

CITY OF MCKINNEY, TEXAS  
STORMWATER MANAGEMENT  
PROGRAM

3<sup>RD</sup> PERMIT TERM

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## Overview

This document is the City of McKinney Stormwater Management Plan (SWMP). It has been developed to outline and direct the City’s stormwater program from 2019 to 2024 as a Phase II Municipal Separate Storm Sewer System (MS4) permit.

The 1972 Clean Water Act (CWA) is a law enacted by Congress and signed by the President that provides a statutory basis for the National Pollutant Discharge Elimination System (NPDES) program and the basic structure for regulating the discharge of pollutants from point sources to waters of the United States. Section 402 of the CWA specifically required the U.S.

Environmental Protection Agency (EPA) to develop and implement the NPDES program to protect the Nation’s water from pollution. It further allows the EPA to authorize the NPDES Permit Program to state governments, enabling states to perform many of the permitting administrative, and enforcement aspects of the NPDES program. Under the NPDES program a municipal stormwater program was developed into two phases. The City of McKinney falls under the Phase II of the program.

Phase II of the NPDES was issued in 1999 and requires small municipal separate storm sewer systems (MS4s) in designated urbanized areas (UA), as well as small MS4s outside the UA that are designated by the permitting authority, to obtain NPDES permit coverage for their stormwater discharges. The 1990 U.S. Census defines an “urban area” as an area with a population density of at least 1000 people per square mile. Phase II MS4s are covered by a general permit. Each regulated MS4 is required to develop and implement a stormwater management program (SWMP) to reduce the contamination of stormwater runoff and prohibit illicit discharges.

On August 13, 2007, the TCEQ issued the TPDES General permit TX040000 (General Permit) authorizing the discharge of stormwater to surface water in the state from small MS4s. McKinney states their intention to implement a Stormwater Management Program (SWMP) in accordance with the requirements of the General Permit and submitted a Notice of Intent (NOI) in January 2008. TCEQ issued approval of McKinney’s SWMP under TPDES permit No. TXR040108 on December 19, 2008 which is to new revised and renewed on a 5 year basis.

On December 13 2018, TCEQ issued the new 5-year General permit. AS a result, McKinney has developed a revised SWMP in accordance with updated requirements and guidelines of the December 2019 TCEQ TPDES General Permit.

## ***Stormwater Management Plan Requirements***

Operators of Phase II MS4s are required to design stormwater management programs that met the following three objectives:

1. Reduce the discharge of pollutants to the maximum extent practicable (MEP)
2. Protect water quality
3. Satisfy the appropriate water quality requirements of the CWA

The SWMP describes specific actions that will be taken over the next five-year period to reduce pollutants and protect the City's stormwater quality. These specific actions are listed as Best Management Practices (BMPs) that will be implemented by the City in support of each of the six Minimum Control Measures (MCMs), as required by the TCEQ General Permit and listed below:

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

These measures will be addressed by implementing BMPs appropriate for McKinney's community. The BMPs will commence according to the schedules provided in this report. The SWMP also sets measurable goals and provides a schedule for the implementation of each of the BMPs. Implementation of the BMPs is expected to result in reductions of pollutants discharged into McKinney's streams, ponds and lakes.

## **Community Profile**

### ***Geography***

McKinney is located at an elevation of 587 in north central Texas in Collin County, approximately 32 miles northeast of Dallas. McKinney is bordered by the towns of Melissa to the north, Prosper to the northwest, New Hope to the northeast, Princeton to the east, Fairview to the southeast and the cities of Allen to the south, and Frisco to the west.

McKinney is considered to be part of the humid subtropical region. On average, the warmest month is August (normal temperature 83F) and the coolest is January (normal temperature 44F), with the maximum average precipitation occurring in May.

Source: NOAA

Population: 187,802

Land Area:

Extraterritorial Jurisdiction:

## Demographics

The 2010 Census yielded a McKinney population of 131,117. This represents an increase of approximately 141.2% from the 2000 census value of 54,369. Although McKinney did not meet the 1990 conditions for a medium of large MS4, it was designated as an urban area having a population density of 2,468 people per square mile, and therefore determined to be a small of Phase II MS4.

## Significant Local Waters

McKinney contributes to the East Fork Trinity Watershed. The East Fork Trinity River Watershed drains approximately 1300 square miles. Seven counties, including Collin County, contribute to the watershed. Water in McKinney flows to the TCEQ classified water bodies segments of Lake Lavon (TX0821) and Lay Ray Hubbard (TX0820). Wilson Creek, Franklin Branch, Stover Creek, Honey Creek, Rowlett Creek, Cottonwood Creek and the East Fork Trinity River are considered as McKinney's major streams.

North Texas Municipal Water District is responsible for the reclamation plants which take in McKinney and surrounding municipality's wastewater. Currently there are no reclamation plants located within the McKinney Jurisdiction.

## Impaired Water Bodies

TCEQ describes the status of the state's waters, as required by Sections 305(b) and 303(d) of the federal CWA, through the *Texas Integrated Report of Surface Water Quality*. The TCEQ produces a new report every two years in even numbered years, as required by law and list those stream segments in Texas that are 303(d) listed water bodies. 303(d) listed water bodies are those that do not meet the Water Quality Standards with existing technology-based pollution controls alone. These waters bodies require the establishment of total maximum daily loads (TMDLs). The goal of the TMDLs is to develop and implement plans aimed at restoring impaired water bodies to an acceptable condition that meets the Water Quality Standards and supports their designated uses.

### McKinney Impaired Water Bodies

Wilson Creek (unclassified water body)

- SegID: 0821C
- From the confluence with Lake Lavon (segment 0821) in Collin County up to West FM 455 (NHD RC 12030106000086), just east Celina, Collin Co.
- 0821C\_01 Entire Water body

Parameter	Category	Year Segment First Listed
<b>Bacteria</b>	<b>5c</b>	<b>2010</b>

East Fork Trinity River above Lake Lavon (unclassified water body)

- SegID: 0821D
- A portion of the East Fork Trinity River extending from the confluence with Lake Lavon (segment 0821) to the upper end of the water body (NHD RC 12030106000074) Collin Co.

- 0821D\_01 Entire Water body

Parameter	Category	Year Segment First Listed
<b>Bacteria</b>	<b>5c</b>	<b>2010</b>

**5c:** Additional data or information will be collected and/or evaluated for one or more parameters before a management strategy is selected.

Once a water body is labeled as impaired TCEQ may require a Total Maximum Daily Load (TMDL) or other water quality management action in order to meet water quality standards. Further review of the water quality standards or additional data is required before a TMDL or other water quality management action is scheduled for Wilson Creek and the East Fork Trinity River. Until a TMDL or other water quality management action is established the SWMP shall identify potential significant sources for E. coli and develop and implement targeted BMPs for those sources. Targets BMPS shall, as appropriate, address the following areas;

1. Sanitary Sewer System
2. On-site sewage facilities
3. Illicit Discharges and Dumping
4. Animal Sources and
5. Residential Education

If any other water body or watershed into which McKinney discharges is considered impaired or a TMDL is approved in the future, McKinney will review the applicable *Texas Water Quality Integrated Report* to see if it includes requirements for control of stormwater discharges. McKinney will then modify the SWMP to ensure that the reduction of the pollutant of concern specified in the *Texas Water Quality Integrated Report* is achieved.

