

**CITY OF MCKINNEY  
STORM WATER MANAGEMENT PROGRAM**

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## **CITY OF MCKINNEY STORM WATER MANAGEMENT PROGRAM**

### **1.0 EXECUTIVE SUMMARY**

Storm water often contains pollutants that may be transported into municipal separate storm sewer systems (MS4s) and subsequently discharged untreated into local creeks, streams, lakes and rivers. In August 2007, the Texas Commission on Environmental Quality (TCEQ) issued the Phase II TXR040000 General Permit under the Texas Pollutant Discharge Elimination System (TPDES) program. This TPDES General Permit program extends coverage of the Phase II Rule to include small MS4s in the “urbanized areas” (UA) as designated by the U.S. Census Bureau. The City of McKinney, population approximately 120,000 is included in a designated UA (Appendix A) and has appropriately developed a storm water management program (SWMP) as required for coverage under the General Permit. The SWMP includes a listing of Best Management Practices (BMPs) that will be implemented by the City in order to reduce pollutants in the City’s storm water to the “maximum extent practicable”. Existing City of McKinney storm water programs and activities designed to protect the City’s water quality will be supplemented with new BMP activities. Measurable goals and an implementation schedule were developed for each of the BMPs in the SWMP. The BMPs, measurable goals, implementation schedule, and final SWMP were developed with input from the City’s Storm Water Committee, a public meeting, and review by the City Council. BMPs, measurable goals, and the implementation schedule were selected based upon their ability to meet specific permit requirements and to reduce pollutants in the City’s storm water to the maximum extent practicable. They were also selected based upon a general assessment of BMP effectiveness, applicability to McKinney, and costs associated with implementation of the BMPs. Effectiveness of the selected BMPs, and success in achieving the selected measurable goals will be reviewed annually.

The City of McKinney will publish notice of the executive director’s preliminary determination on the NOI and SWMP as required by the General Permit (Part II.D.12) in the newspaper of largest circulation in Collin County. The City will also comply with a public meeting should the Texas Commission on Environmental Quality (TCEQ) determine that there is significant public interest.

## **2.0 PROGRAM DEVELOPMENT PROCESS**

### **2.1 Purpose and Scope**

The City of McKinney (City) has developed a SWMP in accordance with TPDES requirements for obtaining authorization for storm water and certain non-storm water discharges. The SWMP has been developed in accordance with guidelines published by TCEQ for coverage under the TPDES General Permit. The SMWP has been developed to:

- reduce the discharge of pollutants from the City's MS4 to the maximum extent practicable;
- to protect water quality; and
- to satisfy the appropriate water quality requirements of the Clean Water Act and the Texas Water Code.

The SWMP describes specific actions that will be taken over the five-year period to reduce pollutants and protect the City's storm water quality. These specific actions are listed as BMPs that will be implemented by the City for each of the six Minimum Control Measures (MCMs), as required by the General Permit. 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.

### **2.2 BMP Selection**

A storm water committee was formed to provide guidance in the selection of BMPs and the development of McKinney's SWMP. A listing of the members of the committee is included in Appendix B.

Various structural and non-structural BMPs will be implemented throughout the five-year permit term authorized under the General Permit. A two-step process was utilized to select the BMPs to be included in the McKinney SWMP.

#### Step One

The City of McKinney has historically implemented various storm water related BMPs intended specifically to protect the City's storm water quality. An important aspect of developing an effective, compliant, and cost efficient TPDES Phase II SWMP is to "take credit" for these on-going programs. Details of the City's existing storm water-related programs were collected, summarized, and categorized into one of the six MCMs required by the General Permit. Some of the City's existing programs meet specific General Permit requirements, while others contribute toward fulfilling the General Permit mandate of reducing pollutants to the maximum extent practicable.

### Step Two

Additional BMPs were selected to supplement the City's existing programs and to fulfill the requirements of the General Permit. Alternative BMPs were evaluated for each of the six MCM's. The evaluation process involved developing general assessments of various alternative BMPs. Some of the alternative BMPs were developed and tailored to the specific needs of McKinney, while other alternative BMPs were developed from general BMP "menus" published by the North Central Texas Council of Governments (NCTCOG) and the Environmental Protection Agency (EPA).

Alternative BMPs were generally assessed in relation to the following criteria:

- fulfillment of General Permit requirements
- effectiveness
- appropriateness for McKinney, and
- estimated cost of implementation.

### **2.3 Selection of Measurable Goals and Implementation Schedule**

Specific measurable goals have been developed for each BMP selected for inclusion into the City's SWMP. In accordance with General Permit requirements, measurable goals have been developed to provide a mechanism for measuring the success of the City's SWMP in protecting the City's water quality and reducing pollutants to the maximum extent practicable. As provided under the General Permit, the City may phase in the implementation of the SWMP over a five-year period. Accordingly, a reasonable progression of measurable goals was developed for each of the selected BMPs. The goals were selected with consideration towards developing a logical progression of implementation, assessing the ability to measure and track progress, and working within budgetary constraints.

