



Stormwater Management Plan (SWMP)

TPDES Phase II Municipal Separate Storm Sewer Systems (MS4)

Permit Effective Date January 24, 2019 – January 24, 2024



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1.0 INTRODUCTION

The City of Temple has developed a Stormwater Management Program (SWMP) as required for coverage under the Texas Pollutant Discharge Elimination System Program (TPDES) General Permit No. TXR040000. The SWMP describes the minimum control measures and Best Management Practices (BMPs) that will be implemented by the City of Temple to achieve the reduction of pollutants in the City's Stormwater to the "maximum extent practicable". The City's programs and activities are designed to protect the environment and water quality. BMPs were selected based on effectiveness, applicability and costs associated with implementation. The SWMP was developed by the Engineering Department with input from multiple City departments.

1.1 Regulatory Background

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The CWA was enacted in 1948 and was called the Federal Water Pollution Control Act. The Act was significantly reorganized and expanded in 1972 and adopted the name of the Clean Water Act.

The 1972 amendments of the Clean Water Act (CWA) made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program was developed to regulate these discharges.

Under the CWA, EPA authorizes the NPDES permit program to state, tribal, and territorial governments, enabling them to perform many of the permitting, administrative, and enforcement aspects of the NPDES program. In states authorized to implement CWA programs, EPA retains oversight responsibilities. The State of Texas assumed the authority to administer the National Pollutant Discharge Elimination System (NPDES) program in Texas on September 14, 1998. The Texas Commission on Environmental Quality (TCEQ) Texas Pollutant Discharge Elimination System (TPDES) program now has federal regulatory authority over discharges of pollutants to Texas surface water, with the exception of discharges associated with oil, gas, and geothermal exploration and development activities, which are regulated by the Railroad Commission of Texas.

The Texas Commission on Environmental Quality (TCEQ) issued the Texas Pollutant Discharge Elimination System (TPDES) General Permit Number TXR040000 (General Permit) for Phase 2 Stormwater on August 13, 2007 in order to create a mechanism for Texas cities to come into compliance with the federal regulations.

1.2 Applying for Coverage

The processes of applying for coverage under the General Permit requires the submittal of the TCEQ Notice of Intent (NOI) and the Stormwater Management Program (SWMP). The SWMP must be fully implemented within 5 years of the TCEQ's issuance of the General Permit. A copy of the Notice of Intent is located in Appendix 2 – City of Temple Notice of Intent for TPDES MS4 General Permit for Stormwater Discharges from Small MS4s.

2.0 AREA OF PERMIT COVERAGE

2.1 City of Temple

The City of Temple is located in Bell County in Central Texas. The City of Temple Urbanized Area (UA) as defined by the 2010 Census extends into three adjacent MS4s: City of Belton, City of Troy, and Morgan's Point Resort. A portion of the urbanized area also extends into unincorporated areas of Bell County. According to the 2015 Census, the City of Temple has a population of approximately 75,000 which categorizes as the City of Temple as a Level 3 MS4. A Level 3 MS4 is described as one that "...serves a population of at least 40,000 but less than 100,000 within a UA".

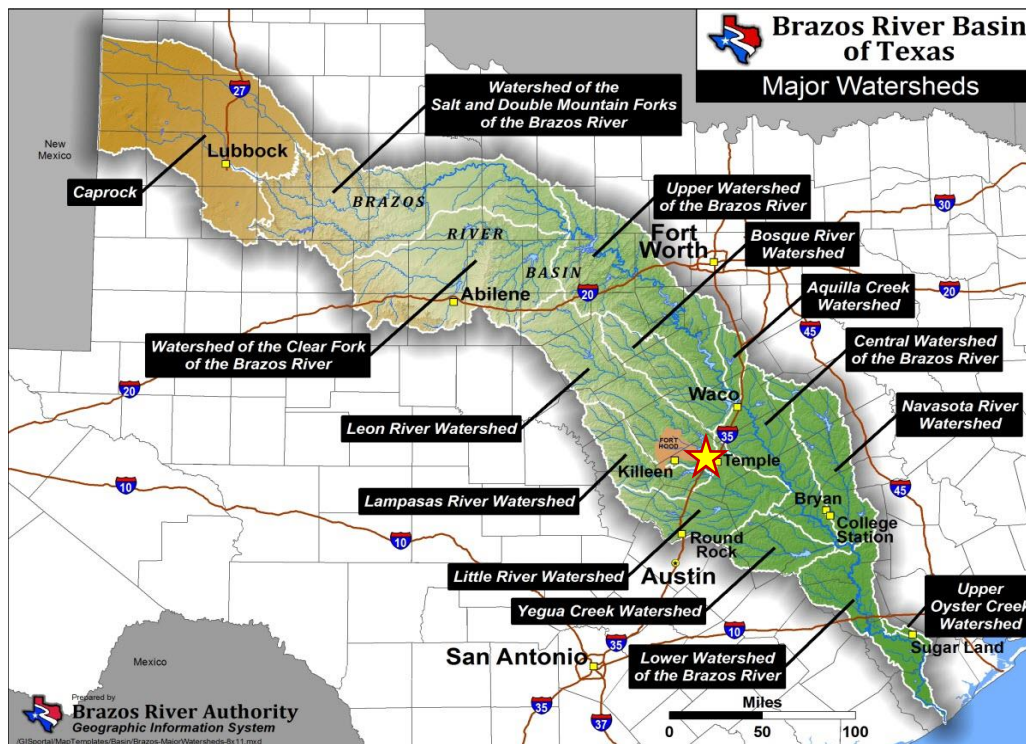
2.2 MS4 Conveyance System

The City of Temple operates a Municipal Separate Storm Sewer System (MS4) which is designed and operated to convey stormwater runoff and minimize flooding risks. The City of Temple MS4 system consists of streets, underground pipes, catch basins, curbs, gutters, ditches, man-made channels, storm drains and detention ponds that are owned and maintained by private entities, TxDOT or the City of Temple.

2.3 City of Temple Water Basins

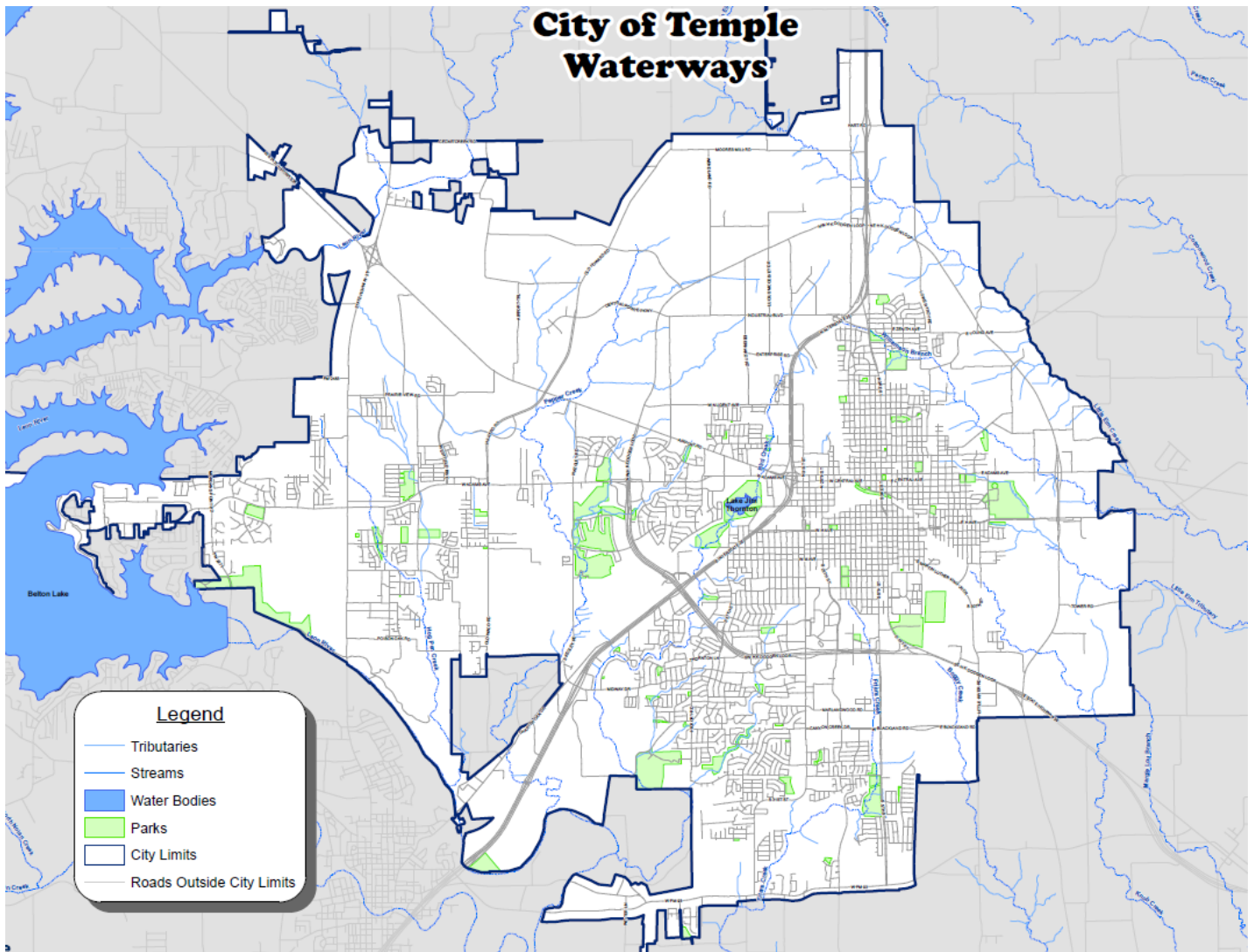
The City of Temple is located in the Central Watershed of the Brazos River Basin as shown in Figure-1.

