water body that ultimately receive the discharge from the City of Dalworthington Gardens is the Lower West Fork Trinity River (#0841). Both Rush Creek and the Lower West Fork Trinity are listed as impaired according to the TCEQ 2012 303(d) list of impaired water bodies for bacteria. The watershed also has a TMDL in place with an approved Implementation Plan (I-Plan). Therefore, the City of Dalworthington Gardens is required to include the benchmark from the I-Plan as well as BMPs that target bacteria. The BMPs include measurable goals to meet all requirements as outlined in Part II.D.4 of the TCEQ MS4 permit. The TMDL BMPs and benchmarks are defined in the BMP table under Detection and Elimination of Illicit Sanitary Sewer Discharges.

City of Dalworthington Gardens
Stormwater Management Program

STORMWATER MANAGEMENT PROGRAM DEVELOPMENT

The City of Dalworthington Gardens hired J. Richard Perkins, P.E. a municipal consulting firm to assist with the preparation of the City's updated Stormwater Management Program. Perkins' firm and the City of Dalworthington Gardens staff from the City Administration Department and Public Works Department performed the steps described in this section to determine the BMPs, select measurable goals and schedule the implementation of the program elements.

BMP SELECTION PROCESS

City of Dalworthington Gardens personnel reviewed the 2018 permit and indicated BMPs that had proved effective in reducing and preventing pollution in stormwater runoff. The City also identified potential future BMPs that could best achieve the goal of improved stormwater quality. Existing BMPs were reviewed and compared with regulatory requirements in the updated permit for each MCM. BMPs that were effective in the first permit term were continued, while ineffective BMPs were removed and replaced with new goals. Perkins' firm met with City of Dalworthington Gardens personnel to evaluate existing programs and to select new BMPs that would reduce pollutants to the maximum extent practicable.

SELECTION OF MEASURABLE GOALS

The permit stipulates the development of measurable goals for each BMP with a description of how the measurable goal will be evaluated. Measurable goals were selected to assess the effectiveness or appropriateness of the BMPs, provide a baseline for future measurements, provide progress towards achieving the statutory goad of reducing the discharge of pollutants to the MEP, and to evaluate the success of implementation of the BMP. Effort was made to select measurable goals that were achievable yet provide specific information about each BMPs progress.

IMPLEMENTATION SCHEDULE

The permit also requires that the program indicate the schedule for BMP development and implementation. BMPs may be performed or phased into the program over the five-year period of permit coverage such that the program is completely implemented by the permit expiration date. The City of Dalworthington Gardens will ensure that legal authority requirements are met within the first two years of the permit, as required by Part III.A.3 of the permit.

The City of Dalworthington Gardens has been proactive in protecting the quality of its stormwater runoff. Consequently, many of the BMPs required are already being practiced in the City and will continue to be practiced or will be improved upon over the permit term. The BMP implementation schedule was developed in an attempt to phase in BMPs over the permit term that are new or will require significant development updating effort. Previously developed and completed BMPs are identified as Year 1 activities as required by the permit and existing BMPs that are planned to be implemented each year are identified as year 1 through Year 5 activities. The progression of implementation aims to continually increase stormwater quality in the City to the maximum extent practicable over the five-year permit term.

ANNUAL REPORTING AND TRACKING

The permit effective date is January 24, 2019 and the first year of the permit ends on January 23, 2020. The small MS4 can select their own annual report due date as long as it is permit year, calendar year, fiscal year. The type of year chosen will remain the same date throughout the permit term. The annual reports are due each year and must be submitted to TCEQ within 90 days after the selected permit year ends. The City of Dalworthington Gardens has chosen to report on the fiscal year. The annual reports are to be completed as BMPs are implemented to tract the progress of the program and to determine if any changes to the program are necessary.

RECORDKEEPING

The City of Dalworthington Gardens shall retain all records including a copy of the TPDES permit (located in Appendix B) and records of all data used to complete the NOI and satisfy the public participation requirements, for a period of three (3) years, or for the remainder of the term of this general permit, whichever is larger, as required by the permit (Part IV.A). The City of Dalworthington Gardens will also make the NOI and SWMP available to the TCEQ and the general public at the City of Dalworthington Gardens, City Hall at reasonable times and during normal business hours.