### **2.4 Development and Review Process**

Storm water committee meetings were held on October 30, 2002, November 12 and 21, 2002, and December 2, 2002. The storm water committee meetings culminated in the development of a Draft Storm Water Management Program. The draft program was then made available for general public comment at a Public Meeting held at City Hall on December 12, 2002. Further review and comment was provided by the McKinney City Council during a Council work session on January 6, 2002.

From the original January 2002 Draft SWMP, this final SWMP document was created considering changes made by TCEQ to the draft TXR040000 permit as issued and made effective August 13th, 2007. Per storm water committee meetings, other modifications to the original Draft SWMP were made to reflect current status of certain BMPs included in the SWMP. Examples include the Texas SmartScape program and NCTCOG's Integrated Storm Water Management (*iSWM*<sup>TM</sup>) program. The SWMP was again presented to the City

Council for discussion and consideration on December 18, 2007. The SWMP was approved by Council on December 18, 2007.

### **3.0 LIST OF BMPS, MEASURABLE GOALS, AND IMPLEMENTATION SCHEDULE**

In accordance with TCEQ's General Permit requirements, McKinney's SWMP includes an implementation plan for BMPs in each of six Minimum Control Measures. The six minimum control measures are:

1. Public Education and Outreach on Storm Water Impacts
2. Public Involvement / Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm Water Runoff Control
5. Post-Construction Storm Water Management in New Development and Redevelopment, and
6. Pollution Prevention / Good Housekeeping for Municipal Operations

Specific requirements of each MCM are provided below. Following each listing of MCM requirements, a table is provided that demonstrates BMPs selected for that MCM, along with BMP descriptions, implementation schedules and measurable goals. Appendix C references each specific BMP listed within the table and those City department(s) having responsibility for the BMP. The **Bold** face type indicates the department(s) with primary responsibility for each BMP.

#### **3.1 Public Education and Outreach on Storm Water Impacts**

##### ***Specific requirements:***

- (a) A public education program must be developed and implemented to distribute educational materials to the community or conduct equivalent outreach activities that will be used to inform the public. The MS4 operator may determine the most appropriate sections of the population at which to direct the program. The MS4 operator must consider the following groups and the SWMP shall provide justification for any listed group that is not included in the program:

- (1) residents;
- (2) visitors;
- (3) public service employees;
- (4) businesses;

(5) commercial and industrial facilities; and

(6) construction site personnel.

The outreach must inform the public about the impacts that storm water run-off can have on water quality, hazards associated with illegal discharges and improper disposal of waste, and steps they can take to reduce pollutants in storm water run-off.

- (b) The MS4 operator must document activities conducted and materials used to fulfill this control measure. Documentation shall be detailed enough to demonstrate the amount of resources used to address each group. This documentation shall be retained in the annual reports.

### **3.2 Public Involvement / Participation**

#### ***Specific Requirements:***

The MS4 operator must, at a minimum, comply with any state and local public notice requirements when implementing a public involvement/participation program. It is recommended that the program include provisions to allow all members of the public within the small MS4 the opportunity to participate in SWMP development and implementation. Correctional facilities will not be required to implement this MCM.

### 3.3 Illicit Discharge Detection and Elimination

#### ***Specific Requirements:***

#### (a) Illicit Discharges

A section within the SWMP must be developed to establish a program to detect and eliminate illicit discharges to the small MS4. The SWMP must include the manner and process to be used to effectively prohibit illicit discharges. To the extent allowable under state and local law, an ordinance or other regulatory mechanism must be utilized to prohibit and eliminate illicit discharges. Elements must include:

#### (1) Detection

The SWMP must list the techniques used for detecting illicit discharges.

#### (2) Elimination

The SWMP must include appropriate actions and, to the extent allowable under state and local law, establish enforcement procedures for removing the source of an illicit discharge.

#### (b) Allowable Non-Storm Water Discharges

Non-storm water flows listed in Part II.B and Part VI.B of the permit do not need to be considered by the MS4 operator as an illicit discharge requiring elimination unless the operator of the small MS4 or the executive director identifies the flow as a significant source of pollutants to the small MS4. In lieu of considering non-storm water sources on a case-by-case basis, the MS4 operator may develop a list of common and incidental non-storm water discharges that will not be addressed as illicit discharges requiring further elimination. If developed, the listed sources must not be reasonably expected to be significant sources of pollutants either because of the nature of the discharge or the conditions that are established by the MS4 operator prior to accepting the discharge to the small MS4. If this list is developed, then all local controls and conditions established for these listed discharges must be described in the SWMP and any changes to the SWMP must be included in the

annual report, and must meet the requirement of Part II.D.3 of the general permit.

