



City of Mansfield

Stormwater Management Program v.8



and Texas Commission on Environmental Quality
Permit Application for Permit # TXR040000

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Accessibility Information

Copies of the Texas Commission on Environmental Quality Executive Director's General Permit TXR#040000 and Fact Sheet, and City Stormwater Management program can be requested in person or in writing by contacting the Stormwater Manager:

Howard Redfearn
Stormwater Manager
1200 E. Broad St
Mansfield, Texas 76063.

Additionally, requests can be made by email: howard.redfearn@ci.mansfield.tx.us or by accessing the documents through the Internet by visiting the City of Mansfield Stormwater Website at: <http://www.mansfield-tx.gov/departments/es/sm/>.

Copies of requested materials will be provided, or post marked, within 48 hours of request. The greatest effort will be made to ensure documents provided over the Internet are current, and the same as documents requested in writing.

PART I – REGULATORY BACKGROUND

1. Federal Regulation

The Federal Government addressed water pollution through the Federal Water Pollution Control Act (FWPCA) in 1948. The original statute has seen extensive revision since it was introduced. Section 402 of the 1972 Amendments to the FWCPA established the National Pollutant Discharge Elimination System (NPDES) authorizing the U.S. Environmental Protection Agency (EPA) to issue discharge permits for certain types of activities. The 1972 Amendments later became known as the Clean Water Act (CWA). Further Amendments to the FWCPA occurred in 1977. The 1977 Amendments established procedures for states to assume regulating authority of the NPDES program.

Citing the CWA as the legislative authority, Congress promulgated Phase I of the U.S. EPA's municipal stormwater program in 1990. Phase I relied on the NPDES permit coverage to address stormwater runoff from medium and large municipal separate storm sewer systems (MS4s), serving populations of 100,000 or greater. The Phase I requirements marked an attempt to address pollution from non-point sources.

The Stormwater Phase II Final Rule (promulgated December 8, 1999) was the next step in the EPA's efforts to preserve, protect, and improve the nation's water resources from polluted stormwater runoff. The Phase II program requires additional operators (small MS4s in urbanized areas) to implement programs and practices to control polluted stormwater runoff, through the NPDES permit program. The program requires Phase II municipalities to develop a Stormwater Management Program to outline actions taken to address stormwater pollution reduction.

Phase II of the NPDES program requires regulated MS4s to address stormwater pollution reduction using six minimum control measures (MCMs). The six MCMs are: Public Education and Awareness, Public Involvement, Illicit Discharge Detection and Elimination, Construction Site Runoff Control, Post-Construction Site Control Runoff and Pollution Prevention/Good Housekeeping. A best management practice (BMP) is a specific action, such as employee training or outfall inventory, within an MCM meant to reduce the potential for stormwater pollution.

2. State Regulation

On September 14, 1998 the U.S. EPA and the Texas Commission on Environmental Quality (TCEQ) signed a memorandum agreement for the TCEQ to assume the regulatory authority for the NPDES as it applies to the State of Texas. This program has been named the Texas Pollutant Discharge Elimination Program (TPDES). The TCEQ has already released permits applying to Industrial, Construction and Phase I of the Municipal stormwater programs. Each of these has a separate, applicable permit in which to comply with.

The first draft of the Phase II permit, TCEQ Proposed General Permit No. TXR040000, was published in the September 27, 2002 issue of the Texas Register. Public meetings were held in Arlington, Houston and San Antonio in October and November of 2002 and the public was given the opportunity to respond with comments.

On September 15, 2003 the Ninth Circuit Court of Appeals issued a revised panel decision in a case challenging portions of the Phase II stormwater regulations. The ruling denied all petitions for rehearing and remanded portions of the rule affecting small MS4s. An EPA memorandum was released publicly on April

16, 2004 that responded to the partial remand of stormwater regulations.

The TCEQ reviewed the Ninth Circuit Court of Appeals decision and a second public comment period ended on September 29, 2005, with an additional public meeting held in Austin on the same day. The final TCEQ Permit No. TXR040000 was released on **August 13, 2007**. Small MS4s that meet regulated criteria for Phase II of the TPDES Stormwater Program via the TPDES General Permit were given one hundred and eighty (180) days to respond by submitting a Notice of Intent and Stormwater Management Program.

By submitting its Stormwater Management Program and Notice of Intent (NOI) to comply with the TPDES Phase II regulations before the deadline of **February 11, 2008**, the City of Mansfield acknowledges the regulatory authority of the TCEQ and agrees to comply with TPDES TXR040000 permitting requirements to discharge directly into surface waters. This permit and authorization shall expire five years after the date of issuance.