## *Endangered Species and Critical Habitat*

<b>Taxon</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Federal Status</b>	<b>State Status</b>	<b># Counties</b>
Birds	<i>Plegadis chihi</i>	White-faced Ibis		T	57
Birds	<i>Mycteria americana</i>	Wood Stork		T	111
Birds	<i>Haliaeetus leucocephalus</i>	Bald Eagle	DL	T	209
Birds	<i>Falco peregrinus</i>	Peregrine Falcon	DL	T	254
Birds	<i>Falco peregrinus anatum</i>	American Peregrine Falcon	DL	T	254
Birds	<i>Falco peregrinus tundrius</i>	Arctic Peregrine Falcon	DL		254
Birds	<i>Grus americana</i>	Whooping Crane	LE	E	186
Birds	<i>Charadrius melodus</i>	Piping Plover	LT	T	64
Birds	<i>Calidris canutus rufa</i>	Red Knot	LT		80
Birds	<i>Sternula antillarum athalassos</i>	Interior Least Tern	LE	E	148
Birds	<i>Athene cunicularia hypugaea</i>	Western Burrowing Owl			199
Birds	<i>Anthus spragueii</i>	Sprague's Pipit			216
Birds	<i>Ammodramus henslowii</i>	Henslow's Sparrow			93
Mammals	<i>Canis rufus</i>	Red wolf	LE	E	160
Mammals	<i>Spilogale putorius interrupta</i>	Plains spotted skunk			204
Reptiles	<i>Macrochelys temminckii</i>	Alligator snapping turtle		T	68
Reptiles	<i>Phrynosoma cornutum</i>	Texas horned lizard		T	236
Reptiles	<i>Thamnophis sirtalis annectens</i>	Texas garter snake			37
Reptiles	<i>Crotalus horridus</i>	Timber rattlesnake		T	102
Crustaceans	<i>Procambarus steigmani</i>	A crayfish			2
Mollusks	<i>Fusconaia askewi</i>	Texas pigtoe		T	61
Mollusks	<i>Pleurobema riddellii</i>	Louisiana pigtoe		T	56
Mollusks	<i>Potamilus amphichaenus</i>	Texas heelsplitter		T	44

There is no reason to believe that the stormwater discharges, allowable non-stormwater discharges and discharge related activities will jeopardize the continued existence of any species or results in adverse modification or destruction of critical habitat.

### *Specific Watershed and Water Quality Areas*

The City of McKinney recognizes that coverage under the General Permit does not allow the City to have stormwater and non-stormwater discharges into areas already protected by 30 TAC Chapter 311 (relating to Watershed Protection) for water quality areas and watershed.

### *Discharges to the Edwards Aquifer-Recharge Zone*

No discharges from the City of McKinney affect water quality within the Edwards Aquifer.

### *Indian Country Lands*

The City has no discharges entering in to Indian Country Lands.

## Legal Authority

### *Government*

McKinney's local government consists of a City Manager appointed by a seven member City Council. Four Council members are elected to single-member districts. Two Council members and the Mayor are elected at-large.

The Mayor is recognized as head of the City Government for all ceremonial purposes and by the Governor for purposes of military law, but shall have no administrative duties.

Responsible elected official: Mayor George Fuller  
Contact info  
Phone: 972-547-7507  
Email: gfuller@mckinneytexas.org

The City Manager serves as the chief administrative officer under the direction of the City Council and is responsible for making recommendations to the Council concerning programs and policies and developing methods to ensure the effective and efficient operation of City services.

Responsible official: City Manager Paul Grimes  
Contact info  
Phone: 972-547-7510  
Email: citymgr@mckinneytexas.org

## Stormwater Management Program

As a Phase II Category 4 MS4, The City of McKinney is required to develop a Stormwater Management Plan (SWMP) that describes specific actions that will be taken over a five (5) year period to reduce pollutants and protect McKinney's stormwater quality to the maximum extent practicable (MEP). Operators of Phase II MS4s are required to design stormwater management programs that accomplish these three objectives:

1. Reduce the release and discharge of pollutants to the maximum extent practicable (MEP)
2. Protect water quality
3. Satisfy the appropriate water quality requirements of the Clean Water Act.

This document is the City of McKinney's Stormwater Management Program (SWMP). It is intended to outline and direct the City of McKinney's stormwater priorities. This SWMP is a living document and has the ability to evolve over time as the program evaluations and Best Management Practices (BMPs) are observed and modified to accommodate more effective methods. The Minimum control measures listed below are required under Phase II regulations for TXR040000. It is expected that when these six elements are addressed in concert, it will result in significant reductions of pollutants being discharged into receiving water bodies.

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

## ***Ordinances***

Stormwater Management Ordinance  
McKinney Engineering Design Manual  
McKinney Code of Ordinances  
McKinney 2040 Comprehensive Plan

## ***Organization***

Many of the BMPs included in McKinney's SWMP are maintained by various City departments that are involved in the administration and implementation of the City's SWMP. Coordination of the SWMP is handled by the Environmental Engineering Division which is housed in the Development Services Department.

## ***Outreach and Training***

The City of McKinney's Communication and Marketing, Environment Education, Engineering, Information Service and Public Works Departments assist the Environmental Engineering Division with maintaining environmental and stormwater information to the local community. Information is made available on the city website, city wide newsletter and McKinney's public access channel as well as distribution of utility inserts. Brochures are made for residents, the development community and businesses and advertisements of community programs as well as training material for employee and city council members. The City Newsletter provides employees information on Stormwater concerns. Environmental Education provides seminars on environmental concerns to the public.

## ***Infrastructure and Municipal Operations***

The Development Services Department is responsible for implementation of Engineering Design for any development and enforcement of City ordinances and codes. The operation, management and maintenance of the municipal drainage system are the responsibility of the Water Utilities and Infrastructure Department.

The Information Technology Department updates and maintains the City's GIS maps for storm sewer maps, developments and identifying industrial facilities.

The Parks Department is responsible for maintaining the green spaces of the city including parks, greenbelts, and medians. The Parks Department is also responsible for pesticide and herbicide applications.

Street Maintenance is responsible for maintenance of city streets, sidewalks and alleys. Fleet manages all the city vehicles and Building Maintenance manages all the City facilities including waste management, cleaning and infrastructure. Fire manages the City's existing spill response procedure and training.

### ***Inspection and Enforcement***

Water Utilities and the Environmental Division perform routine inspections for illicit discharges, OSSF concerns, and pollution prevention. Code Compliance enforces good housekeeping codes throughout the city. Building Inspections and Environmental Control inspect and enforce erosion control compliance. Planning enforces the City's post-construction requirements for all development. Engineering monitors industrial and municipal facilities.

### ***Construction and Development***

The Development Services Department performs regular pre-development and pre-construction reviews on proposed development projects. Environmental engineering currently conducts develop reviews and the Erosion Control Division performs routine inspections of sites as they are under construction.

### ***Program funding***

The City of McKinney has enacted a Stormwater Utility Fee that is based on the number of square feet of impervious cover that is owned by every property holder in the city. The revenue from the fees collected is used to cover the cost for stormwater sewer system maintenance as well as personnel, flood studies, drainage projects and monitoring.

## Organizational Contact Chart

The City of McKinney		
Phase II Stormwater Management Program		
Organization Chart		
<b>Stormwater Management Program Coordinators</b>		
Engineering : Environmental Manager		
Engineering : Stormwater Administrator		
Public Education	Public Involvement	Illicit Discharge Detection & Elimination
<b>Engineering: Environmental Engineering</b>	<b>Engineering: Environmental Engineering</b>	<b>Engineering: Environmental Engineering</b>
Communications & Marketing	Communications & Marketing	Information Technology: GIS
DPW: Environmental & Fleet Services	DPW: Streets & Traffic Control	DPW: Water/Wastewater
DPW: Streets & Traffic Control	DPW: Environmental & Fleet Services	Fire Services
Information Technology: GIS	Housing & Community Development	DPW: Environmental & Fleet Services
	*City Council	DPW: Streets & Traffic Control
Construction Site Runoff	Post-Construction Stormwater Management in New Development/ Redevelopment	Pollution Prevention/ Good Housekeeping for Municipal Operations
<b>Engineering: Environmental Engineering</b>	<b>Engineering: Environmental Engineering</b>	<b>DPW: Streets &amp; Traffic Control</b>
Building Inspections	Building Inspections	<b>DPW: Environmental &amp; Fleet Services</b>
Planning	Planning	<b>DPW: Water/Wastewater</b>
Engineering: Development Engineering	Engineering: Development Engineering	<b>DPW: Building Operations</b>
DPW: Streets & Traffic Control	DPW: Streets & Traffic Control	Engineering: Environmental Engineering
*City Council	*City Council	Information Technology: GIS
Industrial Stormwater Sources		Parks, Recreation and Open Space
		Code Compliance
		McKinney National Airport
<b>Engineering: Environmental Engineering</b>		
Information Technology: GIS		
DPW: Building Operations		
DPW = Department of Public Works	*City Council input/advice on ordinances and enforcement methods	