(c) Storm Sewer Map

- (1) A map of the storm sewer system must be developed and must include the following:
  - (i) the location of all outfalls;
  - (ii) the names and locations of all waters of the U.S. that receive discharges from the outfalls; and
  - (iii) any additional information needed by the permittee to implement its SWMP.
- (2) The SWMP must include the source of information used to develop the storm sewer map, including how the outfalls are verified and how the map will be regularly updated.

### 3.4 Construction Site Storm Water Runoff Control

#### ***Specific Requirements:***

The MS4 operator, to the extent allowable under State and local law, must develop, implement, and enforce a program to reduce pollutants in any storm water run-off to the small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre or if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more of land. The MS4 operator is not required to develop, implement, and/or enforce a program to reduce pollutant discharges from sites where the construction site operator has obtained a waiver from permit requirements under NPDES or TPDES construction permitting requirements based on a low potential for erosion.

- (a) The program must include the development and implementation of, at a minimum, 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 and local law.
- (b) Requirements for construction site contractors to, at a minimum:
  - (1) implement appropriate erosion and sediment control BMPs; and
  - (2) control waste such as discarded building materials, concrete truck washout water, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
- (c) The MS4 operator must develop procedures for:
  - (1) site plan review which incorporate consideration of potential water quality impacts;
  - (2) receipt and consideration of information submitted by the public; and
  - (3) site inspection and enforcement of control measures to the extent allowable under state and local law.

### **3.5 Post-Construction Storm Water Management in New Development and Redevelopment**

#### ***Specific Requirements:***

To the extent allowable under state and local law, the MS4 operator must develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre of land, including projects less than one acre that are part of a larger common plan of development or sale that will result in disturbance of one or more acres, that discharge into the small MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts. The permittee shall:

- (a) Develop and implement strategies which include a combination of structural and/or non-structural 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 and local law; and
- (c) Ensure adequate long-term operation and maintenance of BMPs.

### **3.6 Pollution Prevention/Good Housekeeping Measures for Municipal Operations**

#### ***Specific Requirements:***

A section within the SWMP must be developed to establish an operation and maintenance program, including an employee training component, that has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

#### **(a) Good Housekeeping and Best Management Practices (BMPs)**

Housekeeping measures and BMPs (which may include new or existing structural or non-structural controls) must be identified and either continued or implemented with the goal of preventing or reducing pollutant runoff from municipal operations. Examples of municipal operations and municipally owned areas include, but are not limited to:

- (1) park and open space maintenance;
- (2) street, road, or highway maintenance;
- (3) fleet and building maintenance;
- (4) storm water system maintenance;
- (5) new construction and land disturbances.
- (6) municipal parking lots;
- (7) vehicle and equipment maintenance and storage yards;
- (8) waste transfer stations; and
- (9) salt /sand storage locations.

#### **(b) Training**

A training program must be developed for all employees responsible for municipal operations subject to the pollution prevention/good housekeeping program. The training program must include training materials directed at preventing and reducing storm water pollution from municipal operations. Examples or descriptions of training materials being used must be included in the SWMP.

(c) Structural Control Maintenance

If BMPs include structural controls, maintenance of the controls must be performed at a frequency determined by the MS4 operator and consistent with maintaining the effectiveness of the BMP. The SWMP must list all of the following:

- (1) maintenance activities;
- (2) maintenance schedules; and
- (3) long-term inspection procedures for controls used to reduce floatables and other pollutants.

(d) Disposal of Waste

Waste removed from the small MS4 and waste that is collected as a result of maintenance of storm water structural controls must be properly disposed. A section within the SWMP must be developed to include procedures for the proper disposal of waste, including:

- (1) dredge spoil;
- (2) accumulated sediments; and
- (3) floatables.

(e) Municipal Operations and Industrial Activities

The SWMP must include a list of all:

- (1) municipal operations that are subject to the operation, maintenance, or training program developed under the conditions of this section; and
- (2) municipally owned or operated industrial activities that are subject to TPDES storm water regulations.

### ***Additional Good-Housekeeping Activity:***

#### **Waste Disposal**

Dredge spoil, accumulated sediment, and floatables collected through the implementation of storm sewer cleaning activities (BMP 6.1), street sweeping activities (BMP 6.2), and other routine city operations will be properly disposed of at a nearby landfill or other properly permitted facility depending on constituents of materials collected. Collected material quantities will be tracked in conjunction with implementation of the respective individual BMPs.

#### **Structural Control Maintenance**

No structural controls have been identified under the current SWMP. Structural controls will be identified during the second year of the permit term through the implementation of BMP 6.6, "Fleet Service Center BMPs". Maintenance activities, schedules, and inspection procedures will be identified and incorporated into the SWMP at appropriate intervals.