FIGURE 1

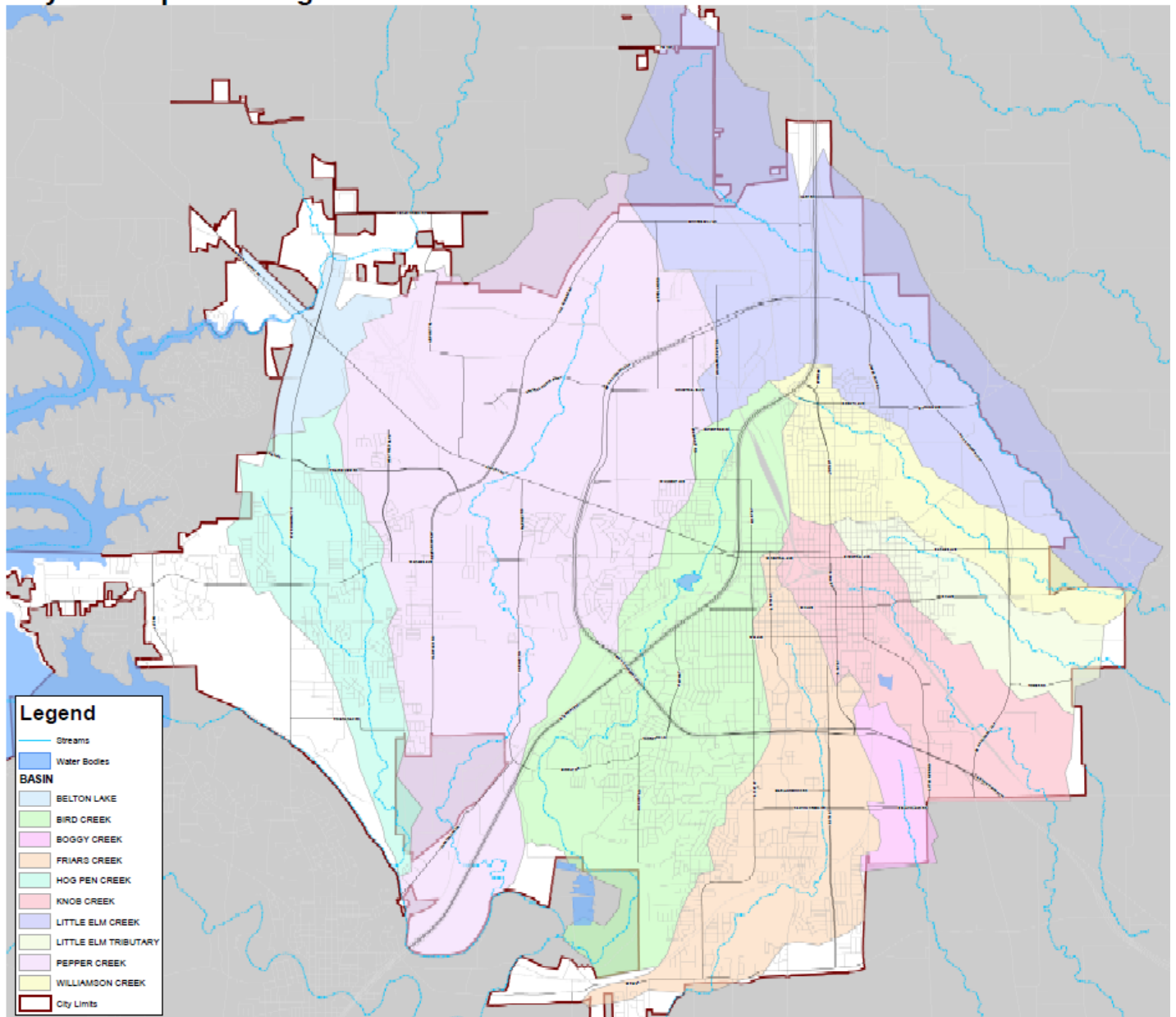


2.4 Receiving Waters

The City of Temple's urbanized area drains to either the Leon River or Little River. In general, the western portion of the City drains through a series of small unclassified streams (Bird Creek, Friar's Creek, and Pepper Creek) to the Leon River below Belton Lake, which is designated by TCEQ as stream segment 1219. Surface runoff from the eastern portion of the City generally drains to the Little River (Segment 1213) via unclassified streams Boggy Creek, Knob Creek, Little Elm Creek and Williamson Branch.



City of Temple Drainage Basins



2.5 Pollutants of Concern

The City of Temple will annually review the Texas Integrated Report for Clean Water Act Sections 305(b) and 303(d) list. This list will identify pollutants of concern to assist the City of Temple in selecting appropriate BMPs.

2014 Texas Integrated Report: Sections 305 (b) and 303 (d) list

Segment	Location	Pollutants of Concern	Source
1213: Little River	From the confluence with the Brazos River in Milam County to the confluence of the Leon River and the Lampasas River in Bell County	Bacteria	NPS - Agriculture; NPS - Non-Point Source; PS - Municipal Point Source Discharges
1213A: Big Elm Creek	From the confluence with Little River in Milam county, 4.5 km northeast of the City of Cameron, upstream to its headwaters in McLennan County, 0.7 km west of Moody	Bacteria	UNK – Source Unknown

2.6 Other City Activities Requiring Stormwater Permit Coverage

Draughon-Miller Central Texas Regional Airport is operated by the City of Temple and is covered under the Texas Pollutant Discharge Elimination System (TPDES) Multi-Sector General Permit No. TXR050000 relating to stormwater discharges associated with Industrial Activity for Sector A (Airport).

The Doshier Farm Wastewater Treatment Plant (WWTP) is owned by the City of Temple and operated by Brazos River Authority. This plant is covered under the Texas Pollutant Discharge Elimination System (TPDES) Multi-Sector General Permit No. TXR050000 relating to stormwater discharges associated with Industrial Activity for Sector T (Treatment Works).

The City of Temple Landfill is owned by the City of Temple and operated by Waste Management. The landfill is covered under the Texas Pollutant Discharge Elimination System (TPDES) Multi-Sector General Permit No. TXR050000 relating to stormwater discharges associated with Industrial Activity for Sector L (Landfill).

3.0 Stormwater Management Program Overview

The Texas Commission on Environmental Quality (TCEQ) adopted a TPDES Municipal Storm Sewer Systems (MS4) General Permit to authorize discharges of stormwater from small MS4s located in the state of Texas to Waters of the United States. A copy of the MS4 General Permit is located in Appendix 3 – TPDES MS4 General Permit for Stormwater Discharges from Small MS4s.

3.1 City of Temple Stormwater Program and Ordinance

The City of Temple Stormwater Program was developed to gather information from the public and City departments to ensure that the requirements of the TPDES General Permit TXR040000 are met. The City of Temple developed an ordinance to ensure that regulatory permit requirements are met, and any violations are enforceable. A copy of the City of Temple Ordinance #27 is located in Appendix 1- Stormwater Management.

3.2 Development of the Stormwater Management Plan

The City's SWMP is in accordance with the requirements of the TPDES General Permit TXR040000. The SWMP addresses the seven minimum control measures (MCM's) that are required under the TPDES General Permit TXR040000 and includes Best Management Practices (BMPs) that will reduce pollutants from the MS4 to the maximum extent practicable. Minimum Control Measure #6 is not required for Level 3 MS4s and Minimum Control Measure #7 is optional.

3.3 Organization of the SWMP

Each of the minimum control measures describes regulatory permit requirements and the selected best management practices with measurable goal(s), implementation schedule, target audience and the responsible party. The City of Temple's SWMP will be implemented over a five-year permit period. The five-year permit term is January 24, 2019 and through January 24, 2024.

The City of Temple's SWMP consists of the seven major minimum control measures and the selected best management practices:

MCM #1 – Public Education, Outreach and Involvement

MCM #2 – Illicit Discharge Detection and Elimination

MCM #3 – Construction Site Stormwater Runoff Control

MCM #4 – Post-Construction Stormwater Management in New Development

MCM #5 – Pollution Prevention / Good Housekeeping for Municipal Operations

MCM #6 – Industrial Stormwater Sources

Not Applicable for Level 3 MS4s

MCM #7 – Authorization for Municipal Construction Activities (optional)

Not Applicable

3.4 List of Allowable Non-Stormwater Discharges

The Small MS4 General Permit provides that certain non-stormwater sources may be discharged from the Small MS4 and are not required to be addressed in the Small MS4 operator's Illicit Discharge minimum control measure, provided that these sources have *not* been determined by the operator or the TCEQ to be significant contributors of pollutants. These allowable non-stormwater discharges are listed below:

- Water line flushing (excluding discharges of hyperchlorinated water, unless the water is

- first dechlorinated and discharges are not expected to adversely affect aquatic life);
- Runoff or return flow from landscape irrigation, lawn irrigation, and other irrigation utilizing potable water, groundwater, or surface water sources;
- Discharges from potable water sources that do not violate Texas Surface Water Quality Standards;
- Diverted stream flows;
- Rising ground waters and springs;
- Uncontaminated ground water infiltration;
- Uncontaminated pumped ground water;
- Foundation and footing drains;
- Air conditioning condensation;
- Water from crawl space pumps;
- Individual residential vehicle washing;
- Flows from wetlands and riparian habitats;
- Dechlorinated swimming pool discharges that do not violate Texas Surface Water Quality Standards;
- Street wash water excluding street sweeper waste water;
- Discharges or flows from emergency firefighting activities (firefighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, and similar activities);
- Other allowable non-stormwater discharges listed in 40 CFR § 122.26(d)(2)(iv)(B)(1);
- Non-stormwater discharges that are specifically listed in the TPDES Multi Sector General Permit (MSGP) TXR050000 or the TPDES Construction General Permit (CGP) TXR150000;
- Discharges that are authorized by a TPDES or NPDES permit or that are not required to be permitted; and
- Other similar occasional incidental non-stormwater discharges such as spray park water, unless the TCEQ develops permits or regulations addressing these discharges.

The City of Temple does not consider any of these non-stormwater sources to be a significant contributor of pollutants to their MS4 and will therefore adopt the TCEQ's list of allowable non-stormwater discharges with no further modifications.

3.5 Record Keeping and Reporting

3.5.1 Record Keeping

The Small MS4 General Permit requires the City of Temple to meeting the following record keeping requirements:

1. The permittee shall retain all records, a copy of this TPDES general permit, and records of all data used to complete the application (NOI) for this general permit and satisfy the public participation requirements, for a period of at least three (3) years, or for the remainder of the term of this general permit, whichever is longer. This period may be extended by request of the executive director at any time.
2. The permittee shall submit the records to the executive director only when specifically asked to do so. The SWMP required by this general permit (including a copy of the general permit) must be retained at a location accessible to the TCEQ.
3. The permittee shall make the NOI and the SWMP available to the public at reasonable times during regular business hours, if requested to do so in writing.

Copies of the SWMP must be made available within ten (10) working days of receipt of a written request. Other records must be provided in accordance with the Texas Public Information Act. However, all requests for records from federal facilities must be made in accordance with the Freedom of Information Act.

4. 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.

3.5.2 Reporting

An annual report must be submitted by the City of Temple to the Executive Director within 90 days of the end of each reporting year. The reporting year may include either: the permit year; the City's fiscal year; or the calendar year. The City of Temple has chosen to have the reporting year encompass the calendar year which will begin on January 1st each year. The permit term began when the TPDES Small MS4 General Permit No. TXR040000 was signed into effect (January 24, 2019). The permit years and deadlines for annual reports are specified below.

Year	Reporting Cycle	Annual Report Due Date
1	1/1/2019 – 12/31/2020	03/30/2020
2	1/1/2020 – 12/31/2021	03/30/2021
3	1/1/2021 – 12/31/2022	03/30/2022
4	1/1/2022 – 12/31/2023	03/30/2023
5	1/1/2023 – 12/31/2024	03/30/2024

The annual report must include:

- (a) 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;
- (b) 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;
- (c) If applicable, a summary of any activities taken to address the discharge to impaired waterbodies, including any sampling results and a summary of the small MS4s BMPs used to address the pollutant of concern;
- (d) A summary of the stormwater activities the MS4 operator plans to undertake during the next reporting year;
- (e) Proposed changes to the SWMP, including changes to any BMPs or any identified measurable goals that apply to the program elements;
- (f) Description and schedule for implementation of additional BMP's that may be necessary, based on monitoring results, to ensure compliance with applicable TMDLs and implementation plans. For waters that are listed as impaired after discharge authorization pursuant to Part II.D.4, include a list of such waters and the pollutant(s)

causing the impairment, and a summary of any actions taken to comply with the requirements of Part II.D.4.b.;

- (g) Notice that the MS4 operator is relying on another government entity to satisfy some of its permit obligations (if applicable);

4.0 Required Minimum Control Measures

4.1 Public Education, Outreach, and Involvement

The Public Education, Outreach and Involvement minimum control measure consists of BMPs that focus on the development and distribution of materials to the public. These materials will be designed to provide information to the public and local businesses about the hazards associated with the illegal discharges and improper disposal of waste and about the impacts stormwater can have on water quality, and steps they can take to reduce pollutants in stormwater. The BMPs will describe the material format and how the materials will be distributed to the target audience. This control measure will be developed to reach all residents, visitors, City of Temple personnel, businesses, construction contractors and industrial facilities within the City of Temple.