## Recordkeeping Requirements

### Record Retention

The following procedures will be followed to ensure adequate recordkeeping for the SWMP:

- The City of McKinney shall retain all records, a copy of the TCEQ general permit, and records of all data used to complete the NOI for a period of three years or for the term of the TCEQ permit, whichever is longer
- The City of McKinney shall retain a copy of the SWMP at a location accessible to the TCEQ
- The City of McKinney shall relinquish all records pertaining to the TPDES general permit if requested by the Executive Director. The SWMP required by the general permit will be retained at a location that is assessable to the permitting authority.
- The City of McKinney shall make the records including the NOI and SWMP, available to the public id requested to do so, in writing. The SWMP must be available within ten (10) working days from receipt of a written request. Other records must be provided in accordance with the

Texas Public Information Act. Reasonable charges, in accordance with Texas law, may be levied by the permittee for researching and preparing any requested materials

### ***Noncompliance***

The City of McKinney will comply with the requirements of 30TAC Chapter 305.125(9), which states that any non-compliance which may endanger human health, safety, or the environment, must be reported to the TCEQ regional office either orally or fax within 24 hours of the incident. A written report will be provided to the TCEQ regional office and the TCEQ Enforcement Division within five (5) working days of becoming aware of the non-compliance. The written report will contain:

- A description of the non-compliance and its cause;
- The potential danger to human health or safety, or the environment;
- The period of non-compliance, including dates and times;
- If non-compliance has not been corrected, the anticipated time it is expected to continue; and
- Steps taken or planned to reduce, eliminate, and prevent recurrence of the non-compliance, and to mitigate the adverse effects of the non-compliance

Additionally, the MS4 must promptly submit to TCEQ any facts or information relevant to a Notice of Intent (NOI), Notice of Termination (NOT), Notice of Change (NOC), or any other report.

If required, the period in which records are kept shall automatically be extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the City of McKinney.

### ***Annual Report***

The City of McKinney will submit a concise annual report to the executive Director of the TCEQ by March 15<sup>th</sup> (of the following year) for each year of the permit term. The City of McKinney will also maintain a copy of the annual report for review by authorized TCEQ personnel upon request. The report generally includes the status of compliance with permit conditions, assessments of the BMPs defined in the SWMP and their relative effectiveness, progress towards reducing the discharge of pollutants into the MS4, and an evaluation of the success of the implementation of the measurable goals for each of the MCMs. The annual report should also include a summary of proposed changes to the SWMP planned for the next reporting cycle.

### **Measurable Goal Evaluation Process**

Selection of the BMPs, measurable goals, and an implementation schedule was based on TCEQ requirements as well as what is believed to necessary and achievable by the various City departments which the responsibility of specific BMPs and monitoring for the City of McKinney's SWMP. An annual cost-analysis helps to determine the extent of our programs and select priorities. Implementation of each BMP is tracked throughout the reporting year, allowing for proper adjustments as needed. Stakeholder meetings were held for departments involves with the SWMP, budgeting, maintenance, man-power, past progress and new requirements were considered before any changes or adjustments were made to the current SWMP. Previous BMPs were evaluated to determine their effectiveness and usefulness to the program going forward. The majority of BMPS will be carried over and utilized in this version. This permit cycle public outreach, education and involvement will be a higher priority within the program. There will be an increase in inspections and the development of standard operating procedures throughout the MS4.

## Assessment of Non-Stormwater Discharges

The following non-stormwater discharges were evaluated to ascertain if any known significant water quality impacts were created as a result of the discharges. There is no known adverse impact to stormwater quality within the city limits from these listed discharges:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration
- Uncontaminated pumped ground water
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensate
- Irrigation water
- Springs
- Water from crawl spaces
- Footing drains
- Lawn watering runoff
- Water from individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool discharges
- Residual street wash water
- Discharges or flows from firefighting activities

## Minimum Control Measure and Associated BMPS

### *Public Education, Outreach and Involvement*

Regulatory Requirement:

#### *Public Education and Outreach*

*40 CFR 122.34 (b) (1) (i)*- Implementation of a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.

*40 CFR 122.34 (b) (1) (ii)*- The MS4 owner may use stormwater educational materials provided by the State, Tribe, EPA, environmental, public interest or trade organizations, or other MS4s. The public education program should inform individuals and households about the steps they can take to reduce stormwater pollution, such as ensuring proper septic system maintenance, ensuring the proper use and

disposal of landscape and garden chemicals including fertilizers and pesticide, protecting and restoring riparian vegetation, and properly disposing of used motor oil or household hazardous wastes.

It is recommended that the program inform individuals and groups how to become involved in local stream and beach restoration activities as well as activities that are coordinated by youth service and conservation corps or other citizen groups.

It is recommended that the program require the MS4 to tailor the public education program, using a mix of locally appropriate strategies, to target specific audiences and communities. Strategies can include, for example, distribution of brochures or fact sheets, sponsoring speaking engagements before community groups, providing public service announcements, implementing educational programs targeted at school age children, and conducting community based projects such as storm drain stenciling, and watershed and beach cleanups.

It is recommended that the program require that some of the materials or outreach programs be directed toward targeted groups of commercial, industrial, and institutional entities likely to have significant stormwater impacts. For example, providing information to restaurants on the impact of grease clogging storm drains and to garages on the impact of oil discharges. It is encouraged that the program tailor the outreach program to address the viewpoints and concerns of all communities, particularly minority and disadvantaged communities, as well as any special concerns relating to children.

*TXR040000 Section B (1) - Public Education and Outreach*

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

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

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

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

(3) If the permittee has a public website, the permittee shall post its SWMP and the annual reports required under Part IV.B.2. or a summary of the annual report on the permittee's website. The SWMP must be posted no later than 30 days after the approval date, and the annual report no later than 30 days after the due date.

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

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

### *Public Involvement*

*40 CFR 122.34 (b) (2) (i)* - The MS4 program must identify the minimum elements and require implementation of a public involvement/participation program that complies with State, Tribal, and local public notice requirements.

*40 CFR 122.34 (b) (2) (ii)*- The EPA recommends that the permit include provisions addressing the need for the public to be included in developing, implementing, and reviewing the stormwater management program and that the public participation process should make efforts to reach out and engage all economic and ethnic groups.

Opportunities for members of the public to participate in program development and implementation include serving as citizen representatives on a local stormwater management panel, attending public hearings, working as citizen volunteer to educate other individuals about the program, assisting in program coordination with other pre-existing programs, or participating in volunteer monitoring efforts.

#### *TXR040000 Section B (1) - Public Involvement*

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

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

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

### *Current Programs:*

The City of McKinney partners with our Environmental Education and Communications Division to produce and distribute general educational material to residents and employees on a variety of subjects. This information has included potential sources of non-pollution such as animal waste, proper waste disposal, and proper chemical use. During the permit cycle the Solid Waste Division has offered Household hazard waste Pick-ups to residents. The Environmental Education Division has offered year round green seminars that discuss various environmental and sustainable concerns.

The Communications and Marketing Division has produced educational videos to introduce citizens to the importance of the Stormwater Division as well as ways in which citizens can get involved via the adopt-a-spot program and Semiannual Clean-up events. Communications and Marketing also manages the City's social media presence and releases seasonally appropriate content on behalf of the Stormwater Division.