#### **Training**

Detailed training programs and materials for City personnel have not yet been developed. Development or adoption of an employee good-housekeeping training program is listed as a BMP to occur during the first year of the permit. Subsequent permit years will include implementation of the program and tracking of employees trained.

### ***Municipal Operations and Industrial Activity***

The municipal operations that are subject to the operation, maintenance, or training program developed under the conditions of the pollution prevention / good housekeeping MCM include:

- park and open space maintenance;
- street, road, or highway maintenance;
- fleet and building maintenance;
- storm water system maintenance;
- vehicle and equipment maintenance and storage yards;
- salt / sand storage locations.

The City of McKinney's Municipal Airport operates under the TPDES multi-sector general permit number TXR151M29. A copy of the Notice of Intent is provided in Appendix G.

#### 4.0 MEASURABLE GOAL EVALUATION PROCESS

Selected measurable goals for each BMP will be evaluated on an annual basis. Implementation of each BMP will be tracked as appropriate during each permit year in order to provide documentation of the BMP activities. Relative success in achieving the measurable goals, as well as an assessment of the effectiveness of each BMP, will also be evaluated on an annual basis.

Multiple City departments will be responsible for implementing portions of the SWMP and for tracking and evaluating the City's success in meeting the program's measurable goals. It is anticipated that the following City departments will be involved in the implementation and verification process:

- Public Works
  - Streets
  - Water / Wastewater
  - Environmental Waste
- Engineering
  - GIS
- Communications and Marketing
- Library
- Community Services
- Parks and Recreation
- Building Inspections
- Information Technology
- Fire
- Fleet Services
- Planning
- Airport

Appendix C references each specific BMP listed within the table and those City department(s) having responsibility for the BMP. The **Bold** face type indicates the department(s) with primary responsibility for each BMP.

#### 5.0 PARTICIPATING ENTITIES

Whereas the City of McKinney is the sole participant of this SWMP, and McKinney is not a participant of any other SWMPs, implementation of portions of this SWMP relies upon activities to be facilitated by NCTCOG. A copy of the agreement between the City of McKinney and NCTCOG for performance of the activities described within the SWMP is provided in Appendix H. NCTCOG activities that the City is relying upon include:

- development of a regional integrated Storm Water Management design manual, implemented as applicable for the Post-Construction MCM;

- continued access to the Texas SmartScape material on the internet; and
- development of educational materials / modules for various BMPs.

McKinney will continue to participate in the development of a regional storm water management program as facilitated by NCTCOG.

## **6.0 ASSESSMENT OF NON-STORM WATER DISCHARGES**

In accordance with the requirements of the General Permit, non-storm water flows listed in Part II.B and Part VI.B. will not be considered as an illicit discharge requiring elimination unless the flow is identified as a significant source of pollutants to McKinney's MS4. The flows referenced by Part II.B and Part VI.B of the general permit were discussed by the storm water committee to ascertain if any known significant water quality impacts have been caused as a result of the discharges. There is no knowledge of adverse impacts to the City's water quality from any of the listed discharges.

## **APPENDICIES**

- Appendix A City of McKinney Urbanized Area
- Appendix B Storm Water Committee Members
- Appendix C BMP Departmental Responsibilities
- Appendix D General Notes and Erosion Control Manual
- Appendix E Storm Water Ordinance
- Appendix F Design Review Standards for Post Construction Drainage Facilities
- Appendix G Development Permit
- Appendix H Municipal Airport TPDES Notice of Intent
- Appendix I NCTCOG Agreement
- Appendix J McKinney Phase II Permit NOI
- Appendix K TCEQ Executive Directors Preliminary Decision and Fact Sheet
- Appendix L TCEQ Correspondence/Comments on McKinney SWMP
- Appendix M TPDES General Permit TXR040000

## Public Education and Outreach on Storm Water Impacts

Residents			
Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 1.1 Utility Bill Insert	Distribute educational material to residents via utility bill inserts. The inserts will include storm water education in general per the TCEQ general permit guidelines. Various inserts will also include information specifically relating to fertilizer, herbicide, and pesticide usage, proper disposal of household hazardous waste and oils, and other educational and participatory opportunities.	Year 1	* Develop an outline of the information to be communicated over a 5 year period. * Distribute one educational flyer as a utility bill insert.
		Year 2 - 5	* Distribute educational flyer as a utility bill insert one time per year. * Make inserts available at the City's public library.
BMP 1.2 Texas SmartScape Website Information	Purchase and distribute bookmarks or other informational materials promoting the Texas SmartScape Website developed by NCTCOG. Create a link from McKinney's website to the Texas SmartScape website.	Year 1	* Obtain Texas SmartScape bookmarks or other materials promoting the Texas SmartScape website. * Develop a distribution plan for bookmarks or SmartScape promotional materials.
		Year 2 - 5	* Implement distribution plan for bookmarks or SmartScape promotional materials. Track numbers distributed. * Make bookmarks or promotional materials available at public library. * Provide a link from McKinney's storm water website (after development) to the Texas SmartScape website.
BMP 1.3 "McKinney Cares" Storm Water Web Site	Develop a storm water web site for the city. The web site will include storm water education in general per the TCEQ general permit guidelines. The web site will also provide specific information regarding the City's TPDES Phase II program, educational and participatory opportunities, and links to other local, state, and national storm water web sites.	Year 1	* Begin building the web site.
		Year 2	* Web site up and running.
		Year 3 - 5	* Web site revised/updated as needed. * Feedback regarding McKinney's storm water program solicited via the web site.