The City of Temple's SWMP includes the following elements:

1. *Define the goals and objectives of the program based on high priority community-wide issues.*
2. *Identify a target audience*
3. *Develop or utilize appropriate educational materials*
4. *Procedures to distribute educational materials*
5. *Make the educational material available to the target audience at least annually*
6. *Post the SWMP and annual reports on the MS4's website*
7. *Include public input in the implementation of the program*
8. *Determine cost effective and practical methods and procedures for distribution*
9. *Consider using public input*
10. *Create opportunities for citizen to participate in implementation of control measures*
11. *Ensure public can easily find information about the SWMP*

The City of Temple will establish the following BMPs to meet the requirements listed in the Public Education, Outreach and Involvement minimum control measure.

- PEI-1 Stormwater Education to Students and the Public
- PEI-2 Proper Wastewater System Use Education to Students and the Public
- PEI-3 Stormwater Web Site
- PEI-4 Printed Materials
- PEI-5 Stormwater Information Mail Outs
- PEI-6 Public Service Announcements
- PEI-7 Storm Drain Marking
- PEI-8 Community Cleanup Events
- PEI-9 Reforestation Programs
- PEI-10 Stormwater Stakeholder Committee

PEI-1

STORMWATER EDUCATION TO STUDENTS AND THE PUBLIC

Responsible Authority: Engineering, Utilities, Recycling, Transform Temple

Target Audience: residents, visitors, City of Temple personnel, businesses, construction contractors and industrial facilities

Description: The stormwater education program will be used to educate students and residents on stormwater related issues. The City of Temple will create displays and discuss examples of the effects of non-point source stormwater pollution. Students will have an opportunity to interact with the stormwater model which demonstrates their impact on stormwater pollution. Educational materials will also be used to discuss illicit discharges, improper disposal of waste, water quality and steps to reduce stormwater pollution.

Reason for selection: Student education has been shown to be an effective way to increase environmental awareness of the public. This program will be available to all students in the Belton Independent School District and the Temple Independent School District. Participation in City and community events will promote public involvement and provide information on programs in the City that are designed to help prevent stormwater pollution.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Provide presentations and information to students and the public	Attend 3 public events Attend 2 school events	December 31, 2019
2	Provide presentations and information to students and the public	Attend 3 public events Attend 2 school events	December 31, 2020
3	Provide presentations and information to students and the public	Attend 3 public events Attend 2 school events	December 31, 2021
4	Provide presentations and information to students and the public	Attend 4 public events Attend 2 school events	December 31, 2022
5	Provide presentations and information to students and the public	Attend 4 public events Attend 2 school events	December 31, 2023

PEI-2

PROPER WASTEWATER SYSTEM USE EDUCATION TO STUDENTS AND PUBLIC

Responsible Authority: Utility Services, Environmental Programs

Target Audience: students, residents and businesses

Description: The City will continue to work towards eliminating sanitary sewer overflows (SSOs). These overflows can be caused by several factors including temporary blockages, flooding and insufficient system capacity. A routine public education program in conjunction with system maintenance is aimed at reducing system blockages due to improper use of the wastewater system. A variety of messages are developed and distributed for maximum effectiveness.

Reason for selection: Improper disposal of fats, oils, and grease (F.O.G.) and various types of wipes via wastewater pipes cause blockages and Sanitary Sewer Overflows. Public education has been shown to be a very effective way to increase environmental awareness. A variety of media avenues, such as utility bills, direct mail/email, and posting in public locations are used for optimum public awareness.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Provide information and presentations to students, residents and businesses	Distribute 30 messages 2,500 brochures/mail-outs Attend 3 public events	December 31, 2019
2	Provide information and presentations to students, residents and businesses	Distribute 30 messages 2,500 brochures/mail-outs Attend 3 public events	December 31, 2020
3	Provide information and presentations to students, residents and businesses	Distribute 30 messages 2,500 brochures/mail-outs Attend 3 public events	December 31, 2021
4	Provide information and presentations to students, residents and businesses	Distribute 30 messages 2,500 brochures/mail-outs Attend 3 public events	December 31, 2022
5	Provide information and presentations to students, residents and businesses	Distribute 30 messages 2,500 brochures/mail-outs Attend 3 public events	December 31, 2023

PEI-3

STORMWATER WEB SITE

Responsible Authority: Engineering

Target Audience: residents, visitors, City of Temple personnel, businesses, construction contractors and industrial facilities

Description: The City developed and maintains a stormwater website to specifically address stormwater related issues. This website provides information to the public such as stormwater outreach events, fun for kids, basic stormwater information, ways to prevent stormwater pollution, ways the City reduces stormwater pollution, guidance documents for local businesses, a copy of the SWMP and the annual report. The web page reaches a wide variety of audiences including residents, visitors, City Employees, business owners, commercial and industrial operators and construction site operators. The City of Temple Stormwater Website is <https://www.templetx.gov/1194/Storm-Water-Management-Program>

Reason for selection: The City maintains a website that can be modified to provide information to the public. This website is an excellent tool for relaying an unlimited amount of information about stormwater issues and activities. The web page educates the public on City ordinances such as illicit discharge, illegal dumping, erosion control and post-construction. The webpage will provide information to the public on how to submit complaints to the City regarding construction activities issues.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	<ul style="list-style-type: none">Develop a webpage for cleanup eventsAdd new SWMP to the website:Add Annual Report to Website	<ul style="list-style-type: none">1 New WebpageAdd New SWMPAdd Annual Report to Website	December 31, 2019
2	<ul style="list-style-type: none">Develop webpage for Pet WasteAdd Annual Report to Website	<ul style="list-style-type: none">1 New WebpageAdd Annual Report to Website	December 31, 2020
3	<ul style="list-style-type: none">Develop a link to a survey for residentsAdd Annual Report to Website	<ul style="list-style-type: none">1 Survey LinkAdd Annual Report to Website	December 31, 2021
4	<ul style="list-style-type: none">Add a Stormwater Water Quality webpageAdd Annual Report to Website	<ul style="list-style-type: none">1 New WebpageAdd Annual Report to Website	December 31, 2022
5	<ul style="list-style-type: none">Develop a webpage for commercial and industrial operatorsAdd Annual Report to Website	<ul style="list-style-type: none">1 New WebpageAdd Annual Report to Website	December 31, 2023

PEI-4

PRINTED MATERIALS

Responsible Authority: Engineering, Recycling, Environmental Programs, Transform Temple

Target Audience: residents, visitors, City of Temple personnel, businesses, construction contractors and industrial facilities

Description: Printed materials can be used to convey detailed information on specific topics related to stormwater management, environmental programs and Transform Temple. Information will be distributed to the public during events, to students during school presentations, and kiosks located throughout the City. Additional information will be available to the public on the City of Temple's Website (PEI-3).

Reason for selection: Printed materials will be used to target specific water quality problems within the City. Information will be distributed to the public during events, to students during school presentations, and kiosks located throughout the City.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Distribute Illegal Dumping door hangers	Distribute door hangers to 100% of illegal dumping residential complaints received	December 31, 2019
2	Distribute Illegal Dumping door hangers	Distribute door hangers to 100% of illegal dumping residential complaints received	December 31, 2020
3	<ul style="list-style-type: none">Distribute Illegal Dumping door hangersDesign a new Pet Waste brochure	<ul style="list-style-type: none">Distribute door hangers to 100% of illegal dumping residential complaints received1 New Pet Waste Brochure created	December 31, 2021
4	<ul style="list-style-type: none">Distribute Illegal Dumping door hangersDesign a new general information stormwater brochure that includes input from other city divisions	<ul style="list-style-type: none">Distribute door hangers to 100% of illegal dumping residential complaints received1 New Stormwater Brochure design	December 31, 2022
5	<ul style="list-style-type: none">Distribute Illegal Dumping door hangersDesign a new industrial stormwater brochure	<ul style="list-style-type: none">Distribute door hangers to 100% of illegal dumping residential complaints received1 New Industrial Stormwater Brochure	December 31, 2023

PEI-5

STORMWATER INFORMATION MAIL OUTS

Responsible Authority: Engineering

Target Audience: residents, visitors, City of Temple personnel, businesses, construction contractors and industrial facilities

Description: Printed materials can be used to convey detailed information on specific topics related to stormwater management. Postcards will be distributed to residents located within designated drainage basins throughout the City. The GIS system will be used to select addresses near illegal dumping sites and illicit discharges.

Reason for selection: Postcards will be used to target specific stormwater quality problems within the City. Postcards will provide direct communication with residents in areas of increase illicit discharges and illegal dumping. List of addresses will be kept on record for future outreach opportunities.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	<ul style="list-style-type: none">Distribute postcards to residents within Little Elm Creek and Little Elm Tributary Drainage Basins	<ul style="list-style-type: none">Distribute postcards to 1,000 residential addresses	December 31, 2019
2	<ul style="list-style-type: none">Distribute postcards to residents within Hog Pen Creek and Knob Creek Drainage Basins	<ul style="list-style-type: none">Distribute postcards to 1,000 residential addresses	December 31, 2020
3	<ul style="list-style-type: none">Distribute postcards to residents within Boggy Creek and Friars Creek Drainage Basins	<ul style="list-style-type: none">Distribute postcards to 1,000 residential addresses	December 31, 2021
4	<ul style="list-style-type: none">Distribute postcards to residents within Belton Lake and Bird Creek Drainage Basins	<ul style="list-style-type: none">Distribute postcards to 1,000 residential addresses	December 31, 2022
5	<ul style="list-style-type: none">Distribute postcards to residents within Pepper Creek and Williamson Creek Drainage Basins	<ul style="list-style-type: none">Distribute postcards to 1,000 residential addresses	December 31, 2023

PEI-6

PUBLIC SERVICE ANNOUNCEMENTS

Responsible Authority: Engineering, Environmental Programs, Transform Temple, Recycling

Target Audience: residents, visitors, City of Temple personnel, businesses, construction contractors and industrial facilities

Description: The City of Temple will utilize spots that are available on the City's Time Warner cable access channel, City's Facebook Page, City's Instagram and City's Curbside Recycling Page. Public service announcements will include but are not limited to general stormwater information, recycling, illegal dumping and pet waste. These PSAs may also include the City's Liquid Waste Program (ID-5), Annual Household Hazardous Waste Disposal Program (ID-6), Storm Drain Marking events (PEI-7), Tree Planting Events (PEI-8), the City's Stormwater Website (PEI-3), and Used Oil Collection and Recycling (ID-7).

Reason for selection: PSAs will provide information to the public about programs within the City of Temple that are working towards meeting the goals listed in the City's SWMP. Continuous information thru various media forms will increase communication between the City and its residents.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Create and broadcast PSAs	Broadcast 6 PSAs	December 31, 2019
2	Create and broadcast PSAs	Broadcast 6 PSAs	December 31, 2020
3	Create and broadcast PSAs	Broadcast 8 PSAs	December 31, 2021
4	Create and broadcast PSAs	Broadcast 10 PSAs	December 31, 2022
5	Create and broadcast PSAs	Broadcast 12 PSAs	December 31, 2023

PEI-7

STORM DRAIN MARKING

Responsible Authority: Engineering

Target Audience: residents

Description: Volunteers will place metal buttons stating “No Dumping Drains to Creek” to storm drains. Student and local citizens can mark inlets through classroom education projects and community involvement projects. This BMP will provide educational opportunities for the public by providing information directly within the community. Events will be publicized through various Public Education BMPs including the stormwater Web Site (PEI-3) and PSAs (PEI-6).