### *Best Management Practices:*

#### **Appendix A**

### ***Illicit Discharge Detection and Elimination***

Regulatory Requirement:

#### ***IDDE***

*40 CFR 122.34 (b) (3) (i)* - The program must identify the minimum elements and require the development, implementation and enforcement of a program to detect and eliminate illicit discharges into the small MS4. At a minimum, the program must:

- Develop and maintain a storm sewer system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those;
- To the extent allowable under State, Tribal or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non- stormwater discharges into the storm sewer system and implement appropriate enforcement procedures and actions;
- Develop and implement a plan to detect and address non-stormwater discharges, including illegal dumping to the system; and
- Inform public employees, businesses and the general public of hazards associated with illegal discharges and improper disposal of waste.

*40 CFR 122.34 (b) (3) (ii)*- The program must address the following categories of non-stormwater discharges or flows (illicit discharges) only if the MS4 program identifies them as significant contributors of pollutants to the small MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (discharges or flows from firefighting activities are excluded from the effective prohibition against non-stormwater and need

only be addressed where they are identified as significant sources of pollutants to waters of the United States).

*40 CFR 122.34 (b) (3) (iii)* - Guidance for NPDES permitting authorities and regulated small MS4s: EPA recommends that the program be required to detect and address illicit discharges including the following four components: Procedures for locating priority areas likely to have illicit discharges; procedures for tracing the source of an illicit discharges; procedures for removing the source of the discharge; and procedures for program evaluation and assessment. It is recommended that the program be required to visually screen outfalls during dry weather and conduct field tests of selected pollutants as part of the procedures for locating priority areas. Illicit discharge education actions may include storm drain stenciling, a program to promote, publish, and facilitate public reporting of illicit connections or discharges, and distribution of outreach materials.

*TXR040000 Section B (1) - Illicit Discharge Detection and Elimination (IDDE)*

(a) Program Development

- (1) All permittees shall develop, implement, and enforce a program to detect, investigate, and eliminate illicit discharges into the small MS4. The program must include a plan to detect and address non-stormwater discharges, including illegal dumping to the MS4 system. Existing permittees must assess program elements that were described in the previous permit, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharge of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of this permit term. (See also Part III.A.1(c). The Illicit Discharge Detection and Elimination (IDDE) program must include the following:
  - a. An up-to-date MS4 map (see Part III.B.2.(c)(1));
  - b. Methods for informing and training MS4 field staff (see Part III.B.2.(c)(2));
  - c. Procedures for tracing the source of an illicit discharge (see Part III. B.2.(c)(5));
  - d. Procedures for removing the source of the illicit discharge (see Part III.B.2.(c)(5));
  - e. For Level 2, 3 and 4 small MS4s, if applicable, procedures to prevent and correct any leaking on-site sewage disposal systems that discharge into the small MS4;
  - f. For Level 4 small MS4s, procedures for identifying priority areas within the small MS4 likely to have illicit discharges, and a list of all such areas identified in the small MS4 (see Part III.B.2.(e)(1));
  - g. For Level 4 small MS4s, field screening to detect illicit discharges (see Part III.B.2.(e)(2)); and
  - h. For Level 4 small MS4s, procedures to reduce the discharge of floatables in the MS4. (see Part III.B.2.(e)(3).)
- (2) For non-traditional small MS4s, if illicit connections or illicit discharges are observed related to another operator's MS4, the permittee shall notify the other MS4 operator within 48 hours of discovery. If notification to the other MS4 operator is not practicable, then the permittee shall notify the appropriate TCEQ Regional Office of the possible illicit connection or illicit discharge.
- (3) If another MS4 operator notifies the permittee of an illegal connection or illicit discharge to the small MS4, then the permittee shall follow the requirements specified in Part III.B.2.(c)(3).
- (4) All permittees shall annually review and update as necessary, the SWMP and MCM implementation procedures required by Part III.A.2. Any changes must be reflected in the

annual report. Such written procedures must be maintained, either on site or in the SWMP and made available for inspection by the TCEQ.

(b) Allowable Non-Stormwater Discharges

Non-stormwater flows listed in Part II.C do not need to be considered by the permittee as an illicit discharge requiring elimination unless the permittee or the TCEQ identifies the flow as a significant source of pollutants to the small MS4.

(c) Requirements for all Permittees

All permittees shall include the requirements described below in Parts III.B.2(c)(1)-(6)

(1) MS4 mapping all permittees shall maintain an up-to-date MS4 map, which must be located on site and available for review by the TCEQ. The MS4 map must show at a minimum the following information:

- a. The location of all small MS4 outfalls that are operated by the permittee and that discharge into waters of the U.S;
  - b. The location and name of all surface waters receiving discharges from the small MS4 outfalls;
- and
- c. Priority areas identified under Part III.B.2.(e)(1), if applicable.

(2) Education and Training All permittees shall implement a method for informing or training all the permittee's field staff that may come into contact with or otherwise observe an illicit discharge or illicit connection to the small MS4 as part of their normal job responsibilities. Training program materials and attendance lists must be maintained on site and made available for review by the TCEQ.

(3) Public Reporting of Illicit Discharges and Spills All permittees shall publicize and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from the small MS4. The permittee shall provide a central contact point to receive reports; for example by including a phone number for complaints and spill reporting.

(4) All permittees shall develop and maintain on-site procedures for responding to illicit discharges and spills.

(5) Source Investigation and Elimination

a. Minimum Investigation Requirements – Upon becoming aware of an illicit discharge, all permittees shall conduct an investigation to identify and locate the source of such illicit discharge as soon as practicable.

- i. All permittees shall prioritize the investigation of discharges based on their relative risk of pollution. For example, sanitary sewage may be considered a high priority discharge.
- ii. All permittees shall report to the TCEQ immediately upon becoming aware of the occurrence of any illicit flows believed to be an immediate threat to human health or the environment.
- iii. All permittees shall track all investigations and document, at a minimum, the date(s) the illicit discharge was observed; the results of the investigation; any follow-up of the investigation; and the date the investigation was closed.

b. Identification and Investigation of the Source of the Illicit Discharge –All permittees shall investigate and document the source of illicit discharges where the permittees have jurisdiction to complete such an investigation. If the source of illicit discharge extends outside the permittee's boundary, all permittees shall notify the adjacent

permitted MS4 operator or the appropriate TCEQ Regional Office according to Part III.A.3.b.

- c. Corrective Action to Eliminate Illicit Discharge If and when the source of the illicit discharge has been determined, all permittees shall immediately notify the responsible party of the problem, and shall require the responsible party to perform all necessary corrective actions to eliminate the illicit discharge.

(6) Inspections –The permittee shall conduct inspections, in response to complaints, and shall conduct follow-up inspections to ensure that corrective measures have been implemented by the responsible party. The permittee shall develop written procedures describing the basis for conducting inspections in response to complaints and conducting follow-up inspections.

(d) Additional Requirements for Level 3 and 4 small MS4s

In addition to the requirements described in Parts III.B.2(c)(1)-(6) above, permittees who operate Level 3 and 4 small MS4s shall meet the following requirements:

Source Investigation and Elimination

Permittees who operate Level 3 and 4 small MS4 shall upon being notified that the discharge has been eliminated, conduct a follow-up investigation or field screening, consistent with Part III.B.2.(e)(2), to verify that the discharge has been eliminated. The permittee shall document its follow-up investigation. The permittee may seek recovery and remediation costs from responsible parties consistent with Part III.A.3., and require compensation related costs.

Resulting enforcement actions must follow the procedures for enforcement action in Part III.A.3. If the suspected source of the illicit discharge is authorized under an NPDES/TPDES permit or the discharge is listed as an authorized non-stormwater discharge, as described in Part III.C, no further action is required.