PART II – MUNICIPALITY BACKGROUND

1. General

The City of Mansfield was incorporated in 1909, but can trace its community roots back to the mid 1800's. In 1857 Ralph S. Man and Julian B. Feild moved from Ft. Worth to the area around present day Mansfield. They opened a sawmill and one of the first steam powered gristmills in the State. Repeated misspelling of Feild's name eventually led to adoption of the current spelling. Mansfield's population fluctuated from slightly above to slightly below 1,000 until the 1960's. The 1960 population was near 1,300 but had grown to over 5,000 by 1970 and has continued to grow since that time. The 2000 census population for the City was 28,031. The 2007 population estimate from the North Central Texas Council of Governments was 51,300. The average percent increase for a decade over the last 40 years was 84.5%, with an estimated 5.23% increase from 2006-2007. The current city limits cover an area of approximately 36 sq mi, with an extra-territorial jurisdiction area of approximately 17 sq mi.

The City of Mansfield is located in the Dallas-Fort Worth Metroplex. More than 28 sq mi of the City falls within Tarrant County, with nearly 7 sq mi in Johnson County and less than 2 sq mi in Ellis County. The northern boundary of the City of Mansfield is bordered by the City of Arlington. The eastern boundary is bordered in part by the City of Grand Prairie and Joe Pool Lake. Most of the southern boundary is bordered by unincorporated Johnson County. The Rendon Census Designated Place (CDP) borders the Tarrant County portion of the western boundary and the Johnson County portion is bordered by unincorporated Johnson County. The latitude and longitude coordinates for the centroid of the City of Mansfield are: 32° 34' 5.9520" N and 97° 6' 59.6736" W, as determined by the City's GIS system using the Lambert Conformal Conic projection and North American Datum 1983 coordinate system.

2. Receiving Waters

The primary receiving waters for the City of Mansfield are: Bowman Branch, Walnut Creek, Low Branch, and Mountain Creek; all of which drain into Joe Pool Lake. A small portion, slightly more than 1% of the total City area at the north boundary with Arlington drains into the Rush Creek watershed. Rush Creek confluences into Village Creek just after the Lake Arlington dam before it joins the West Fork of the Trinity River. Slightly less than 2% of the City's area drains into the Bowman Branch watershed, which then flows into Arlington and eventually into Grand Prairie before arriving in Joe Pool Lake. Close to 56% of the City's area drains into the Walnut Creek watershed, before it flows into Joe Pool Lake. The City of Mansfield covers nearly 25% of the total Walnut Creek watershed. The Low Branch watershed drains approximately 18% of the City's area. The City of Mansfield does not drain directly to Mountain Creek, but drains to several unnamed stream segments that are tributaries of Mountain Creek. The watersheds for the unnamed streams cover approximately 24% of the City's area. Some of the drainage from the City of Mansfield enters stream segments that flow through the Cities of Arlington and Grand Prairie and the counties of Johnson and Ellis before reaching Joe Pool Lake.

Joe Pool Lake is a 7, 400-acre impoundment located in the south part of the Dallas-Fort Worth Metroplex. The lake is located partially in Grand Prairie, Dallas, Cedar Hill, Mansfield, and Midlothian and encompasses part of Dallas, Ellis, and Tarrant Counties. The main body of the lake located in-between SH 360 and FM 1382 about one mile south of IH-20. There are four developed parks at Joe Pool Lake: Britton Park, Cedar Hill State Park, Loyd Park, and Lynn Creek Park.

Joe Pool Lake is fed mostly by Mountain Creek and Walnut Creek and continues to drain north from the Joe Pool Lake dam into Mountain Creek as it flows into Mountain Creek Lake. Joe Pool Lake impounds water in two arms formed by Mountain Creek and Walnut Creek. The Mountain Creek Watershed is in the Upper Trinity River Basin and has a length of 37 miles and a total drainage area of 304 square miles. There are 64 miles of shoreline at normal conservation pool of 522 feet mean sea level (msl). Impoundment began in January 1986. Trees and fences were cleared between 501 msl and 522 msl in the main body of the lake. However in the upper branches of the lake, the trees were left for fish habitat. Currently Joe Pool Lake serves as a reservoir for the City of Midlothian for their public water supply. Several other entities have water interests in Joe Pool Lake, but are not currently using the water resources.