## Public Education and Outreach on Storm Water Impacts

Residents			
Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 1.4 "Seeds for Thought" Classroom Education	Provide education opportunities and curriculum materials to the McKinney Independent School District (MISD). Materials and curriculum will be assessed and selected from existing, readily available programs, and through discussions with MISD staff.	Year 1 - 5	* Discuss City's Phase II storm water education goals with MISD. * Provide information on available storm water educational material to MISD.
BMP 1.5 Storm Water Book Covers	Provide storm water book covers to MISD for their distribution.	Year 1 - 5	Each year, develop, create, and provide storm water book covers to MISD for their distribution. Each year, provide enough covers to supply all MISD school children with a book cover, or provide a quantity requested by MISD.
BMP 1.6 "Stencil Town" Storm Drain Markers	Place storm drain markers on local storm drains in an effort to increase awareness and to prevent dumping into the storm drain system.	Year 1	* Assess the number of storm drain inlets not currently marked. Determine the number of inlets that would need to be marked in order to attain a goal of having 25% of all of the City's inlets marked, excluding inlets on arterial roads and highways. * Develop an implementation plan that will result in attaining the City's goal of having 25% of all inlets marked by the end of the permit term.
		Year 2 - 5	* Continue implementation of the City's plan for installing storm drain markers, achieving the 25% marked goal by the end of the 5th year.
BMP 1.7 "Public Reference"	Provide educational material for reference at the Public Library. Materials to be provided will include copies of educational materials used for other educational BMPs, access to McKinney's storm water website, information regarding McKinney's storm water program, and other miscellaneous storm water educational material as deemed appropriate.	Year 1 - 5	* Provide copies of educational materials at the Public Library. * A description of the materials made available at the public library will be included in the Annual Report

## Public Education and Outreach on Storm Water Impacts

Residents			
Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 1.8 Storm Water video	Develop or acquire storm water videos for display on McKinney's Public Access Channel. Copies of videos will also be made available for checkout at the Public Library and will be made available to MISD for use in classroom education.	Year 1	* Begin development or acquisition of a storm water education video.
		Year 2 - 5	* Air a minimum of three storm water educational videos, developed or acquired by the City, on the City's public access channel. * Provide copies of videos to Public Library

## Public Education and Outreach on Storm Water Impacts

Visitors			
Best Management Practices	BMP Descriptiopn	Implementation Schedule	Measurable Goals
See BMP 1.3 (Storm Water Website)	<i>Refer to referenced BMP for specific goals and schedule</i>		
See BMP 1.6 (Stencil Town)	<i>Refer to referenced BMP for specific goals and schedule</i>		
See BMP 1.7 (Public Reference)	<i>Refer to referenced BMP for specific goals and schedule</i>		

## Public Education and Outreach on Storm Water Impacts

Public Service Employees			
Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 1.9 City Employee Education	City Employees will receive storm water education on general storm water topics in accordance with TCEQ educational guidelines and will also receive information relating to McKinney's Phase II program, with a focus on good housekeeping measures.	Year 1 - 5	<ul style="list-style-type: none"> <li>* Provide Storm Water information through pay-check stuffers a minimum of once per permit year.</li> <li>* Provide educational material on the City's intranet.</li> </ul>
BMP 1.10 Education For Elected Officials	Elected Officials will receive storm water education on general storm water topics in accordance with TCEQ educational guidelines and will also receive information relating to McKinney's Phase II program.	Year 1 - 5	<ul style="list-style-type: none"> <li>* Provide educational material and Phase II program status reports a minimum of 2 times per year through Council meetings or Council updates.</li> <li>* Provide educational material on the City's intranet.</li> </ul>

## Public Education and Outreach on Storm Water Impacts

Businesses			
Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 1.11 Partnerships for McKinney	Develop a partnership program for providing educational material to McKinney's businesses.	Year 1	* Develop a partnership program with key business representatives in order to develop educational materials and a distribution list. * Conduct a minimum of one meeting.
		Year 2	* Distribute educational material to local businesses a minimum of 1 time.
		Year 3 - 5	* Solicit feedback once per year and revise partnership program if appropriate. * Distribute educational material a minimum of 1 time per year.
See BMP 1.2 (Texas SmartScape Website)	<i>Refer to referenced BMP for specific goals and schedule</i>		
See BMP 1.3 (McKinney Storm Water Web Site)	<i>Refer to referenced BMP for specific goals and schedule</i>		