(e) Additional Requirements for Level 4 small MS4s

In addition to the requirements described in Parts III.B.2(c)-(d) above, permittees who operate Level 4 small MS4s shall meet the following requirements:

(1) Identification of Priority Areas Permittees who operate Level 4 small MS4s shall identify priority areas likely to have illicit discharges and shall document the basis for the selection of each priority area and shall create a list of all priority areas identified. This priority area list must be available for review by the TCEQ.

(2) Dry Weather Field Screening By the end of the permit term, permittees who operate Level 4 small MS4s shall develop and implement a written dry weather field screening program to assist in detecting and eliminating illicit discharges to the small MS4. Dry weather field screening must consist of (1) field observations; and (2) field screening according to item (2)c. below.

If dry weather field screening is necessary, at a minimum, the permittee shall:

- a. Conduct dry weather field screening in priority areas as identified by the permittee in Part III.B.2(e)(1). By the end of the permit term, all of those priority areas, although not necessarily all individual outfalls must be screened.

- b. Field observation requirements – The permittee shall develop written procedures for observing flows from outfalls when there has been at least 72 hours of dry weather. The written procedures must include the basis used to determine which outfalls will be observed. The permittee shall record visual observations such as odor, color, clarity, floatables, deposits, or stains.

- c. Field screening requirements – The permittee shall develop written procedures to determine which dry weather flows will be screened, based on results of field observations or complaint from the public or the permittee’s trained field staff. At a minimum, when

visual observations indicate a potential problem such as discolored flows, foam, surface sheen, and other similar indicators of contamination, the permittee shall conduct a field screening analysis for selected indicator pollutants. The basis for selecting the indicator pollutants must be described in the written procedures. Screening methodology may be modified based on experience gained during the actual field screening activities. The permittee shall document the method used.

(3) Reduction of Floatables

The permittee shall implement a program to reduce the discharge of floatables (for example, litter and other human-generated solid refuse) in the MS4. The MS4 shall include source controls at a minimum and structural controls and other appropriate controls where necessary. The permittee shall maintain two locations where floatable material can be removed before the stormwater is discharged to or from the MS4. Floatable material shall be collected at the frequency necessary for maintenance of the removal devices, but not less than twice per year. The amount of material collected shall be estimated by weight, volume, or by other practical means. Results shall be included in the annual report.

*Current Programs:*

At present the City of McKinney performs routine dry weather inspections of our high priority areas throughout the City of McKinney. The water quality data collected throughout the city has helped to identify illicit discharges from businesses and residential neighborhoods. The City has a household hazardous waste program. The Solid Waste Department provides residents with the means to properly dispose of harsh chemicals. GIS maps the stormwater sewer system, permanent BMPs, outfalls and municipal facilities.

*Best Management Practices:*

**Appendix A**

***Construction Site Stormwater Runoff Control***

Regulatory Requirement:

*Construction site stormwater runoff control*

*40 CFR 122.34 (b) (4) (i)*- The permit must identify the minimum elements and require the development, implementation, and enforcement of a program to reduce pollutants in any stormwater runoff to the small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. If the Director waives requirements for stormwater discharges associated with small construction activity in accordance with 122.26(b)(15)(i), the program is not required to develop, implement, and/or enforce a program to reduce pollutant discharges from such sites. At a minimum, the permit must require the program to develop and implement:

- (A) An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State, Tribal, or local law;
- (B) Requirements for construction site operators to implement appropriate erosion and sediment control best management practices;
- (C) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
- (D) Procedures for site plan review which incorporate consideration of potential water quality impacts;
- (E) Procedures for site inspection and enforcement of control measures.

*40 CFR 122.34 (b) (4) (ii)* - Guidance for NPDES permitting authorities and regulated small MS4s: Examples for sanctions to ensure compliance include non-monetary penalties, fines, bonding requirements and/or permit denials for non-compliance. EPA recommends that the procedures for site plan review include the review of individual pre-construction site plans to ensure consistency with local sediment and erosion control requirements. Procedures for site inspections and enforcement of control measures could include steps to identify priority sites for inspection and enforcement based on the nature of the construction activity, topography, and the characteristics of soils and receiving water quality. EPA also recommends that the permit require the program to provide appropriate educational and training measures for construction site operators, and require stormwater pollution prevention plans for construction sites within the MS4s jurisdiction that discharge into the system. (See 122.44(s), 122.35(b))

*TXR040000 Section B (3)* - Construction Site Stormwater Runoff Control

(a) Requirements and Control Measures

(1) All permittees shall develop, implement, and enforce a program requiring operators of small and large construction activities, as defined in Part I of this general permit, to select, install, implement, and maintain stormwater control measures that prevent illicit discharges to the MEP. The program must include the development and implementation of an ordinance or other regulatory mechanism, as well as sanctions to ensure compliance to the extent allowable under state, federal, and local law, to require erosion and sediment control. Existing permittees shall assess program elements that were described in the previous permit, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharge of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of this permit term.

If TCEQ waives requirements for stormwater discharges associated with small construction from a specific site(s), the permittee is not required to enforce the program to reduce pollutant discharges from such site(s).

(b) Requirements for all Permittees All permittees shall include the requirements described below in Parts III.B.3(b)(1)-(7)

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

(2) All permittees shall require that construction site operators implement appropriate erosion and sediment control BMPs. The permittee's construction program must ensure the following minimum requirements are effectively implemented for all small and large construction activities discharging to its small MS4.

a. Erosion and Sediment Controls - Design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants.

b. Soil Stabilization - Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization must be completed as soon as practicable, but no more than 14 calendar days after the initiation of soil stabilization measures. In arid, semiarid, and drought-stricken areas, where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures must be employed. The permittee shall develop written procedures that describes initiating and completing stabilization measures for construction sites.

c. BMPs – Design, install, implement, and maintain effective BMPs to minimize the discharge of pollutants to the small MS4. At a minimum, such BMPs must be designed, installed, implemented and maintained to:

(i) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters;

(ii) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater; and

(iii) Minimize the discharge of pollutants from spills and leaks.

d. As an alternative to (a) through (c) above, all permittees shall ensure that all small and large construction activities discharging to the small MS4 have developed and implemented a stormwater pollution prevention plan (SWP3) in accordance with the TPDES CGP TXR150000. In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures must be employed and described in the written procedure required in item (2)b. above. As an alternative, vegetative stabilization measures may be implemented as soon as practicable.

(3) Prohibited Discharges - The following discharges are prohibited:

a. Wastewater from washout of concrete and wastewater from water well drilling operations, unless managed by an appropriate control;

b. Wastewater from washout and cleanout of stucco, paint, from release oils, and other construction materials;

c. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;

d. Soaps or solvents used in vehicle and equipment washing; and e. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed by appropriate BMPs.

4) Construction Plan Review Procedures To the extent allowable by state, federal, and local law, all permittees shall maintain and implement site plan review procedures that describe which plans will be reviewed as well as when an operator may begin construction. For those permittees without legal authority to enforce site plan reviews, this requirement is limited to

those sites operated by the permittee and its contractors and located within the permittee's regulated area. The site plan procedures must meet the following minimum requirements:

- a. The site plan review procedures must incorporate consideration of potential water quality impacts.
- b. The permittee may not approve any plans unless the plans contain appropriate site specific construction site control measures that, at a minimum, meet the requirements described in Part III.B.3.(a) or in the TPDES CGP, TXR150000. The permittee may require and accept a plan, such as a SWP3, that has been developed pursuant to the TPDES CGP, TXR150000.

(5) Construction Site Inspections and Enforcement To the extent allowable by state, federal, and local law, all permittees shall implement procedures for inspecting large and small construction projects. Permittees without legal authority to inspect construction sites shall at a minimum conduct inspection of sites operated by the permittee or its contractors and that are located in the permittee's regulated area.

a. The permittee shall conduct inspections based on the evaluation of factors that are a threat to water quality, such as: soil erosion potential; site slope; project size and type; sensitivity of receiving waterbodies; proximity to receiving waterbodies; non-stormwater discharges; and past record of non-compliance by the operators of the construction site.

b. Inspections must occur during the active construction phase.