3. Municipal Setting

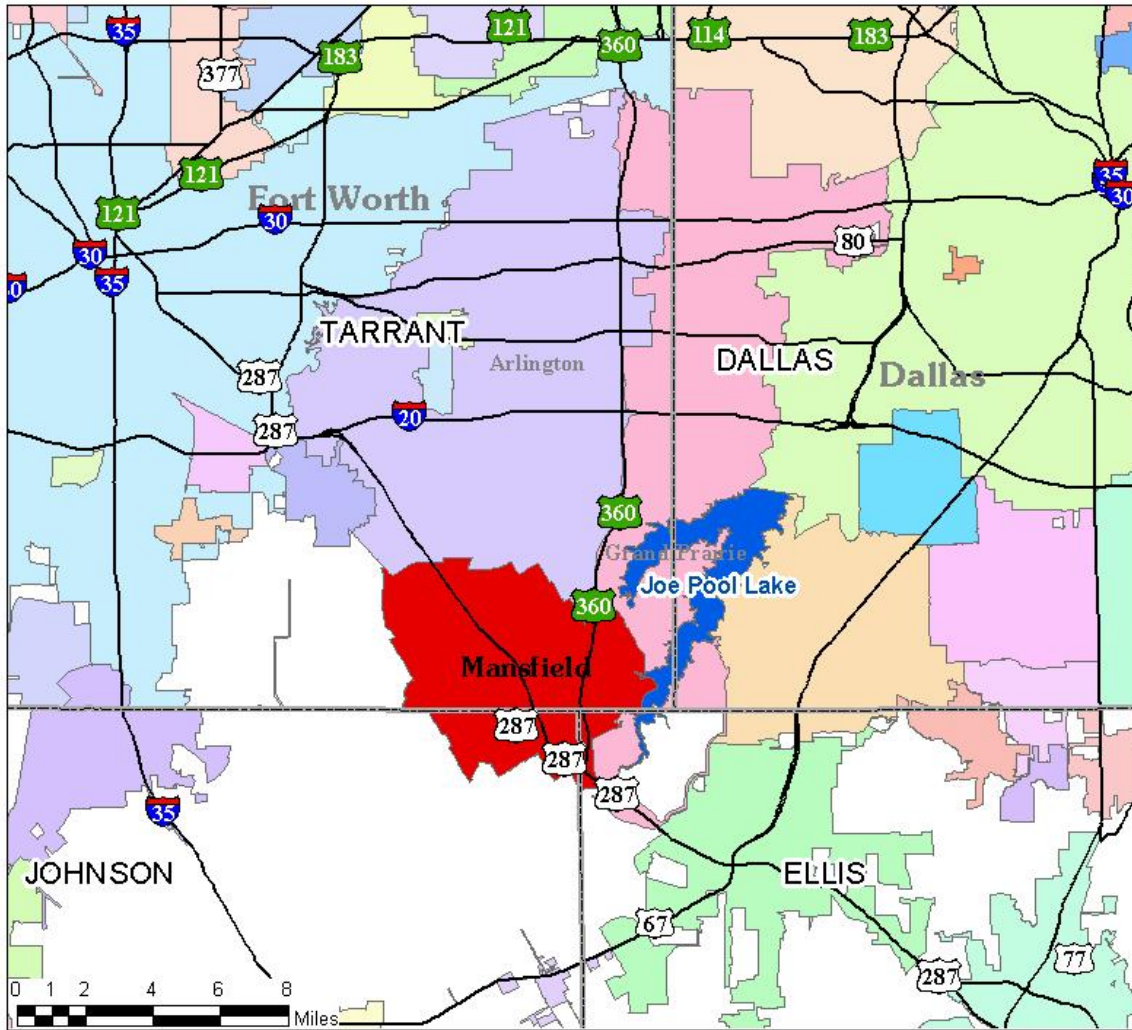
The City of Mansfield runs a Council-Manager form of government. Each member of the Council including the Mayor, is elected at large, meaning that there are no council districts in the City of Mansfield, but rather that each member represents the city as a whole.

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. The person elected Mayor presides over all meetings of the City Council. Each Council member has an equal vote on all action taken by the Council. There are seven positions (6 council members and 1 mayor) to ensure that every issue that is taken before Council is granted a decision, there are no tie votes.

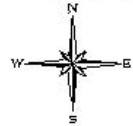
As designated by the city charter, the City Manager is appointed by the Mayor and City Council and serves as the chief administrative officer for the city organization. The City Manager manages the day-to-day operations of the various city departments and staff, directing delivery of services and executing all city policies and ordinances. In addition, the City Manager and his or her staff guide all goals and strategies of the city operations including future city development and expansion of services.