Reason for selection: Storm drain marking is an effective, inexpensive and easy to implement outreach opportunity within the community.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Storm Drain Marking Event	1 Storm Drain Marking Event	December 31, 2019
2	Storm Drain Marking Event	1 Storm Drain Marking Event	December 31, 2020
3	Storm Drain Marking Event	1 Storm Drain Marking Event	December 31, 2021
4	Storm Drain Marking Event	1 Storm Drain Marking Event	December 31, 2022
5	Storm Drain Marking Event	1 Storm Drain Marking Event	December 31, 2023

PEI-8

COMMUNITY CLEANUP EVENTS

Responsible Authority: Engineering, Transform Temple

Target Audience: residents, visitors, City of Temple personnel, businesses

Description: Clean up events are a great opportunity for volunteers and neighbors to positively impact a neighborhood and the environment. Volunteers will help residents with yard maintenance such as mowing, raking leaves, and removing trash and debris. This BMP will provide educational opportunities for the public by providing information directly within the community. Events will be publicized through various Public Education BMPs including the stormwater Web Site (PEI-3) and PSAs (PEI-6).

Reason for selection: Clean up events are an effective, inexpensive and easy to implement outreach opportunity within the community. The activities associated with clean up events help prevent pollution from entering our waterways.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Community Clean Up Event	1 Community Clean Up Event	December 31, 2019
2	Community Clean Up Event	1 Community Clean Up Event	December 31, 2020
3	Community Clean Up Event	1 Community Clean Up Event	December 31, 2021
4	Community Clean Up Event	1 Community Clean Up Event	December 31, 2022
5	Community Clean Up Event	1 Community Clean Up Event	December 31, 2023

PEI-9

REFORESTATION PROGRAMS

Responsible Authority: Parks and Recreation

Target Audience: Residents

Description: Planting trees helps to conserve energy and their roots help to prevent soil erosion. In 2005, Temple Parks and Recreation was awarded a grant from the Texas Forestry Service to establish the Temple Tree Farm. This farm nurtures trees until they are strong enough to be planted in the City. Parks and Recreation has created a Tree for Me program and an Arbor Day Program.

Reason for selection: Tree planting is an effective, inexpensive and easy to implement outreach opportunity within the community.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Providing Trees for the City of Temple residents	1 Tree for Me Program event 1 Arbor Day Program event	December 31, 2019
2	Providing Trees for the City of Temple residents	1 Tree for Me Program event 1 Arbor Day Program event	December 31, 2020
3	Providing Trees for the City of Temple residents	1 Tree for Me Program event 1 Arbor Day Program event	December 31, 2021
4	Providing Trees for the City of Temple residents	1 Tree for Me Program event 1 Arbor Day Program event	December 31, 2022
5	Providing Trees for the City of Temple residents	1 Tree for Me Program event 1 Arbor Day Program event	December 31, 2023

PEI-10

STORMWATER STAKEHOLDERS COMMITTEE MEETING

Responsible Authority: Engineering

Target Audience: City of Temple personnel, businesses, construction contractors and industrial facilities

Description: People from the community that have a vested interest in a municipality's stormwater program attend the stakeholders committee meeting to provide input to the stormwater program. Stakeholders include citizens, local school groups, community leaders, government representatives, developers and business owners.

Reason for selection: This committee will meet annually to review the annual report and recommend changes, if necessary. The stakeholders will provide feedback to the City and inform their representative organization on the City's Stormwater Management Program. It is a great opportunity to involve the community in meeting the goals listed in the SWMP.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Stakeholder committee meeting	1 Stakeholder committee meeting	March 31, 2019
2	Stakeholder committee meeting	1 Stakeholder committee meeting	March 31, 2020
3	Stakeholder committee meeting	1 Stakeholder committee meeting	March 31, 2021
4	Stakeholder committee meeting	1 Stakeholder committee meeting	March 31, 2022
5	Stakeholder committee meeting	1 Stakeholder committee meeting	March 31, 2023

4.2 Illicit Discharge Detection and Elimination

The Illicit Discharge Detection and Elimination minimum control measure consists of BMPs that focus on any discharge into a storm drain system that is not entirely composed of stormwater. The exceptions include water from firefighting activities and discharges from facilities already under an NPDES permit. Illicit discharges often contain pathogens, nutrients, surfactants, and various toxic pollutants. Under this control measure, BMPs will be established to detect, investigate and eliminate illicit discharges including illegal dumping.

BMPs will be designed to provide information to the public and local businesses about the hazards associated with illicit discharges, improper disposal of waste and steps the public can take to reduce pollutants in stormwater. The BMPs will describe the material format and how the materials will be distributed to the target audience. BMPs will be developed to reach all residents, visitors, City of Temple personnel, businesses, construction contractors and industrial facilities within the City of Temple.

The City of Temple's SWMP includes the following elements:

- 1) *Description of the program that will be used to detect, investigate and eliminate illicit discharges. The program includes a plan to detect and address illicit discharges, including illegal dumping to the MS4 system.*
- 2) *MS4 map: The map includes:*
 - *Location of all small MS4 outfalls operated by the MS4 and that discharge into waters of the U.S.;*
 - *Location and name of all surface waters receiving discharge from the MS4s outfalls;*
 - *Location of MS4 owned or operated facilities and stormwater controls;*
- 3) *Methods for informing and training MS4 field staff*
- 4) *Procedures for:*
 - a. *tracing the source of an illicit discharge*
 - b. *removing the source of the illicit discharge*
 - c. *facilitating public reporting of illicit discharges or water quality impacts associated with discharges into or from the small MS4*
 - d. *responding to illicit discharges and spills*
 - e. *inspections in response to complaints*
 - f. *prevent and correct leaking on-site sewage disposal systems*
 - g. *follow-up investigation to verify that the illicit discharge has been eliminated*

The City of Temple will establish the following BMPs to meet the requirements listed in the Illicit Discharge Detection and Elimination minimum control measure.

- IDDE-1 Storm Drain System Mapping
- IDDE-2 Water Quality Testing and Dry Weather Screening
- IDDE-3 Illicit Discharge Investigations and Procedures
- IDDE-4 Reduce Illegal Dumping
- IDDE-5 Reduce Sanitary Sewer Overflows
- IDDE-6 Remediating Sanitary Sewer Overflows
- IDDE-7 Household Hazardous Waste Disposal

IDDE-1

MS4 SYSTEM MAPPING

Responsible Authority: GIS

Target Audience: City of Temple personnel, businesses, construction contractors and industrial facilities

Description: This BMP will help to identify the areas of illicit discharges and illegal dumping. It will also be used to determine the risk to the MS4 system during illicit discharge investigations. The City of Temple uses a Geographic Information System (GIS) that provides details such as:

- Locations of all outfalls that discharge into water of the U.S. and that are operated by the City of Temple
- Names and locations of surface waters receiving discharges from the MS4
- Stormwater structures and features

The City of Temple will also use City Works software to track illicit discharge incidents. This software will indicate the type of discharge and the location of the discharge. This information can be used to determine trends and identify areas that will require additional outreach information.

Reason for selection: An updated storm drainage system map is a required component of the permit. This map is also essential for detecting the impact of illicit discharges and illegal dumping to the City of Temple's Storm drainage system. Illicit discharge investigations can determine the impact of the discharge on surface waters.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Update GIS map based on visual observations	Update the GIS map with 90% of the corrections found during visual observations	December 31, 2019
2	Update GIS map based on visual observations	Update the GIS map with 90% of the corrections found during visual observations	December 31, 2020
3	Update GIS map based on visual observations	Update the GIS map with 90% of the corrections found during visual observations	December 31, 2021
4	Update GIS map based on visual observations	Update the GIS map with 90% of the corrections found during visual observations	December 31, 2022
5	Update GIS map based on visual observations	Update the GIS map with 90% of the corrections found during visual observations	December 31, 2023

IDDE-2

WATER QUALITY TESTING AND DRY WEATHER SCREENING

Responsible Authority: Engineering

Target Audience: City of Temple personnel

Description: The City of Temple staff will perform visual inspections at designated sampling sites within all 10 drainage basins. Staff will perform testing to monitor for the presence of pollutants. One sampling event will be conducted in the Spring during precipitation events. The second sampling event will be conducted in the Fall after a period of at least 72 hours of dry weather. If the chemical analysis indicates a concentration of pollutant that is above the allowable threshold limits, further investigation will be required. If there is no water present, staff will record that the site was dry and no sampling was conducted. The City may utilize GPS equipment to document the location of the field tests.

Reason for selection: Dry weather screening will provide the initial level of detection for illicit discharges to the MS4 from residential, industrial or construction sources. City staff has the ability to perform fluorescent dye testing, smoke testing and remote TV camera inspection for confirmation of suspected sources. Visual inspections can determine the impact of MS4 discharges on surface waters and provide important information on topics or issues that need to be addressed within the MS4.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Perform Visual Inspections and Water Quality Sampling	Perform visual inspections and water quality sampling annually for 100% of drainage basins	December 31, 2019
2	Perform Visual Inspections and Water Quality Sampling	Perform visual inspections and water quality sampling annually for 100% of drainage basins	December 31, 2020
3	Perform Visual Inspections and Water Quality Sampling	Perform visual inspections and water quality sampling annually for 100% of drainage basins	December 31, 2021
4	Perform Visual Inspections and Water Quality Sampling	Perform visual inspections and water quality sampling annually for 100% of drainage basins	December 31, 2022
5	Perform Visual Inspections and Water Quality Sampling	Perform visual inspections and water quality sampling annually for 100% of drainage basins	December 31, 2023

IDDE-3

ILLICIT DISCHARGE INVESTIGATIONS

Responsible Authority: Engineering, Transform Temple

Target Audience: City of Temple personnel

Description: The City of Temple has developed illicit discharge procedures that will be reviewed annually. Procedures include removing the source of the illicit discharge, reporting to City of Temple personnel, response to discharges and spills, inspections in response to residential complaints and follow up inspection requirements. The City of Temple personnel will perform illicit discharge investigations based on these procedures. Investigations may utilize water quality testing, fluorescent dye tests, smoke tests or remote TV camera inspection depending on the nature of the illicit discharge and the potential source.

Reason for selection: Procedures will include how to trace the source of an illicit discharge, how to remove the source of the illicit discharge and follow-up investigation to verify that the illicit discharge has been eliminated. Public reporting of illicit discharges or illegal dumping is listed on the City of Temple's website and is on outreach material given to the public. Investigations in response to public complaints will be track in City Works software.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Perform illicit discharge investigations	Perform illicit discharge investigations on 100% of complaints received	December 31, 2019
2	Perform illicit discharge investigations	Perform illicit discharge investigations on 100% of complaints received	December 31, 2020
3	Perform illicit discharge investigations	Perform illicit discharge investigations on 100% of complaints received	December 31, 2021
4	Perform illicit discharge investigations	Perform illicit discharge investigations on 100% of complaints received	December 31, 2022
5	Perform illicit discharge investigations	Perform illicit discharge investigations on 100% of complaints received	December 31, 2023

IDDE-4

REDUCE ILLEGAL DUMPING

Responsible Authority: Engineering, Transform Temple, Recycling

Target Audience: residents, visitors, City of Temple personnel, businesses

Description: Illegal dumping consists of the disposal of waste in undesignated areas. The reduction and elimination of illegal dumping will depend on the implementation of a combination of enforcement and public education. Transform Temple is responsible for the enforcement of illegal dumping. Public Education will inform citizens of the environmental concerns and legal implications of illegal dumping. The following BMPs will be used for the education of the public: Stormwater Education to Students and the Public (PEI-1), Stormwater Web Site (PEI-3), Printed Materials (PEI-4), Stormwater Information Mail Outs (PEI-5), Public Service Announcements (PEI-6), Storm Drain Marking (PEI-7) and Community Clean Up Events (PEI-8).