(i) All permittees shall develop and implement updated written procedures outlining the inspection and enforcement requirements. These procedures must be maintained on-site or in the SWMP and be made available to TCEQ.

(ii) Inspections of construction sites must, at a minimum:

1. Determine whether the site has appropriate coverage under the TPDES CGP, TXR150000. If no coverage exists, notify the permittee of the need for permit coverage;
2. Conduct a site inspection to determine if control measures have been selected, installed, implemented, and maintained according to the small MS4's requirements;
3. Assess compliance with the permittee's ordinances and other regulations; and
4. Provide a written or electronic inspection report.

c. Based on site inspection findings, all permittees shall take all necessary follow-up actions (for example, follow-up-inspections or enforcement) to ensure compliance with permit requirements and the SWMP. These follow-up and enforcement actions must be tracked and maintained for review by the TCEQ.

For non-traditional small MS4s with no enforcement powers, the permittee shall notify the adjacent MS4 operator with enforcement authority or the appropriate TCEQ Regional Office according to Part III.A.3(b).

(6) Information submitted by the Public All permittees shall develop, implement, and maintain procedures for receipt and consideration of information submitted by the public.

(7) MS4 Staff Training All permittees shall ensure that all staff whose primary job duties are related to implementing the construction stormwater program (including permitting, plan review, construction site inspections, and enforcement) are informed or trained to conduct these activities. The training may be conducted by the permittee or by outside trainers.

(c) Additional Requirements for Level 3 and 4 small MS4s In addition to the requirements described in Parts III.B.3(b)(1)-(7) above, permittees who operate Level 3 and 4 small MS4s shall meet the following requirements:

**Construction Site Inventory**

Permittees who operate Level 3 and 4 small MS4s shall maintain an inventory of all permitted active public and private construction sites, that result in a total land disturbance of one or more acres or that result in a total land disturbance of less than one acre if part of a larger common plan or development or sale. Notification to the small MS4 must be made by submittal of a copy of an NOI or a small construction site notice, as applicable. The permittee shall make this inventory available to the TCEQ upon request.

*Current Programs:*

The City of McKinney has a robust Stormwater Ordinance (SO) as well as an Engineering Design Manual (EDM) which provides for development within the city. The SO and EDM addresses erosion and sediment controls on construction sites and makes provisions for enforcement if there is non-compliance.

Every project follows a development review process that collects the required details, permits and documents before any form of construction begins. This process also allows for comments and education from the various departments involved in development and construction.

Erosion Control Inspectors are very active in construction compliance. Sites both small and large are inspected regularly. Erosion Control Inspectors partake in the final walk through and certificate of occupancy for any building.

*Best Management Practices:*

**Appendix A**

***Post-construction stormwater management in new development and redevelopment***

Regulatory Requirement:

Post-construction stormwater management in new development and redevelopment

*40 CFR 122.34 (b) (5) (i)* - The permit must identify the minimum elements and require the development, implementation, and enforcement of a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the small MS4. The permit must ensure that controls are in place that would prevent or minimize water quality impacts. At a minimum, the permit must require the permittee to:

- (A) Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for the community;

- (B) Use an ordinance or other regulatory mechanism to address post construction runoff from new development and redevelopment projects to the extent allowable under State, Tribal or local law; and
- (C) Ensure adequate long-term operation and maintenance of BMPs.

*40 CFR 122.34 (b) (5) (ii)* - Guidance for NPDES permitting authorities and regulated small MS4: If water quality impacts are considered from the beginning stages of a project, new development and potentially redevelopment provide more opportunities for water quality protection. EPA recommends that the program ensure the BMPs included in the program: Be appropriate for the local community; minimize water quality impacts; and attempt to maintain pre development runoff condition. EPA encourages the MS4 to participate in locally-based watershed planning efforts which attempt to involve a diverse group of stakeholders including interested citizens. When developing a program that is consistent with this measure's intent, EPA recommends that the permit require the MS4 to adopt a planning process that identifies the municipality's program goals (e.g., minimize water quality impacts resulting from post-construction runoff from new development and redevelopment), implementation strategies (e.g., adopt a combination of structural and/or non-structural BMPs), operation and maintenance policies and procedures, and enforcement procedures. In developing the program, the program will be required to assess existing ordinances, policies, programs and studies that address stormwater runoff quality. In addition to assessing these existing documents and programs, the permit should require the MS4 to provide opportunities to the public to participate in the development of the program. Non-structural BMPs are preventive actions that involve management and source controls such as: Policies and ordinances that provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space (including a dedicated fund source for open space acquisition), provide buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbances of soils and vegetation; policies or ordinances that encourage infill development in higher density urban areas, and areas with existing infrastructure; education programs for developers and the public about project designs that minimize water quality impacts; and measures such as minimization of percent impervious are after development and minimization of directly connected impervious areas, Structural BMPs include: Storage practices such as wet ponds and extended-detention outlet structures, filtration practices such as grassed swales, sand filters and filter strips; and infiltration practices such as infiltration basins and infiltration trenches. EPA recommends that the permit ensure the appropriate implementation of the structural BMPs by considering some or all of the following: Preconstruction review of BMP designs; inspections during construction to verify BMPs are built as designed; post-construction inspection and maintenance of BMPs; and penalty provisions for the noncompliance with design, construction or operation and maintenance. Stormwater technologies are constantly being improved, and EPA recommends that the permit requirements be responsive to these changes, developments or improvements to control technologies.

*TXR040000 Section B (4)* – Post Construction Stormwater Management in New Development and Redevelopment

(a) Post-Construction Stormwater Management Program

- (1) All permittees shall develop, implement, and enforce a program, to the extent allowable under state, federal, and local law, to control stormwater discharges from new development and redeveloped sites that discharge into the small MS4 that disturb one acre or more, including projects that disturb less than one acre that are part of a larger common plan of development or

sale. The program must be established for private and public development sites. The program may utilize an offsite mitigation and payment in lieu of components to address this requirement. Existing permittees shall assess program elements that were described in the previous permit and modify as necessary to continue reducing the discharge of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of the permit term. (2) All permittees shall use, to the extent allowable under state, federal, and local law and local development standards, an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects. The permittees shall establish, implement, and enforce a requirement that owners or operators of new development and redeveloped sites design, install, implement, and maintain a combination of structural and non-structural BMPs appropriate for the community and that protects water quality. If the construction of permanent structures is not feasible due to space limitations, health and safety concerns, cost effectiveness, or highway construction codes, the permittee may propose an alternative approach to TCEQ. Newly regulated permittees shall have the program element fully implemented by the end of the permit term.

(b) Requirements for all Permittees

All permittees shall include the requirements described below in Parts III.B.4.(b)(1)-(3)

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

(2) All permittees shall document and maintain records of enforcement actions and make them available for review by the TCEQ.

(3) Long-Term Maintenance of Post-Construction Stormwater Control Measures

All permittees shall, to the extent allowable under state, federal, and local law, ensure the long-term operation and maintenance of structural stormwater control measures installed through one or both of the following approaches:

a. Maintenance performed by the permittee. (See Part III.B.5)

b. Maintenance performed by the owner or operator of a new development or redeveloped site under a maintenance plan. The maintenance plan must be filed in the real property records of the county in which the property is located. The permittee shall require the owner or operator of any new development or redeveloped site to develop and implement a maintenance plan addressing maintenance requirements for any structural control measures installed on site. The permittee shall require operation and maintenance performed is documented and retained on site, such as at the offices of the owner or operator, and made available for review by the small MS4.

(c) Additional Requirements for Level 4 small MS4s

In addition to the requirements described in Parts III.B.5(b)(1)-(3), permittees who operate Level 4 small MS4s shall meet the following requirements:

Inspections - Permittees who operate Level 4 small MS4s shall develop and implement an inspection program to ensure that all post construction stormwater control measures are operating correctly and are being maintained as required consistent with its applicable maintenance plan. For small MS4s with limited enforcement authority, this requirement applies to the structural controls owned and operated by the small MS4 or its contractors that perform these activities within the small MS4's regulated area.