## Public Education and Outreach on Storm Water Impacts

Commercial and Industrial Facilities			
Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 1.12 Commercial and Industrial Education	Develop a partnership program for providing educational material to McKinney's commercial and industrial businesses.	Year 1	* Use available resources to establish a group e-mail distribution list of McKinney commercial and industrial businesses. * Develop a commercial and industrial partnership program by sending all businesses on the distribution list an e-mail providing information on McKinney's SWMP and soliciting continued communication/input with regard to storm water related issues
		Year 2	* Distribute educational material tailored to local commercial and industrial businesses a minimum of one time. * Continue e-mail distribution as appropriate. * Track number of storm water related communications
		Year 3 - 5	* Solicit feedback once per year and revise partnership program if appropriate. * Distribute educational material a minimum of 1 time per year. * Continue e-mail distribution as appropriate. * Track number of storm water related communications
See BMP 1.2 (Texas SmartScape Website)	<i>Refer to referenced BMP for specific goals and schedule</i>		
See BMP 1.3 (McKinney Storm Water Web Site)	<i>Refer to referenced BMP for specific goals and schedule</i>		

## Public Education and Outreach on Storm Water Impacts

Construction Site Personnel			
Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 1.13 City Inspector Training	Train City construction site erosion control inspectors.	Year 1 - 5	<ul style="list-style-type: none"> <li>* Provide a minimum of 8 hours of construction site erosion control training to inspection personnel at least once every three years.</li> <li>* Provide a minimum of 8 hours of construction site erosion control training to new inspection employees within 6 months of the employee's start date.</li> <li>* Track training hours and number of attendees.</li> </ul>
BMP 1.14 Developer/Builder/ Engineer Education and Training	Provide educational material to the development community and offer training opportunities.	Year 1	* Develop or adopt a construction site erosion control training program for the development community.
		Year 2 - 5	<ul style="list-style-type: none"> <li>* Provide educational material annually to builders, developers, and engineers that are active in McKinney.</li> <li>* Provide developers, builders, and engineers that are active in McKinney with construction site erosion control training at least once every 2 years.</li> <li>* Track training hours and number of attendees.</li> </ul>

## Public Participation and Involvement

Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 2.1 "Stencil Town" Storm Drain Marker Installation	Solicit public involvement in the installation of storm drain markers for installation per BMP 1.6.	Year 1	* Develop Public Participation component of the Storm Drain Marker program (BMP 1.6) including a list of prospective public participants.
		Year 2 - 5	*Implement public participants in installation of storm drain markers. *Track the number of groups, individuals, and markers placed by these groups.
BMP 2.2 Public Meetings	Conduct public meetings to present and to solicit feedback on McKinney's storm water management program.	Year 1 - 5	* Conduct a minimum of 1 public meeting per year. * Advertise and conduct the meetings in accordance with local and state public notice requirements.
BMP 2.3 Citizen's Advisory Committee	Form a citizen's advisory committee to solicit input on McKinney's storm water management program.	Year 1	* Form the committee from representatives representing various constituencies within the community.
		Year 2 - 5	* Conduct a minimum of 1 citizen's advisory committee meeting per year.
BMP 2.4 Stormwater hotline	Develop and advertise a dedicated storm water hotline to solicit information related to illicit discharges and illegal dumping, complaints, and general comments regarding McKinney's storm water management program.	Year 1	* Establish a dedicated phone line and develop appropriate procedures for taking, tracking, assigning, and investigating complaints.
		Years 2 - 5	* Implement the procedures developed for this BMP in the first year. * Advertise the hotline's existence through various Public Education BMP's as appropriate.

## Public Participation and Involvement

Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 2.5 McKinney Cleanup	Continue McKinney's existing community cleanup program in order to reduce floatables, etc., that make their way to the stormwater conveyance system.	Year 1 - 5	* Continue sponsoring McKinney's existing cleanup program a minimum of once per year.
BMP 2.6 Household Hazardous Waste Collection and Recycling	Provide opportunities for collection and recycling of hazardous materials from local residents.	Year 1	* Continue existing household hazardous waste collection and recycling program.
		Year 2 - 5	* Evaluate the success of the previous year's collection and recycling activities. * Update the household hazardous waste collection and recycling program to reflect any necessary changes as determined in the evaluation.
		Year 4 - 5	* Continue the household hazardous waste collection and recycling program as evaluated/modified in year 2 of the permit term.