Reason for selection: A targeted public education program, using several of the recommended public education BMPs should increase public education and reduce the number of enforcement actions.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Perform illegal dumping investigations	Perform inspections on 100% of complaints received	December 31, 2019
2	Perform illegal dumping investigations	Perform inspections on 100% of complaints received	December 31, 2020
3	Perform illegal dumping investigations	Perform inspections on 100% of complaints received	December 31, 2021
4	Perform illegal dumping investigations	Perform inspections on 100% of complaints received	December 31, 2022
5	Perform illegal dumping investigations	Perform inspections on 100% of complaints received	December 31, 2023

IDDE-5

REDUCTION OF SANITARY SEWER OVERFLOWS

Responsible Authority: Environmental Programs

Target Audience: residents, visitors, City of Temple personnel, businesses

Description: As part of the City's effort to work towards eliminating sanitary sewer overflows (SSOs), the City adopted a liquid waste ordinance to reduce the number of SSOs caused by blockages due to an accumulation of fats, oils and grease (F.O.G.). Temple's Liquid Waste Ordinance includes provisions for grease trap maintenance, sampling and owner notification for food service and automotive service establishments. There is also a routine public education program associated with reducing system blockages in an effort to eliminate overflows (PEI).

Reason for selection: Sanitary Sewer Overflows may occur when there is an accumulation of fats, oils and grease (F.O.G.) in the wastewater system. The waste generated at food service and automotive service establishments can cause blockages in the collection system. Routine maintenance and public education will be an effective method to reduce Sanitary Sewer Overflows (SSOs).

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Perform facility inspections	Perform 200 inspections annually	December 31, 2019
2	Perform facility inspections	Perform 200 inspections annually	December 31, 2020
3	Perform facility inspections	Perform 200 inspections annually	December 31, 2021
4	Perform facility inspections	Perform 200 inspections annually	December 31, 2022
5	Perform facility inspections	Perform 200 inspections annually	December 31, 2023

IDDE-6

REMDIATION OF SANITARY SEWER OVERFLOWS

Responsible Authority: Utilities Services

Target Audience: residents, visitors, City of Temple personnel, businesses

Description: The City of Temple is under an Environmental Protection Agency (EPA) Administrative Order for the remediation of SSOs in the City's entire collection basin. Work will be performed in each sub-basin and will include, cleaning and videoing lines, smoke testing and manhole evaluations. All identified defects will be rated using NASSCO standards for capital planning and prioritization.

Reason for selection: The City of Temple has until 2028 to resolve all defects and must continue the cycle with sub-basin assessments every 10 years.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Friars Creek Sub-Basin: <ul style="list-style-type: none">• Clean, video and/or smoke test sewer lines• Perform manhole evaluations	<ul style="list-style-type: none">• 129,200 linear feet of sewer lines• 850 manhole evaluations	December 31, 2019
2	Bird Creek Sub-Basin: <ul style="list-style-type: none">• Clean, video and/or smoke test sewer lines• Perform manhole evaluations	<ul style="list-style-type: none">• 130,000 linear feet of sewer lines• 800 manhole evaluations	December 31, 2020
3	Bird Creek Sub-Basin: <ul style="list-style-type: none">• Clean, video and/or smoke test sewer lines• Perform manhole evaluations	<ul style="list-style-type: none">• 130,000 linear feet of sewer lines• 800 manhole evaluations	December 31, 2021
4	Knob Creek Sub-Basin: <ul style="list-style-type: none">• Clean, video and/or smoke test sewer lines• Perform manhole evaluations	<ul style="list-style-type: none">• 145,000 linear feet of sewer lines• 725 manhole evaluations	December 31, 2022
5	Knob Creek Sub-Basin: <ul style="list-style-type: none">• Clean, video and smoke test sewer lines• Perform manhole evaluations	<ul style="list-style-type: none">• 145,000 linear feet of sewer lines• 725 manhole evaluations	December 31, 2023

IDDE-7

HOUSEHOLD HAZARDOUS WASTE DISPOSAL

Responsible Authority: Solid Waste, Recycling

Target Audience: residents, visitors, City of Temple personnel, businesses

Description: The City of Temple currently participates in an annual household hazardous waste collection day for the proper disposal of items such as paints, pesticides, fertilizers and other household chemicals. The HHW collection days will be promoted through public education BMPs.

Reason for selection: Household chemicals and wastes are an important issue for residents and the City of Temple. Improper disposal of these materials into the sanitary sewer or storm drain system can pose significant risks to human health and the environment. Information collected at these events will be used to develop additional public outreach information.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Hold an Annual Collection Day Event	Hold 1 Annual Collection Day Event	December 31, 2019
2	Hold an Annual Collection Day Event	Hold 1 Annual Collection Day Event	December 31, 2020
3	Hold an Annual Collection Day Event	Hold 1 Annual Collection Day Event	December 31, 2021
4	Hold an Annual Collection Day Event	Hold 1 Annual Collection Day Event	December 31, 2022
5	Hold an Annual Collection Day Event	Hold 1 Annual Collection Day Event	December 31, 2023

4.3 Construction Site Stormwater Runoff Control

Discharges of stormwater runoff and certain non-stormwater discharges from small and large construction activities may be authorized under the Construction General Permit TXR150000. This permit allows stormwater discharges from construction activities to surface water in the state. Construction activities are required to put measures in place to prevent stormwater pollution.

The City of Temple's SWMP includes the following elements:

- 1) *Program requires operators of construction sites one acre and greater (including larger common plan) to select, install, implement, and maintain stormwater control measures*
- 2) *Description of ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under state and local law*
- 3) *Requirement for construction site operators to*
 - a. *implement BMPs for erosion and sediment control*
 - b. *have procedures for initiating and completing soil stabilization measures*
 - c. *implement BMPs to control pollutants from equipment and vehicle washing and other wash waters*
 - d. *implement BMPs to minimize exposure to stormwater of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials*
 - e. *implement BMPs to minimize the discharge of pollutants from spills and leaks.*
- 4) *Program ensures that the construction site has developed a stormwater pollution prevention plan in accordance with the TPDES Construction General Permit TXR150000*
- 5) *Program prohibits illicit discharges such as wash out wastewater, fuels, oils, soaps, solvents, and dewatering activities*
- 6) *Procedures for construction site plan review to consider water quality impacts*
- 7) *Procedures for construction site inspections and enforcement of control measures, to the extent allowable under state and local law*
- 8) *Procedures for receipt and consideration of information submitted by the public*
- 9) *Procedures for MS4 staff training*
- 10) *Procedures to develop and maintain an inventory of all permitted active public and private construction sites greater than one acre (and sites that are less than one acre if part of larger common plan of development or sale)*
- 11) *SWMP lists BMPs used to fulfill this MCM. Examples may include: notification to discharger of responsibilities under TPDES CGP; hire staff to review construction site plans; provide a web page for public input on construction activities; perform site inspections and enforcement; provide education and training for construction site operators; and mechanism to prohibit discharges into MS4 where necessary.*

The list of BMPs below was developed to meet the regulatory requirements and City of Temple ordinance. The City of Temple will promote and monitor compliance with the Construction General Permit TXR150000. The City of Temple will establish the following BMPs to meet the requirements listed in the Construction Site Stormwater Runoff Control minimum control measure.

- C-1 Site Plan and SWPPP reviews
- C-2 Inventory of Construction Sites
- C-3 Construction Inspections
- C-4 Receipt and Consideration of Information from Public

SITE PLAN AND SWPPP REVIEWS

Responsible Authority: Engineering

Target Audience: City of Temple personnel, Engineers, Construction Contractors

Description: The City of Temple reviews site plans for construction within the city boundary and within the extra territorial jurisdiction boundary (EJTA). The City has developed procedures to track TCEQ Construction General Permit requirements such as SWPPPs, Construction Site Notices and NOIs. Under the City of Temple's ordinance (#27), these documents are required to be submitted to the City for review. City of Temple project managers review site plans to ensure that there is a description of:

1. how construction activities will generally be conducted to take into consideration local conditions of weather, soils, and other site-specific considerations
2. a description of how the City of Temple will supervise or maintain oversight over contractor activities to ensure that the SWP3 requirements are properly implemented at the construction site or will make certain that contractors have a separate authorization for stormwater discharges
3. how a SWP3 will be developed for each construction site.

Reason for selection: The City of Temple requires reviews based on the requirements listed in the TCEQ Municipal Separate Storm Sewer System Permit (MS4), TCEQ Construction General Permit (CGP) and the City of Temple's Stormwater Management Ordinance #27. All reviews are used to evaluate potential water quality impacts, erosion control, BMPs, SWPPP submittal, oversight of activities, local and site conditions, and stormwater discharge authorizations.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	<ul style="list-style-type: none"> Erosion Control Site Plan reviews SWPPP reviews 	<ul style="list-style-type: none"> Review 100% of the Site Plans Review 100% of the SWPPPs received by the City 	December 31, 2019
2	<ul style="list-style-type: none"> Erosion Control Site Plan reviews SWPPP reviews 	<ul style="list-style-type: none"> Review 100% of Site Plans Review 100% of the SWPPPs received by the City 	December 31, 2020
3	<ul style="list-style-type: none"> Erosion Control Site Plan reviews SWPPP reviews 	<ul style="list-style-type: none"> Review 100% of the Site Plans Review 100% of the SWPPPs received by the City 	December 31, 2021
4	<ul style="list-style-type: none"> Erosion Control Site Plan reviews SWPPP reviews 	<ul style="list-style-type: none"> Review 100% of the Site Plans Review 100% of the SWPPPs received by the City 	December 31, 2022
5	<ul style="list-style-type: none"> Erosion Control Site Plan reviews SWPPP reviews 	<ul style="list-style-type: none"> Review 100% of the Site Plans Review 100% of the SWPPPs received by the City 	December 31, 2023

C-2

INVENTORY OF ACTIVE CONSTRUCTION SITES

Responsible Authority: Engineering, Permits and Planning

Target Audience: City of Temple personnel, Engineers, Construction Contractors

Description: The City of Temple performs routine on-site inspection to ensure contractors compliance with the City's ordinances and the TCEQ Construction General Permit. Visual inspections will be performed at all active construction sites that are >1 or part of a common plan or sale that consists of >1 acre.

Reason for selection: Construction sites can contribute to stormwater pollution. During precipitation events, stormwater can carry sediment, debris, trash, chemicals and materials from construction sites and transport them to nearby storm drainage systems that lead directly to our rivers, lakes, creeks and streams. TCEQ requires construction site operators of one acre or greater or that are part of a larger common plan to follow the TCEQ Construction General Permit (TXR150000). Construction operators are required to follow the Construction General Permit and the City of Temple's ordinances by establishing BMPs to prevent stormwater pollution to the Maximum Extent Practicable (MEP).

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Inventory of Active construction sites	Track 100% of the active construction sites within the City of Temple received through permit system.	December 31, 2019
2	Inventory of Active construction sites	Track 100% of the active construction sites within the City of Temple received through permit system.	December 31, 2020
3	Inventory of Active construction sites	Track 100% of the active construction sites within the City of Temple received through permit system.	December 31, 2021
4	Inventory of Active construction sites	Track 100% of the active construction sites within the City of Temple received through permit system.	December 31, 2022
5	Inventory of Active construction sites	Track 100% of the active construction sites within the City of Temple received through permit system.	December 31, 2023

C-3

CONSTRUCTION SITE INSPECTIONS

Responsible Authority: Engineering

Target Audience: City of Temple personnel, Engineers, Construction Contractors

Description: The City of Temple performs routine on-site inspection to ensure contractors compliance with the City's ordinances and the TCEQ Construction General Permit. Visual inspections will be performed at all active construction sites that are >1 or part of a common plan or sale that consists of >1 acre. The City of Temple's Stormwater Management Ordinance (#27) requires construction sites to select, install, implement and maintain stormwater control measures. If construction sites do not meet requirements, the City of Temple has enforcement and penalty procedures. Training will be provided to the City of Temple Construction inspectors to recognize key criteria that must be in place before construction begins.