Inspection Reports - The permittee shall document its inspection findings in an inspection report and make them available for review by the TCEQ.

### *Current Programs:*

The City of McKinney Development department regulates development in the city. The development process requires that all sites be in compliance with the McKinney 2040 Comprehensive Plan. Every site is required to have a Construction Site Notice (CSN) that is tied back to an erosion control plan. Sites under one acre are subject to developing a plan to receive a City of McKinney CSN. The Engineering Design Manual (EDM) has requirements for temporary stabilization after construction is complete but before all requirements for a certificate of occupancy are met. Sites that disturb an area of 1 acre or greater are required to develop a Post Construction Stormwater Quality Plan (PCSQP). As the size of the land disturbed increases, so does the number of permanent post construction controls needed for the site. The City of McKinney utilizes the NCTCOG iSWM Technical Manual for Site Development Controls.

### *Best Management Practices:*

#### **Appendix A**

### *Pollution Prevention and Good Housekeeping for Municipal Operations*

Regulatory Requirement:

#### *Pollution Prevention and Good Housekeeping for Municipal Operations*

*40 CFR 122.34 (b) (6) (i)* – The permit must identify the minimum elements and require the development and implementation of an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. Using training materials that are available from EPA, the State, Tribe, or other organizations, the program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.

*40 CFR 122.34 (b) (6) (ii)* – Guidance for NPDES permitting authorities and regulated small MS4s: EPA recommends that the permit address the following: Maintenance activities, maintenance schedules, and long-term inspection procedures for structural and non-structural storm water controls to reduce floatables and other pollutants discharged from the separate storm sewers; controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations and snow disposal areas operated by the permittee, and waste transfer stations; procedures for properly disposing of waste removed from the separate storm sewers and areas listed above (such as dredge spoil, accumulated sediments, floatables, and other debris); and ways to ensure that new flood management projects assess the impacts on water quality and examine existing projects for incorporating additional water quality protection devices or practices. Operation and maintenance should be an integral component of all storm water management programs. This measure is intended to improve the efficiency of these programs and require new programs where necessary. Properly developed and implemented operation and maintenance programs reduce the risk of water quality problems.

*TXR040000 Section B (5)* – Pollution Prevention and Good Housekeeping for Municipal Operations

(a) Program development

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

Existing permittees shall assess program elements that were described in the previous permit, modify as necessary, and develop and implement new elements, as necessary, to continue reducing the discharges of pollutants from the MS4 to the MEP. New elements must be fully implemented by the end of this permit term and newly regulated permittees shall have the program fully implemented by the end of this permit term. (See also Part III.A.1.(c))

(b) Requirements for all Permittees

All permittees shall include the requirements described below in Parts III.B.5.(1)-(6) in the program:

(1) Permittee-owned Facilities and Control Inventory All permittees shall develop and maintain an inventory of facilities and stormwater controls that it owns and operates within the regulated area of the small MS4. The inventory must include all applicable permit numbers, registration numbers, and authorizations for each facility or controls. The inventory must be available for review by TCEQ and must include, but is not limited, to the following, as applicable:

- a. Composting facilities;
- b. Equipment storage and maintenance facilities;
- c. Fuel storage facilities;
- d. Hazardous waste disposal facilities;
- e. Hazardous waste handling and transfer facilities;
- f. Incinerators;
- g. Landfills;
- h. Materials storage yards;
- i. Pesticide storage facilities;
- j. Buildings, including schools, libraries, police stations, fire stations, and office buildings;
- k. Parking lots;
- l. Golf courses;
- m. Swimming pools;
- n. Public works yards;
- o. Recycling facilities;
- p. Salt storage facilities;
- q. Solid waste handling and transfer facilities;
- r. Street repair and maintenance sites;
- s. Vehicle storage and maintenance yards; and
- t. Structural stormwater controls.

2) Training and Education

All permittees shall inform or train appropriate employees involved in implementing pollution prevention and good housekeeping practices. All permittees shall maintain a training attendance list for inspection by TCEQ when requested.

(3) Disposal of Waste Material - Waste materials removed from the small MS4 must be disposed of in accordance with 30 TAC Chapters 330 or 335, as applicable.

(4) Contractor Requirements and Oversight

a. Any contractors hired by the permittee to perform maintenance activities on permittee-owned facilities must be contractually required to comply with all of the stormwater control measures, good housekeeping practices, and facility specific stormwater management operating procedures described in Parts III B.5.(b)(2)-(6).

b. All permittees shall provide oversight of contractor activities to ensure that contractors are using appropriate control measures and SOPs. Oversight procedures must be maintained on-site and made available for inspection by TCEQ.

(5) Municipal Operation and Maintenance Activities

a. Assessment of permittee-owned operations All permittees shall evaluate operation and maintenance (O&M) activities for their potential to discharge pollutants in stormwater, including but not limited to:

(i) Road and parking lot maintenance, including such areas as pothole repair, pavement marking, sealing, and re-paving;

(ii) Bridge maintenance, including such areas as re-chipping, grinding, and saw cutting;

(iii) Cold weather operations, including plowing, sanding, and application of deicing and anti-icing compounds and maintenance of snow disposal areas; and

(iv) Right-of-way maintenance, including mowing, herbicide and pesticide application, and planting vegetation.

b. All permittees shall identify pollutants of concern that could be discharged from the above O&M activities (for example, metals; chlorides; hydrocarbons such as benzene, toluene, ethyl benzene, and xylenes; sediment; and trash).

c. All permittees shall develop and implement a set of pollution prevention measures that will reduce the discharge of pollutants in stormwater from the above activities. These pollution prevention measures may include the following examples:

(i) Replacing materials and chemicals with more environmentally benign materials or methods;

(ii) Changing operations to minimize the exposure or mobilization of pollutants to prevent them from entering surface waters; and

(iii) Placing barriers around or conducting runoff away from deicing chemical storage areas to prevent discharge into surface waters.

d. Inspection of pollution prevention measures - All pollution prevention measures implemented at permittee-owned facilities must be visually inspected to ensure they are working properly. The permittee shall develop written procedures that describes frequency of inspections and how they will be conducted. A log of inspections must be maintained and made available for review by the TCEQ upon request.

(6) Structural Control Maintenance If BMPs include structural controls, maintenance of the controls must be performed by the permittee and consistent with maintaining the effectiveness of the BMP. The permittee shall develop written procedures that define the frequency of inspections and how they will be conducted.

(c) Additional Requirements for Level 3 and 4 small MS4s:

In addition to the requirements described in Parts.B.5.(b)(1)-(6) above, permittees who operate Level 3 or 4 small MS4s shall meet the following requirements:

(1) Storm Sewer System Operation and Maintenance

a. Permittees who operate

Level 3 or 4 small MS4s shall develop and implement an O&M program to reduce to the maximum extent practicable the collection of pollutants in catch basins and other surface drainage structures.

b. Permittees who operate Level 3 or 4 small MS4s shall develop a list of potential problem areas. The permittees shall identify and prioritize problem areas for increased inspection (for example, areas with recurrent illegal dumping).