## Illicit Discharge Detection and Elimination

Illicit Discharges			
Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 3.1 Dry Weather Screening	Conduct dry weather screening of major storm water outfalls.	Year 1	<ul style="list-style-type: none"> <li>* Develop dry weather screening procedures and train appropriate personnel.</li> <li>* Assess the City's outfalls and determine location of major outfalls, as determined by 40 CFR §122.26 (B.5).</li> </ul>
		Year 2 - 5	<ul style="list-style-type: none"> <li>* Conduct dry weather screening procedures developed in first year.</li> <li>* Dry weather screen no fewer than 80 major outfalls per year</li> </ul>
BMP 3.2 Sanitary Sewer Smoke Testing	Conduct smoke testing of sanitary sewers in order to identify potential cross-connections with the City's storm sewer system.	Year 1 - 5	<ul style="list-style-type: none"> <li>* Conduct sanitary sewer smoke testing as a part of the City's on-going Sanitary Sewer Evaluation Study (SSES) program.</li> <li>* Track the linear feet of sewer lines tested, the number of detected breaks, and the number of repairs made based on the SSES program.</li> </ul>
BMP 3.3 Illicit Discharge Investigation	Conduct investigations to determine the source of illicit connections and illegal dumping activities.	Year 1	<ul style="list-style-type: none"> <li>* Assess regulatory authority and adopt new ordinances if needed to provide the City with the authority to inspect suspected sites of illicit connections or illegal dumping activities in accordance with TCEQ requirements.</li> <li>* Develop standard investigation procedures and train appropriate personnel.</li> </ul>
		Year 2 - 5	<ul style="list-style-type: none"> <li>* Conduct investigations in accordance with investigation procedures established in first permit year to identify sources of illicit discharges or illegal dumping as identified from dry weather screening, smoke testing, and/or from information received from the City's storm water hotline.</li> <li>* Track number of investigations performed.</li> <li>* Track number of detected discharges through hotline information, dry weather screening, smoke testing, or other.</li> </ul>

## Illicit Discharge Detection and Elimination

Illicit Discharges			
Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 3.4 Elimination of Illicit Connections	Illicit discharge connection elimination.	Year 1	<ul style="list-style-type: none"> <li>* Assess regulatory authority and adopt new ordinances if needed to provide the City with the authority to require the elimination of illicit connections or illegal dumping activities in accordance with TCEQ requirements.</li> <li>* Develop standard verification procedures and train appropriate personnel.</li> </ul>
		Year 2 - 5	<ul style="list-style-type: none"> <li>* Utilizing the regulatory authority developed in the first permit year, eliminate identified sources of illicit discharge connections or demonstrate escalated enforcement actions against the responsible entity.</li> </ul>
BMP 3.5 Spill Response	Continue implementation of existing spill response procedures and training.	Year 1 - 5	<ul style="list-style-type: none"> <li>* Continue implementation of existing spill response procedures and training.</li> <li>* Track number of responses to spills / Hazmat incidents.</li> <li>* Track the number of training hours for appropriate employees.</li> </ul>
See BMP 2.4 (Storm Water Hotline)	<i>See Public Involvement MCM for goals and schedule</i>		
See BMP 2.6 (Household Hazardous Waste Collection and Recycling)	<i>See Public Involvement MCM for goals and schedule</i>		

## Illicit Discharge Detection and Elimination

Storm Sewer Map			
Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 3.7 Storm Sewer System Map	Develop a storm sewer map in accordance with TCEQ requirements.	Year 1	* GIS mapping information for the City's storm sewer system has been collected. A storm sewer map will be prepared from this data in accordance with TCEQ guidelines.
BMP 3.8 Update Storm Sewer System Map	Update the City's storm sewer system map as needed to record new pipes/systems created by new development.	Year 1 - 5	* Continue the existing program of triggering/completing storm sewer mapping changes as permits and as-built plans are filed for new construction activities. * Track number of outfalls added to storm sewer outfall map.

### Construction Site Runoff Control

Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 4.1 Controlling Ordinances	The City of McKinney has a thorough, existing construction site erosion control program. Specific ordinances and guidance documents describing the existing program are attached.	Year 1 - 5	* Continue implementation of existing programs. (Attached as Appendix D)
BMP 4.2 Requirements for Construction Site Contractors			
BMP 4.3 Site Plan Review			
BMP 4.4 Site Inspection and Enforcement			

## Construction Site Runoff Control

Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
<b>BMP 4.5</b> Receipt and Consideration of Information from Public	Develop and implement a program for the receipt and consideration of public comments regarding erosion control.	Year 1	*Develop a system for receiving, considering, and tracking comments from the public regarding the City's erosion control program and for specific project-related complaints.
		Year 2 - 5	* Implement system.
<b>BMP 4.6</b> Review Erosion and Sediment Control Program	Review the effectiveness, appropriateness, and cost-effectiveness of the existing erosion control program.	Year 1	* Continue existing programs plus review existing erosion control manual.
		Year 2	* Adopt any recommended changes from Year 1.
		Year 3- 5	* No formal review. Continue existing and/or revised programs.