Reason for selection: Construction sites can contribute to stormwater pollution. During precipitation events, stormwater can carry sediment, debris, trash, chemicals and materials from construction sites and transport them to nearby storm drainage systems that lead directly to our rivers, lakes, creeks and streams. TCEQ requires construction site operators of one acre or greater or that are part of a larger common plan to follow the TCEQ Construction General Permit (TXR150000). Construction operators are required to follow the Construction General Permit and the City of Temple's ordinances by establishing BMPs to prevent stormwater pollution to the Maximum Extent Practicable (MEP).

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Perform inspections on small and large construction sites	Perform inspections on 90% of all small and large construction sites once per month	December 31, 2019
2	Perform inspections on small and large construction sites	Perform inspections on 90% of all small and large construction sites once per month	December 31, 2020
3	Perform inspections on small and large construction sites	Perform inspections on 90% of all small and large construction sites once per month	December 31, 2021
4	Perform inspections on small and large construction sites	Perform inspections on 90% of all small and large construction sites once per month	December 31, 2022
5	Perform inspections on small and large construction sites	Perform inspections on 90% of all small and large construction sites once per month	December 31, 2023

C-4

RECEIPT AND CONSIDERATION OF INFORMATION SUBMITTED BY THE PUBLIC

Responsible Authority: Engineering

Target Audience: City of Temple personnel, Engineers, Residents, Businesses, Construction Contractors

Description: The City of Temple will utilize the existing Stormwater Management Program phone line and email address for residents to report potential violations or concerns related to construction activities. City of Temple personnel will respond and investigate potential violations and residential concerns.

Reason for selection: The stormwater phone line and email address will provide residents with a way to voice concerns and report potential violations to the appropriate authorities regarding construction activities. The City of Temple will investigate and track potential concerns or violations received from the public.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	<ul style="list-style-type: none">Publicize Stormwater Phone number and email addressTrack complaint investigations from hotline	<ul style="list-style-type: none">Broadcast 1 PSA about Stormwater Phone number and email addressInvestigate 100% of complaints received	December 31, 2019
2	<ul style="list-style-type: none">Publicize Stormwater Phone number and email addressTrack complaint investigations from hotline	<ul style="list-style-type: none">Broadcast 1 PSA about Stormwater Phone number and email addressInvestigate 100% of complaints received	December 31, 2020
3	<ul style="list-style-type: none">Publicize Stormwater Phone number and email addressTrack complaint investigations from hotline	<ul style="list-style-type: none">Broadcast 1 PSA about Stormwater Phone number and email addressInvestigate 100% of complaints received	December 31, 2021
4	<ul style="list-style-type: none">Publicize Stormwater Phone number and email addressTrack complaint investigations from hotline	<ul style="list-style-type: none">Broadcast 1 PSA about Stormwater Phone number and email addressInvestigate 100% of complaints received	December 31, 2022
5	<ul style="list-style-type: none">Publicize Stormwater Phone number and email addressTrack complaint investigations from hotline	<ul style="list-style-type: none">Broadcast 1 PSA about Stormwater Phone number and email addressInvestigate 100% of complaints received	December 31, 2023

4.4 Post-Construction Stormwater Management

Stormwater runoff from developed sites contributes significant pollutant loads to receiving waters. The increase in impervious surfaces such as rooftops, roads, and parking lots can increase urban runoff and have a detrimental impact on aquatic systems. Runoff from impervious surfaces can contain increased concentrations of sediment, nutrients, heavy metals, bacteria, and petroleum hydrocarbons. The best way to mitigate stormwater impacts from new development is to use practices to treat, store, and infiltrate runoff onsite before it can affect downstream waterbodies. Innovative site designs that reduce imperviousness and smaller-scale low impact development practices may be dispersed throughout a site to achieve the goals of reducing flows and improving water quality.

The City of Temple's SWMP includes the following elements:

- 1) *a program that will be developed, implemented and enforced, to control stormwater discharges from private and public new development and redeveloped sites that discharge into the small MS4 that disturb one acre or more (and sites that disturb less than one acre that are part of a larger common plan of development or sale)*
- 2) *ordinance or other regulatory mechanism that is in place or planned which will regulate discharges from new development and redevelopment projects*
- 3) *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*
- 4) *Procedures to document and maintain records of enforcement actions*
- 5) *Procedures to ensure long-term operation and maintenance of post construction stormwater control measures*
- 6) *Operation and maintenance of post construction stormwater control measures is documented*

The City of Temple will establish the following BMPs to meet the requirements listed in the Post Construction Stormwater Management minimum control measure.

PC-1 Post-Construction Management Plan Reviews

PC-2 Long Term Operation and Maintenance of BMPs

PC-1

POST-CONSTRUCTION MANAGEMENT PLAN REVIEWS

Responsible Authority: Engineering

Target Audience: City of Temple personnel, Engineers, Construction Contractors

Description: The City of Temple has an ordinance to address post-construction runoff from new development and redevelopment projects. This ordinance states the requirements for post-construction BMPs and the identification of the Creek Buffer Zone. 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. The City of Temple will track enforcement actions taken regarding this ordinance.

Reason for selection: In the City of Temple ordinance #27, new development and redevelopment sites greater than 1 acre are required to submit a Post Construction Management Plan. In this plan, builders and developers are required to have structural and non-structural controls for post-construction runoff. This plan is reviewed by Engineering staff. All reviews are used to consider potential water quality impacts.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Post-Construction Management Plan reviews	Review 100% of the Post-Construction Management Plans received	December 31, 2019
2	Post-Construction Management Plan reviews	Review 100% of the Post-Construction Management Plans received	December 31, 2020
3	Post-Construction Management Plan reviews	Review 100% of the Post-Construction Management Plans received	December 31, 2021
4	Post-Construction Management Plan reviews	Review 100% of the Post-Construction Management Plans received	December 31, 2022
5	Post-Construction Management Plan reviews	Review 100% of the Post-Construction Management Plans received	December 31, 2023

PC-2

LONG TERM OPERATION AND MAINTENANCE OF BMPS

Responsible Authority: Drainage Department

Target Audience: City of Temple personnel, Residents

Description: The City assumes responsibility for maintenance of some residential stormwater drainage infrastructure following construction. The City of Temple's drainage division is responsible for the maintenance of stormwater drainage infrastructure. The City of Temple is currently using a software called City Works. City Works allows the Public Works Department to log in all maintenance, inspections and residential complaints. City Works also geocodes the location of the maintenance, inspection or residential complaint. Proper maintenance of the post-construction BMPs requires knowing the location of each BMP to be maintained and a regular inspection process. The City of Temple's GIS personnel will develop and maintain GIS coverage of post-construction BMPs in the City.

Reason for selection: The City assumes responsibility for maintenance of some residential detention basins following construction. If a maintenance issue is identified, the Drainage Division of the Street Department will perform maintenance activities. The Drainage Division is also responsible for the maintenance of stormwater drainage infrastructure, including creeks, concrete drainage flumes, grassed detention ponds, and grassy drainage easements.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	City of Temple maintenance of structural BMPs	Record in City Works software 100% of drainage maintenance performed	December 31, 2019
2	City of Temple maintenance of structural BMPs	Record in City Works software 100% of drainage maintenance performed	December 31, 2020
3	City of Temple maintenance of structural BMPs	Record in City Works software 100% of drainage maintenance performed	December 31, 2021
4	City of Temple maintenance of structural BMPs	Record in City Works software 100% of drainage maintenance performed	December 31, 2022
5	City of Temple maintenance of structural BMPs	Record in City Works software 100% of drainage maintenance performed	December 31, 2023

4.5 Good Housekeeping for Municipal Operations

The City of Temple shall develop and implement an operation and maintenance program to focus on reducing stormwater pollution to the maximum extent practicable (MEP). The City of Temple is required to prevent or reduce stormwater pollution 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. The City of Temple's procedures are developed to implement pollution prevention measures for the city facilities and field operations.

The City of Temple's SWMP includes the following elements:

- 1) *Description of an operation and maintenance (O&M) program, including an employee training component, to reduce/prevent pollution from municipal activities and municipally owned areas included 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*
- 2) *Develop and maintain an inventory of facilities and stormwater controls that are owned or operated by the MS4*
- 3) *Procedures to inform or train staff involved in implementing pollution prevention and good housekeeping practices. Maintain training attendance records*
- 4) *Procedures to remove and properly dispose of waste from the MS4*
- 5) *Contractors hired by the MS4 must be required to comply with operating procedures. Develop contractor oversight procedures*
- 6) *Evaluate O&M activities for their potential to discharge pollutants in stormwater for road and parking lot maintenance, bridge maintenance, cold weather operations, right-of-way maintenance, etc.*
- 7) *Identify pollutants of concern that could be discharged from the O&M activities*
- 8) *Develop and implement pollution prevention measures that will reduce discharge of pollutants from O&M activities*
- 9) *Conduct inspections of pollution prevention measures and maintain inspection log*
- 10) *Procedures for inspecting and maintaining structural controls*
- 11) *Develop and implement an O&M program to reduce the collection of pollutants in catch basins and other surface structures in the storm sewer system*
- 12) *Develop a list of potential problem areas in the storm sewer system for increased inspection (for example, areas with recurring illegal dumping)*
- 13) *Implement an O&M program to reduce discharge of pollutants from roads that includes at least a street sweeping and cleaning program, or inlet protection. The program includes an implementation schedule and a waste disposal procedure*
- 14) *Assess its facilities for their potential to discharge pollutants into stormwater and identify high priority facilities that have a high potential to generate stormwater pollutants. At a minimum, facilities include the MS4s maintenance yards, hazardous waste facilities, fuel storage locations, and any other facilities at which*

- chemicals or other materials have a high potential to be discharged in stormwater. Document the results of the assessments*
- 15) Develop facility specific stormwater management Standard Operation Procedures for high priority facilities*
 - 16) MS4 implements stormwater controls at high priority facilities that address good housekeeping; de-icing and anti-icing storage; fueling operations and vehicle maintenance; equipment and vehicle washing*
 - 17) Develop and implement an inspection program that includes high priority facilities*

The City of Temple will establish the following BMPs to meet the requirements listed in the Illicit Discharge Detection and Elimination minimum control measure.

- GH-1 Stormwater Pollution Prevention Training
- GH-2 Stormwater Management Manual and Standard Operating Procedures
- GH-3 City Owned Facility Inventory and Inspections
- GH-4 Landscape and Lawn Care
- GH-5 Used Oil Collection and Recycling
- GH-6 Roadway Cleaning
- GH-7 Storm Drain System Cleaning
- GH-8 Non-Stormwater Discharges- Dechlorination Equipment

GH-1

STORMWATER POLLUTION PREVENTION TRAINING

Responsible Authority: Engineering

Target Audience: City of Temple personnel

Description: The City of Temple will implement annual training for City departments to reduce/prevent pollution from municipal activities and municipally owned areas. Departments required to participate in the training will include but are not limited to; permits/planning, public works, engineering, parks and recreation, code enforcement, utility services, solid waste, fleet services, street services and drainage division. This training will inform staff on how to recognize signs of illicit discharge, illegal dumping and construction activities. Training will also include good housekeeping practices. The City of Temple is currently using Cornerstone online training software to distribute training to City of Temple Departments.