(2) Operation and Maintenance Program to Reduce Discharges of Pollutants from Roads

Permittees who operate Level 3 or 4 small MS4s shall implement an O&M program that includes at least one of the following: a street sweeping and cleaning program, or an equivalent BMP such as an inlet protection program, which must include an implementation schedule and a waste disposal procedure. The basis for the decision must be included in the SWMP. If a street sweeping and cleaning program is implemented, the permittee shall evaluate the following permittee-owned and operated areas for the program: streets, road segments, and public parking lots including, but not limited to, high traffic zones, commercial and industrial districts, sport and event venues, and plazas, as well as areas that consistently accumulate high volumes of trash, debris, and other stormwater pollutants.

a. Implementation schedules – If a sweeping program is implemented, the permittee shall sweep the areas in the program (for example, the streets, roads, and public parking lots) in accordance with a frequency and schedule determined in the permittee's O&M program.

b. For areas where street sweeping is technically infeasible (for example, streets without curbs), the permittee shall focus implementation of other trash and litter control procedures, or provide inlet protection measures to minimize pollutant discharges to storm drains and creeks.

c. Sweeper Waste Material Disposal – If utilizing street sweepers, the permittee shall develop a procedure to dewater and dispose of street sweeper waste material and shall ensure that water and material will not reenter the small MS4.

(3) Mapping of Facilities Permittees who operate Level 3 or 4 small MS4s shall, on a map of the area regulated under this general permit, identify where the permittee-owned and operated facilities and stormwater controls are located.

(4) Facility Assessment

Permittees who operate Level 3 or 4 small MS4s shall perform the following facility assessment in the regulated portion of the small MS4 operated by the permittee:

- a. Assessment of Facilities' Pollutant Discharge Potential - The permittee shall review the facilities identified in Part III.B.5.(b) once per permit term for their potential to discharge pollutants into stormwater.
- b. Identification of high priority facilities - Based on the Part III.B.5.(c)(4)a. assessment, the permittee shall identify as high priority those facilities that have a high potential to generate stormwater pollutants and shall document this in a list of these facilities. Among the factors that must be considered in giving a facility a high priority ranking are the amount of urban pollutants stored at the site, the identification of improperly stored materials, activities that must not be performed outside (for example, changing automotive fluids, vehicle washing), proximity to waterbodies, proximity to sensitive aquifer recharge features, poor housekeeping practices, and discharge of pollutant(s) of concern to impaired water(s). High priority facilities must include, at a minimum, the permittee's 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.
- c. Documentation of Assessment Results - The permittee shall document the results of the assessments and maintain copies of all site evaluation checklists used to conduct the assessments. The documentation must include the results of the permittee's initial assessment, and any identified deficiencies and corrective actions taken.

(5) Development of Facility Specific SOPs

Permittees who operate Level 3 or 4 small MS4s shall develop facility specific stormwater management SOPs. The permittee may utilize existing plans or documents that may contain the following required information:

- a. For each high priority facility identified in Part III.B.5.(c)(4)b., the permittee shall develop a SOP that identifies BMPs to be installed, implemented, and maintained to minimize the discharge of pollutants in stormwater from each facility.
- b. A hard or electronic copy of the facility-specific stormwater management SOP (or equivalent existing plan or document) must be maintained and be available for review by the TCEQ. The SOP must be kept on site when possible and must be kept up to date.

(6) Stormwater Controls for High Priority Facilities Permittees who operate Level 3 or 4 small MS4s shall implement the following stormwater controls at all high priority facilities identified in Part III.B.5.(c)(4)b. A description of BMPs developed to comply with this requirement must be included in each facility specific SOP:

- a. General good housekeeping – Material with a potential to contribute to stormwater pollution must be sheltered from exposure to stormwater.
- b. De-icing and anti-icing material storage - The permittee shall ensure, to the MEP, that stormwater runoff from storage piles of salt and other de-icing and anti-icing materials is not discharged; or shall ensure that any discharges from the piles are authorized under a separate discharge permit.
- c. Fueling operations and vehicle maintenance - The permittee shall develop SOPs (or equivalent existing plans or documents) that address spill prevention and spill control at permittee-owned and operated vehicle fueling, vehicle maintenance, and bulk fuel delivery facilities.

d. Equipment and vehicle washing - The permittee shall develop SOPs that address equipment and vehicle washing activities at permittee-owned and operated facilities. The discharge of equipment and vehicle wash water to the small MS4 or directly to receiving waters from permittee-owned facilities is not authorized under this general permit. To ensure that wastewater is not discharged under this general permit, the permittee's SOP may include installing a vehicle wash reclaim system, capturing and hauling the wastewater for proper disposal, connecting to sanitary sewer (where applicable and approved by local authorities), ceasing the washing activity, or applying for and obtaining a separate TPDES permit.

#### (7) Inspections

Permittees who operate Level 3 or 4 small Ms4s shall develop and implement an inspection program, which at a minimum must include periodic inspections of high priority permittee-owned facilities. The results of the inspections and observations must be documented and available for review by the TCEQ.

#### (c) Additional Requirements for Level 4 small MS4s:

In addition to all the requirements described in Parts III.B.5(b) and III.B.5.(c) above, permittees who operate Level 4 small MS4s shall meet the following requirements:

##### (1) Pesticide, Herbicide, and Fertilizer Application and Management

a. Landscape maintenance - The permittee shall evaluate the materials used and activities performed on public spaces owned and operated by the permittee such as parks, schools, golf courses, easements, public rights of way, and other open spaces for pollution prevention opportunities. Maintenance activities for the turf landscaped portions of these areas may include mowing, fertilization, pesticide application, and irrigation. Typical pollutants include sediment, nutrients, hydrocarbons, pesticides, herbicides, and organic debris.

b. The permittee shall implement the following practices to minimize landscaping-related pollutant generation with regard to public spaces owned and operated by the permittee:

(i) Educational activities, permits, certifications, and other measures for the permittee's applicators and distributors.

(ii) Pest management measures that encourage non-chemical solutions where feasible. Examples may include:

(a) Use of native plants or xeriscaping;

(b) Keeping clippings and leaves out the small MS4 and the street by encouraging mulching, composting, or landfilling;

(c) Limiting application of pesticides and fertilizers if precipitation is forecasted within 24 hours, or as specified in label instructions;

(d) Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing motorist safety.

c. The permittee shall develop schedules for chemical application in public spaces owned and operated by the permittee that minimize the discharge of pollutants from the application due to irrigation and expected precipitation.

d. The permittee shall ensure collection and proper disposal of the permittee's unused pesticides, herbicides, and fertilizers.

## (2) Evaluation of Flood Control Projects

The permittee shall assess the impacts of the receiving water(s) for all flood control projects. New flood control structures must be designed, constructed, and maintained to provide erosion prevention and pollutant removal from stormwater. The retrofitting of existing structural flood control devices to provide additional pollutant removal from stormwater shall be implemented to the maximum extent practicable.

### *Current Programs:*

The Good Housekeeping and pollution prevention aspects for the City of McKinney include routine street sweeping of all public streets at least twice a year, parks application of pesticides, herbicides and lawn maintenance. Stormwater pollution prevention plans have been developed for the Fleet Department and the Airport.

### *Best Management Practices:*

#### **Appendix A**

### *Industrial Stormwater Sources:*

Regulatory Requirement:

### *Industrial Stormwater Sources:*

#### *TXR040000 Section B (6) – Industrial Stormwater Sources*

Permittees operating a Level 4 small MS4 shall include the requirements described below in Part III.

B.6(a) and (b) – this requirement is only applicable to Level 4 MS4s

(a) Permittees who operate Level 4 small MS4s shall identify and control pollutants in stormwater discharges to the small MS4 from permittee's landfills; other treatment, storage, or disposal facilities for municipal waste (for example, transfer stations and incinerators); hazardous waste treatment, storage, disposal and recovery facilities and facilities that are subject to Emergency Planning and Community Right-to-Know Act (EPCRA) Title III, Section 313; and any other industrial or commercial discharge the permittee determines are contributing a substantial pollutant loading to the small MS4.

(b) The program must include priorities and procedures for inspections and for implementing control measures for such industrial discharges.

*Current Programs:*

As of last the last permitting cycle the City of McKinney is required by TCEQ and the EPA to perform Industrial inspections of all industry within the city's jurisdiction. Annual inspections of industries are done by the Stormwater Inspector. Documentation is reviewed, facilities of inspected and any education and corrections are provided to sites.

*Best Management Practices:*

**Appendix A**