IV. MINIMUM CONTROL MEASURES

The following section is organized according to the five (5) minimum control measures (MCMs):

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

The sixth MCM, Industrial Stormwater Sources, is not a required MCM for a Level 1 City. Therefore, Dalworthington Gardens has excluded this MCM for the SWMP.

Under each MCM heading the TPDES regulations are provided followed by a listing of the proposed BMPs being implemented to meet the permit requirements. The BMPs that are identified within this program along with the measurable goals and implementation schedule represent the City's efforts to comply with the permit to the maximum extent practicable. A stormwater management program summary and master tracking table is included within this section and provides an overview of the BMPs, measurable goals, and implementation schedules that will be used to comply with the TPDES regulations. The tables also identify the responsible department for development and implementation of each BMP. Notes are added for each BMP to describe in detail what the City has planned in order to make the BMP effective in reducing stormwater pollution.

City of Dalworthington Gardens
Stormwater Management Program

A. Public Education, Outreach and Involvement

I. TCEQ Permit Requirements (Ref. TPDES Permit Part III.B.1):

(a) PUBLIC EDUCATION AND OUTREACH

(1) All permittees shall develop, implement, and maintain a comprehensive stormwater education 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.

Existing permittees shall assess program elements that were described in the previous permit, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharge of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of this permit term. The program must, at a minimum:

a. Define the goals and objectives of the program based on high priority community-wide issues (for example, reduction of nitrogen in discharges from the small MS4, promoting previous techniques used in the small MS4, or improving the quality of discharges to Rush Creek;
b. Identify the target audience(s);
c. Develop or utilize appropriate educational materials, such as printed materials, billboard and mass transit advertisements, signage at select locations, radio advertisements, television advertisements, and websites;
d. Determine cost effective and practical methods and procedures for distribution of materials.

(2) Throughout the permit term, all permittees shall make the educational materials available to convey the program's message to the target audience(s) at least annually.

(3) All permittees shall review and update, as necessary, the SWMP and MCM implementation procedures required by Part III.A.2. Any changes must be reflected in the annual report. Such written procedures must be maintained, either on site or in the SWMP and made available for inspection by the TCEQ.

(4) MS4 operators may partner with other MS4 operators to maximize the program and cost effectiveness of the required outreach.

(b) PUBLIC INVOLVEMENT

(1) All permittees shall involve the public, and, at minimum, comply with any state and local public notice requirements in the planning and implementation activities related to small MS4s in general to developing and implementing the SWMP, except that correctional facilities are not required to implement this portion of the MCM.

Existing permittees shall assess program elements that were described in the previous permit, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharge of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of this permit term. At a minimum, all permittees shall:

a. If feasible, consider using public input (for example, the opportunity for public comment, or public meetings) in the implementation of the program;
b. If feasible, create opportunities for citizens to participate in the implementation of control measures, such as stream clean-ups, storm drain stenciling, volunteer monitoring, volunteer "Adopt-A-Highway" programs, and educational activities;
c. Ensure the public can easily find information about the SWMP.

2. Goals and Objectives

The City of Dalworthington Gardens identified littering as being a community-wide issue. Trash and debris build up and collect on residential property, open spaces, and streets. The trash eventually makes its way to the creek and affects water quality. The City has added a BMP to address this issue, and provide education and involvement to reduce the amount of trash in the City. The City also addressed construction site activities as being a concern for the city. Runoff from sites, as well as improper disposal of waste is something that the City deals with on a regular basis. This issue was also addressed through a construction specific BMP.

The master tracking table that describes each Public Education, Outreach, and Involvement BMP identifies the goal and targeted audience, in addition to the description, measurable goal, implementation year, and notes. The goal details the intended outcome of each BMP. The target audience identifies the specific group of people that the BMP is targeting.

3. Best Management Practices

The City of Dalworthington Gardens has selected the following BMPs to fulfill the requirements of the Public Education, Outreach and Involvement minimum control measures.

1. City Composting Program
2. Construction Site Waste Management Guideline
3. Fats, Oils, and Grease Education *
4. Household Hazardous Waste (HHW) Program
5. Pet Waste Management *
6. Recycling Program
7. Spring Clean-up Event
8. Storm Drain Inlet Marking
9. Stormwater Webpage

*TMDL specific BMP

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