Reason for selection: Annual training will train new employees and will provide a refresher course for existing employees. This training program is a key component of ensuring that the City of Temple staff are aware of TCEQ stormwater regulations.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Provide training to City departments	Complete 90% of training assigned to City of Temple staff	December 31, 2019
2	Provide training to City departments	Complete 90% of training assigned to City of Temple staff	December 31, 2020
3	Provide training to City departments	Complete 90% of training assigned to City of Temple staff	December 31, 2021
4	Provide training to City departments	Complete 90% of training assigned to City of Temple staff	December 31, 2022
5	Provide training to City departments	Complete 90% of training assigned to City of Temple staff	December 31, 2023

GH-2

STORMWATER MANAGEMENT MANUAL AND STANDARD OPERATING PROCEDURES FOR CITY FACILITIES

Responsible Authority: Engineering

Target Audience: City of Temple personnel

Description: The Stormwater Management Manual was developed by the City of Temple for use by municipal employees. Pollution Prevention and Good Housekeeping Practices for municipal operations will not only help to keep the municipal storm system clean but will also ensure City of Temple compliance with TCEQs MS4 permit and stormwater regulations. This manual will also include procedures to remove and properly dispose of waste from the MS4.

Reason for selection: The Stormwater Management Manual for City staff will standardize procedures and provide a written reference document for employees to consult regarding good housekeeping procedures. This manual will become the basis for Stormwater Pollution Prevention Training for City employees (GH-1). High priority facilities are facilities that have been indicated as having a higher stormwater pollution risk. Additional Standard Operating Procedures will be written for facilities that are listed as a High Priority Facility.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	<ul style="list-style-type: none">Review Stormwater Management ManualCreate a Street Services SOP	<ul style="list-style-type: none">1 documented review of Stormwater Management ManualCreation of 1 Street Services SOP	December 31, 2019
2	<ul style="list-style-type: none">Review Stormwater Management ManualCreate a Solid Waste Services SOP	<ul style="list-style-type: none">1 documented review of Stormwater Management ManualCreation of 1 Solid Waste Services SOP	December 31, 2020
3	<ul style="list-style-type: none">Review Stormwater Management ManualCreate a Water and Wastewater Treatment Plant SOP	<ul style="list-style-type: none">1 documented review of Stormwater Management ManualCreation of 1 Water and Wastewater Treatment Plant SOPCreation of 1 Utilities SOP	December 31, 2021
4	<ul style="list-style-type: none">Review Stormwater Management ManualCreate a Fleet Services SOP	<ul style="list-style-type: none">1 documented review of Stormwater Management ManualCreation of 1 Fleet Services SOP	December 31, 2022
5	<ul style="list-style-type: none">Review Stormwater Management ManualCreate a Parks and Recreation Services	<ul style="list-style-type: none">1 documented review of Stormwater Management ManualCreation of 1 Parks and Recreation Services SOP	December 31, 2023

GH-3

CITY-OWNED FACILITY INVENTORY AND INSPECTIONS

Responsible Authority: Engineering

Target Audience: City of Temple personnel

Description: The City of Temple maintains an inventory of all City-owned facilities and stormwater controls. Facilities are prioritized by their potential to generate stormwater pollutants. High priority facilities will have standard operating procedures and stormwater controls to limit stormwater pollution. A map will be created indicating the location of each facility.

Reason for selection: The City of Temple will routinely inspect all city-owned facilities. Facility inspections will be used to ensure that stormwater controls and good housekeeping practices are in place.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Perform inspections of High Priority Facilities	Perform inspections on 100% of high priority facilities annually	December 31, 2019
2	Perform inspections of High Priority Facilities	Perform inspections on 100% of high priority facilities annually	December 31, 2020
3	Perform inspections of High Priority Facilities	Perform inspections on 100% of high priority facilities annually	December 31, 2021
4	Perform inspections of High Priority Facilities	Perform inspections on 100% of high priority facilities annually	December 31, 2022
5	Perform inspections of High Priority Facilities	Perform inspections on 100% of high priority facilities annually	December 31, 2023

GH-4

LANDSCAPE AND LAWN CARE

Responsible Authority: Parks and Recreation

Target Audience: City of Temple personnel

Description: The City of Temple will ensure that employees are trained and certified on the proper storage and application of pesticides. Education and certification will help to reduce stormwater pollution from pesticides during municipal operations. The certification program is administered by the Texas Department of Agriculture and requires an annual exam and continuing education credits for recertification. The City has employees that are licensed applicators and will continue to require their applicators to obtain annual training and certification.

Reason for selection: The proper application of pesticides can significantly reduce the potential contamination of stormwater runoff and subsequent impacts to local waterways. Pesticides are soluble in water and are a primary source of nutrient pollution. By educating municipal employees on proper application techniques the City of Temple will help reduce water quality impacts from pesticide application.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Maintain certified pesticide applicator licenses	Maintain 2 certified pesticide applicator licenses	December 31, 2019
2	Maintain certified pesticide applicator licenses	Maintain 2 certified pesticide applicator licenses	December 31, 2020
3	Maintain certified pesticide applicator licenses	Maintain 2 certified pesticide applicator licenses	December 31, 2021
4	Maintain certified pesticide applicator licenses	Maintain 2 certified pesticide applicator licenses	December 31, 2022
5	Maintain certified pesticide applicator licenses	Maintain 2 certified pesticide applicator licenses	December 31, 2023

GH-5

USED OIL COLLECTION AND RECYCLING

Responsible Authority: Fleet Services, Solid Waste, Recycling

Target Audience: City of Temple personnel, residents, businesses

Description: The City of Temple currently collects and recycles used oil from vehicle maintenance at the Fleet Service Center. The City of Temple's Fleet Service Center utilizes tanks to store used oil and oil filters from the City vehicles. The used oil and oil filters are collected and transported for recycling by a commercial contractor. Residents can dispose of their used motor oil and some waste vegetable oils at the City of Temple's Recycling Center.

Reason for selection: Recycling will help to ensuring that the waste oils are not discharged into the local sewer system or down storm drains. The Recycling Center is open to the public and information needs to be distributed to the public to ensure that waste oils are not discharged into the local sewer system or down storm drains.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	<ul style="list-style-type: none">Collect oil resulting from maintenance activities at Fleet ServicesRecord oil received at Solid Waste from residents and businesses	<ul style="list-style-type: none">Collect 100% of the oil resulting from maintenance activities.Record 100% of the oil received at Solid Waste from residents and businesses	December 31, 2019
2	<ul style="list-style-type: none">Collect oil resulting from maintenance activities at Fleet ServicesRecord oil received at Solid Waste from residents and businesses	<ul style="list-style-type: none">Collect 100% of the oil resulting from maintenance activities.Record 100% of the oil received at Solid Waste from residents and businesses	December 31, 2020
3	<ul style="list-style-type: none">Collect oil resulting from maintenance activities at Fleet ServicesRecord oil received at Solid Waste from residents and businesses	<ul style="list-style-type: none">Collect 100% of the oil resulting from maintenance activities.Record 100% of the oil received at Solid Waste from residents and businesses	December 31, 2021
4	<ul style="list-style-type: none">Collect oil resulting from maintenance activities at Fleet ServicesRecord oil received at Solid Waste from residents and businesses	<ul style="list-style-type: none">Collect 100% of the oil resulting from maintenance activities.Record 100% of the oil received at Solid Waste from residents and businesses	December 31, 2022
5	<ul style="list-style-type: none">Collect oil resulting from maintenance activities at Fleet ServicesRecord oil received at Solid Waste from residents and businesses	<ul style="list-style-type: none">Collect 100% of the oil resulting from maintenance activities.Record 100% of the oil received at Solid Waste from residents and businesses	December 31, 2023

GH-6

ROADWAY CLEANING

Responsible Authority: Street Department

Target Audience: City of Temple personnel

Description: Routine roadway cleaning with street sweepers helps to reduce the amount of sediment, floatable debris, and other pollutants discharged into MS4 conveyances. Street sweepers can pick up fine-grained sediment particles that carry a substantial portion of nutrient pollution. The City of Temple has street sweepers that perform routine sweeping of streets and downtown areas. The City of Temple will continue to document the number lane miles that have been swept.

Reason for selection: Sweeping city streets removes sediment, floatable debris and other pollutants that would otherwise be washed into the MS4 system. City of Temple has several departments that performs street sweeping and will document areas and lane miles swept.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Street sweeping	Sweep 3000 lane miles	December 31, 2019
2	Street sweeping	Sweep 3000 lane miles	December 31, 2020
3	Street sweeping	Sweep 3000 lane miles	December 31, 2021
4	Street sweeping	Sweep 3000 lane miles	December 31, 2022
5	Street sweeping	Sweep 3000 lane miles	December 31, 2023

GH-7

STORM DRAIN SYSTEM CLEANING

Responsible Authority: Drainage Department

Target Audience: City of Temple personnel

Description: Routine maintenance and cleaning of the MS4 drainage system can help reduce the amount of debris, trash and other pollutants entering into the storm drain system. The Drainage Division currently maintains ditches and storm drain inlets through a periodic inspection and preventative maintenance program. The Drainage Division is responsible for the maintenance of stormwater drainage infrastructure, including creeks, concrete drainage flumes, grassed detention ponds, and grassy drainage easements. City Works allows the Public Works Department to log in all maintenance, inspections and residential complaints. City Works also geocodes the location of the maintenance, inspection or residential complaint.

Reason for selection: The City currently has an inspection and preventative maintenance program for the storm drain system and has a system in place to track maintenance activities. Removing clogged material from the storm drain system can prevent overflows and flooding. Routine maintenance can help reduce levels of bacteria, increase dissolved oxygen, support instream habitat and restore the catch basins' sediment trapping capacity.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Track inspections, cleaning and maintenance	Enter 100% of inspections, cleaning and maintenance into City Works software	December 31, 2019
2	Track inspections, cleaning and maintenance	Enter 100% of inspections, cleaning and maintenance into City Works software	December 31, 2020
3	Track inspections, cleaning and maintenance	Enter 100% of inspections, cleaning and maintenance into City Works software	December 31, 2021
4	Track inspections, cleaning and maintenance	Enter 100% of inspections, cleaning and maintenance into City Works software	December 31, 2022
5	Track inspections, cleaning and maintenance	Enter 100% of inspections, cleaning and maintenance into City Works software	December 31, 2023

GH-8

NON-STORMWATER DISCHARGES - DE-CHLORINATION EQUIPMENT

Responsible Authority: Utility Services Department

Target Audience: City of Temple personnel

Description: De-chlorination equipment will be required to remove chlorine from potable water lines and water lines that contain hyperchlorinated water (>10 mg/L). The Utility Services Division of the Public Works Department and contractors that perform super chlorination of new water lines will use the dechlorination equipment to remove chlorine residual prior to discharge of water into the MS4. In accordance with Stormwater Management Ordinance (#27), no water from a water line can be discharged into the MS4 unless the total residual chlorine (TRC) has been reduced to less than 0.10 milligrams per liter (mg/L) and it contains no harmful quantity of chlorine or any other chemical used in line disinfection. De-chlorination equipment will be made available to other departments such as the Parks and Leisure Services Department for use during pool maintenance and to treat backwash water from pool filtering equipment.

Reason for selection: De-chlorination equipment is required to prevent the illicit discharge of chlorinated water to the MS4. The equipment will also be made available to several departments within the City. The use of this equipment will be documented.

YEAR	IMPLEMENTATION ACTIVITY	MEASURABLE GOAL (items per year)	Deadline
1	Use de-chlorination equipment for water line flushing	Document 100% of the use of de-chlorination equipment in City Works	December 31, 2019
2	Use de-chlorination equipment for water line flushing	Document 100% of the use of de-chlorination equipment in City Works	December 31, 2020
3	Use de-chlorination equipment for water line flushing	Document 100% of the use of de-chlorination equipment in City Works	December 31, 2021
4	Use de-chlorination equipment for water line flushing	Document 100% of the use of de-chlorination equipment in City Works	December 31, 2022
5	Use de-chlorination equipment for water line flushing	Document 100% of the use of de-chlorination equipment in City Works	December 31, 2023

4.6 Industrial Stormwater Sources

NOT APPLICABLE

The City of Temple is classified as a Level 3 Small MS4; therefore, is not required to create BMPs for this MCM. According to the TCEQ permit, MCM #6 is only applicable to Level 4 small MS4s.