## Post-Construction Storm Water Management in New Development/Redevelopment

Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 5.1 <i>iSWM</i> <sup>TM</sup> Design Manual Development & Implementation	Review North Central Texas Council of Governments' integrated Storm Water ( <i>iSWM</i> <sup>TM</sup> ) Design Manual. Consider portions of the manual congruent with McKinney's Storm Water and Planning ordinances. Adopt manual as appropriate.	Year 1 - 5	* Continue to participate financially in support of the NCTCOG-sponsored <i>iSWM</i> <sup>TM</sup> Design Manual throughout permit term or until fiscal support is no longer required.
		Year 2 - 3	* Review, assess, and adopt the regional <i>iSWM</i> <sup>TM</sup> Design Manual in part or in whole, as or if deemed appropriate.
		Year 4 - 5	* Implement the <i>iSWM</i> <sup>TM</sup> Design Manual (or portions thereof) through ordinances (revised if necessary) and the City's existing plan review process if it is determined the Manual is congruent with existing McKinney ordinances. * In lieu of <i>iSWM</i> <sup>TM</sup> implementation McKinney will continue existing post-construction storm water practices as included in the storm water ordinance (Appendix E).
BMP 5.2 Engineering Design Review	Continue existing design review process.	Year 1 - 5	* Continue existing design review process of all construction projects, one acre in size, or larger, to verify compliance with the city's stormwater ordinance. (Existing review process is attached in Appendix F).
BMP 5.3 Land Use Plan	Continue to utilize the City's existing land use plan.	Year 1 - 5	*Continue implementing existing land use plan. *Evaluate existing land use plan and provide recommendations considering environmental and storm water management practices once during the first permit period.

## Pollution Prevention/Good Housekeeping for Municipal Operations

Good Housekeeping			
Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 6.1 Storm Sewer Cleaning	Remove floatables, debris, sediment, etc. from inlets and pipes as needed to maintain capacity and to reduce stormwater pollution.	Year 1	<ul style="list-style-type: none"> <li>* Develop a schedule for conducting a visual inspection of the City's storm sewer inlets.</li> <li>* Develop a system to monitor and track storm sewer cleaning activities.</li> <li>* Clean system as needed in response to complaints or reported problems.</li> </ul>
		Year 2 - 5	<ul style="list-style-type: none"> <li>* Implement the inspection schedule. Clean inlets as necessary.</li> <li>* Clean system as needed in response to complaints or reported problems.</li> </ul>
BMP 6.2 Street Sweeping	Continue existing street sweeping program.	Year 1 - 5	Sweep major arterials once per quarter, collectors twice per year, and residential streets once per year.
BMP 6.3 Herbicide Management	Continue existing herbicide management program.	Year 1 - 5	<ul style="list-style-type: none"> <li>* Continue McKinney's existing herbicide management program following all Federal, State and local laws concerning the handling and application of herbicides as well as any appropriate documentation.</li> <li>* Track training and licensure as required.</li> </ul>
BMP 6.4 Pesticide Management	Continue existing pesticide management program.	Year 1 - 5	<ul style="list-style-type: none"> <li>* Continue McKinney's existing pesticide management program following all Federal, State and local laws concerning the handling and application of pesticides as well as any appropriate documentation.</li> <li>* Track training and licensure as required.</li> </ul>

## Pollution Prevention/Good Housekeeping for Municipal Operations

Good Housekeeping			
Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 6.5 Safe Material Storage	Continue existing material storage management practices.	Year 1 - 5	<ul style="list-style-type: none"> <li>* Continue McKinney's existing material storage practices.</li> <li>* Perform inspections of material storage facilities annually.</li> <li>* Include any inspection based changes in the annual report.</li> </ul>
BMP 6.6 Fleet Service Center BMPs	Review existing fleet service center operations and infrastructure. Develop and implement structural and non-structural controls.	Year 1	* Perform a detailed assessment of existing fleet center operations and infrastructure.
		Year 2 - 5	* Develop a storm water management plan, including an implementation plan for structural and non-structural controls.
		Year 2 - 5	* Implement the stormwater management plan developed in year 2 of the permit term.

## Pollution Prevention/Good Housekeeping for Municipal Operations

Training			
Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 6.7 Employee Training	Add good housekeeping and pollution prevention training to existing operations (Streets/Public Works) employee training programs.	Year 1	* Develop or adopt a good-housekeeping / pollution prevention operations employee training module.
		Year 2 - 5	* Add the new training module to existing street department and public works department training programs. * Train all new operations employees within six months of the employee's start date.

## Pollution Prevention/Good Housekeeping for Municipal Operations

Industrial Activities			
Best Management Practices	BMP Description	Implementation Schedule	Measurable Goals
BMP 6.8 Airport SWPPP	Continue to implement the existing airport SWPPP	Year 1 - 5	* Continue to implement the existing airport SWPPP. (TPDES Industrial Multi-sector Notice of Intent Attached in Appendix G).