4.7 Authorization for Municipal Construction Activities (optional)

NOT APPLICABLE

The City of Temple may apply under the TPDES MS4 Small MS4 General Permit for authorization to discharge stormwater runoff from each construction activity performed by the City that results in the disturbance of one or more acres of land as an alternative to applying for coverage under the TPDES Construction General Permit. The City of Temple has decided not to develop the optional seventh minimum control measure for municipal construction activities. This optional 7th minimum control measure may be developed after the submittal of the initial NOI and would require a Notice of Change (NOC) to be submitted to notify the executive director of this change and identify the geographical area or boundary where the activities will be conducted under the provisions of this permit.

5.0 Program Summary

Included on the following sheet is a listing of the BMPs described above along with the year in which they are to be implemented and the measurable goal for that year.



STORMWATER MANAGEMENT PROGRAM (2019-2024)

PROGRAM SUMMARY

The table below lists the measurable goals developed for each BMP and the year in which they are to be implemented.

BMP	DESCRIPTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
PEI-1	Stormwater Education to Students and the Public	Attend 3 public events Attend 2 school events	Attend 3 public events Attend 2 school events	Attend 3 public events Attend 2 school events	Attend 4 public events Attend 2 school events	Attend 4 public events Attend 2 school events
PEI-2	Proper Wastewater system use education to students and the public	Distribute 30 messages 2,500 brochures/mail-outs Attend 3 public events	Distribute 30 messages 2,500 brochures/mail-outs Attend 3 public events	Distribute 30 messages 2,500 brochures/mail-outs Attend 3 public events	Distribute 30 messages 2,500 brochures/mail-outs Attend 3 public events	Distribute 30 messages 2,500 brochures/mail-outs Attend 3 public events
PEI-3	Stormwater Website	1 New Webpage Add New SWMP to website Add Annual Report to Website	1 New Webpage Add Annual Report to Website	1 Survey Link Add Annual Report to Website	1 New Webpage Add Annual Report to Website	1 New Webpage Add Annual Report to Website
PEI-4	Printed Materials	Distribute door hangers to 100% of illegal dumping residential complaints received	Distribute door hangers to 100% of illegal dumping residential complaints received	Distribute door hangers to 100% of illegal dumping residential complaints received 1 New Pet Waste Brochure created	Distribute door hangers to 100% of illegal dumping residential complaints received 1 New Stormwater Brochure design	Distribute door hangers to 100% of illegal dumping residential complaints received 1 New Industrial Stormwater Brochure
PEI-5	Stormwater Information Mail Outs	Distribute postcards to 1,000 residential addresses	Distribute postcards to 1,000 residential addresses	Distribute postcards to 1,000 residential addresses	Distribute postcards to 1,000 residential addresses	Distribute postcards to 1,000 residential addresses
PEI-6	Public Service Announcements (PSA)	Broadcast 6 PSAs	Broadcast 6 PSAs	Broadcast 8 PSAs	Broadcast 10 PSAs	Broadcast 12 PSAs
PEI-7	Storm Drain Marking Events	1 Storm Drain marking event	1 Storm Drain marking event	1 Storm Drain marking event	1 Storm Drain marking event	1 Storm Drain marking event
PEI-8	Community Cleanup Events	1 Community Cleanup event	1 Community Cleanup event	1 Community Cleanup event	1 Community Cleanup event	1 Community Cleanup event
PEI-9	Reforestation Programs	1 Tree for Me Program event 1 Arbor Day Program event	1 Tree for Me Program event 1 Arbor Day Program event	1 Tree for Me Program event 1 Arbor Day Program event	1 Tree for Me Program event 1 Arbor Day Program event	1 Tree for Me Program event 1 Arbor Day Program event
PEI-10	Stormwater Stakeholders Committee	1 Stakeholder Committee Meeting	1 Stakeholder Committee Meeting	1 Stakeholder Committee Meeting	1 Stakeholder Committee Meeting	1 Stakeholder Committee Meeting

IDDE-1	MS4 System Map	Update the GIS map with 90% of the corrections found during visual observations	Update the GIS map with 90% of the corrections found during visual observations	Update the GIS map with 90% of the corrections found during visual observations	Update the GIS map with 90% of the corrections found during visual observations	Update the GIS map with 90% of the corrections found during visual observations
IDDE-2	Water Quality Testing and Dry Weather Screening	Perform visual inspections and water quality sampling annually for 100% of drainage basins	Perform visual inspections and water quality sampling annually for 100% of drainage basins	Perform visual inspections and water quality sampling annually for 100% of drainage basins	Perform visual inspections and water quality sampling annually for 100% of drainage basins	Perform visual inspections and water quality sampling annually for 100% of drainage basins
IDDE-3	Illicit Discharge Investigations	Perform illicit discharge investigations on 100% of complaints received	Perform illicit discharge investigations on 100% of complaints received	Perform illicit discharge investigations on 100% of complaints received	Perform illicit discharge investigations on 100% of complaints received	Perform illicit discharge investigations on 100% of complaints received
IDDE-4	Reduce Illegal Dumping	Perform inspections on 100% of complaints received	Perform inspections on 100% of complaints received	Perform inspections on 100% of complaints received	Perform inspections on 100% of complaints received	Perform inspections on 100% of complaints received
IDDE-5	Reduction of Sanitary Sewer Overflows	Perform 200 inspections annually	Perform 200 inspections annually	Perform 200 inspections annually	Perform 200 inspections annually	Perform 200 inspections annually
IDDE-6	Remediation of Sanitary Sewer Overflows	129,200 linear feet of sewer line 850 manhole evaluations	130,000 linear feet of sewer line 800 manhole evaluations	130,000 linear feet of sewer line 800 manhole evaluations	145,000 linear feet of sewer line 725 manhole evaluations	145,000 linear feet of sewer line 725 manhole evaluations
IDDE-7	Household Hazardous Waste Disposal	Hold 1 Annual Collection Day	Hold 1 Annual Collection Day	Hold 1 Annual Collection Day	Hold 1 Annual Collection Day	Hold 1 Annual Collection Day
C-1	Site Plan and SWPPP Reviews	Review 100% of the Erosion Control Site Plans Review 100% of the SWPPPs received by the City	Review 100% of the Erosion Control Site Plans Review 100% of the SWPPPs received by the City	Review 100% of the Erosion Control Site Plans Review 100% of the SWPPPs received by the City	Review 100% of the Erosion Control Site Plans Review 100% of the SWPPPs received by the City	Review 100% of the Erosion Control Site Plans Review 100% of the SWPPPs received by the City
C-2	Inventory of Active Construction Sites	Track 100% of the active construction sites within the City of Temple received through permit system	Track 100% of the active construction sites within the City of Temple received through permit system	Track 100% of the active construction sites within the City of Temple received through permit system	Track 100% of the active construction sites within the City of Temple received through permit system	Track 100% of the active construction sites within the City of Temple received through permit system
C-3	Construction Site Inspections	Perform inspections on small and large construction sites once per month	Perform inspections on small and large construction sites once per month	Perform inspections on small and large construction sites once per month	Perform inspections on small and large construction sites once per month	Perform inspections on small and large construction sites once per month
C-4	Receipt and Consideration of Information from Public	Broadcast 1 PSA about Stormwater Phone number and email address Investigate 100% of complaints received	Broadcast 1 PSA about Stormwater Phone number and email address Investigate 100% of complaints received	Broadcast 1 PSA about Stormwater Phone number and email address Investigate 100% of complaints received	Broadcast 1 PSA about Stormwater Phone number and email address Investigate 100% of complaints received	Broadcast 1 PSA about Stormwater Phone number and email address Investigate 100% of complaints received

PC-1	Post Construction Management Plan Reviews	Review 100% of the Post-Construction Management Plans received	Review 100% of the Post-Construction Management Plans received	Review 100% of the Post-Construction Management Plans received	Review 100% of the Post-Construction Management Plans received	Review 100% of the Post-Construction Management Plans received
PC-2	Long Term Operation and Maintenance of BMPs	Record in City Works software 100% of drainage maintenance performed	Record in City Works software 100% of drainage maintenance performed	Record in City Works software 100% of drainage maintenance performed	Record in City Works software 100% of drainage maintenance performed	Record in City Works software 100% of drainage maintenance performed
GH-1	Stormwater Pollution Prevention Training	Provide training to 2 City departments	Provide training to 2 City departments	Provide training to 2 City departments	Provide training to 2 City departments	Provide training to 2 City departments
GH-2	Stormwater Management Manual and Standard Operating Procedures for City Facilities	1 documented review of Stormwater Management Manual Creation of 1 Fleet Services SOP	1 documented review of Stormwater Management Manual Creation of 1 Parks and Recreation Services SOP	1 documented review of Stormwater Management Manual Creation of 1 Solid Waste Services SOP	1 documented review of Stormwater Management Manual Creation of 1 Street Services SOP	1 documented review of Stormwater Management Manual Creation of 1 Water and Wastewater Treatment Plant SOP Creation of 1 Utilities SOP
GH-3	City Owned Facility Inventory and Inspections	Perform inspections on 100% of high priority facilities annually	Perform inspections on 100% of high priority facilities annually	Perform inspections on 100% of high priority facilities annually	Perform inspections on 100% of high priority facilities annually	Perform inspections on 100% of high priority facilities annually
GH-4	Landscape and Lawn Care	Maintain 2 certified pesticide applicator licenses	Maintain 2 certified pesticide applicator licenses	Maintain 2 certified pesticide applicator licenses	Maintain 2 certified pesticide applicator licenses	Maintain 2 certified pesticide applicator licenses
GH-5	Used Oil Collection and Recycling	Collect 100% of the oil resulting from maintenance activities. Record 100% of the oil received at Solid Waste from residents and businesses	Collect 100% of the oil resulting from maintenance activities. Record 100% of the oil received at Solid Waste from residents and businesses	Collect 100% of the oil resulting from maintenance activities. Record 100% of the oil received at Solid Waste from residents and businesses	Collect 100% of the oil resulting from maintenance activities. Record 100% of the oil received at Solid Waste from residents and businesses	Collect 100% of the oil resulting from maintenance activities. Record 100% of the oil received at Solid Waste from residents and businesses
GH-6	Roadway Cleaning	Sweep 3000 lane miles	Sweep 3000 lane miles	Sweep 3000 lane miles	Sweep 3000 lane miles	Sweep 3000 lane miles
GH-7	Storm Drain System Cleaning	Enter 100% of inspections, cleaning and maintenance into City Works software	Enter 100% of inspections, cleaning and maintenance into City Works software	Enter 100% of inspections, cleaning and maintenance into City Works software	Enter 100% of inspections, cleaning and maintenance into City Works software	Enter 100% of inspections, cleaning and maintenance into City Works software
GH-8	Non-Stormwater Discharges Dechlorination Equipment	Document 100% of the use of de-chlorination equipment in City Works	Document 100% of the use of de-chlorination equipment in City Works	Document 100% of the use of de-chlorination equipment in City Works	Document 100% of the use of de-chlorination equipment in City Works	Document 100% of the use of de-chlorination equipment in City Works

Appendix 1

City of Temple Ordinance #27

Appendix 2

Notice of Intent Form

Appendix 3

TPDES Small MS4 General Permit for Stormwater Discharges (TXR040000)