Surrounding Cities Map



1 inch equals 4.15 miles



County Lake Major Roads

PART III – PERMIT APPLICABILITY AND COVERAGE

1. MS4 Coverage and Eligibility

Approximately one half of the City of Mansfield's incorporated limits are located within the Dallas/Fort Worth urbanized area as identified by the 2000 Decennial Census by the U.S. Census Bureau. In addition to Permit #TXR040000 requirements for the Stormwater Management Program (SWMP) to be implemented throughout the portions of the City within the identified Urbanized Area, the City of Mansfield will implement the SWMP throughout the entire City limits area. Should the City limits expand to new areas, the City of Mansfield will comply with the permit requirements to implement the SWMP for the new areas within the required time.

2. Allowable Non-Stormwater Discharges

The following non-stormwater discharges may be discharged from the City of Mansfield and are not required to be addressed in the Illicit Discharge Detection and Elimination or other minimum control measure, unless they are determined by the City of Mansfield or TCEQ to be significant contributors of pollutants:

- A) water line flushing;
- B) runoff or return flow from landscape irrigation, lawn irrigation, and other irrigation utilizing potable water, groundwater or surface water sources;
- C) discharges from potable water sources;
- D) diverted stream flows;
- E) rising ground waters and springs;
- F) uncontaminated ground water infiltration;
- G) uncontaminated pumped ground water;
- H) foundation and footing drains;
- I) air conditioner condensation;
- J) water from crawl space pumps;
- K) individual residential vehicle washing;
- L) flows from wetlands and riparian habitats;
- M) de-chlorinated swimming pool discharges;
- N) street wash water;

- O) discharges or flows from fire fighting activities (fire fighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, and similar activities), and;
- P) other similar occasional incidental non-stormwater discharges, unless the TCEQ develops permits or regulations addressing these discharges.

3. Coverage Limitations

The City understands that other discharges requiring a TPDES permit may be authorized under this Stormwater Management Program, however, the City elects to file for those permits separately as they are needed and necessary.

The City currently has no combined sanitary and storm sewer systems, not will any be constructed in the foreseeable future. Any flows of combined sanitary and storm water shall be treated as an illicit discharge and corrected as soon as possible after such flows are discovered.

The City pledges to not knowingly discharge to surface waters of the State in a manner that would contribute to a violation of water quality standards or that would fail to protect and maintain existing uses as a part of this permit. The City is aware that discharges contributing to a violation of water quality standards are not covered by this general permit. Should the City find itself in a position where discharges of this nature occur, the City is aware that the executive director may require an application for an individual permit.

City staff currently has no knowledge that stormwater discharges from the City flow in to an impaired water body, as noted by a listing the Clean Water Act § 303(d) list. City staff shall maintain current knowledge of impaired water bodies as reported by the TCEQ or EPA to ensure that if designated impaired water bodies receive discharges from the City, so that staff is aware of any water quality standards implications and take appropriate actions to protect water quality.

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

The City recognizes that coverage under this 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.

The City understands that coverage under this permit does not authorize the City to discharge into a stream or watershed that any flows that would violate another home rule municipality's authority to protect said stream or watershed as granted by § 401.002 of the Texas Local Government Code.

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

PART IV – STORMWATER MANAGEMENT PROGRAM

Regulatory Requirement

To the extent allowable under state and local law, a SWMP must be developed and implemented according to the requirements of Part III of this general permit, for storm water discharges that reach waters of the United States, regardless of whether the discharge is conveyed through a separately operated storm sewer. The SWMP must be developed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act and the Texas Water Code. Existing programs or best management practices (BMPs) may be used to fulfill the requirements of this general permit. The MS4 operator must develop the SWMP to include the six minimum control measures described in Part III.A.1. through 6, and the operator may develop and include the optional seventh minimum control measure in Part III.A.7. Small MS4s have five years from the date of issuance of this general permit to fully implement their SWMP. A discharger's compliance with its approved SWMP will be deemed compliance with Part III of this permit.

Where the permittee lacks the authority to develop ordinances or to implement enforcement actions, the permittee shall exert enforcement authority as required by this general permit for its facilities, employees, and contractors. For discharges from third party actions, the permittee shall perform inspections and exert enforcement authority to the MEP.

If the permittee does not have enforcement authority and is unable to meet the goals of this general permit through its own powers, then, unless otherwise stated in this general permit, the permittee shall perform the following action in order to meet the goals of the permit:

- Enter into interlocal agreements with municipalities where the small MS4 is located. These interlocal agreements must state the extent to which the municipality will be responsible for inspections and enforcement authority in order to meet the conditions of this general permit; or,
- if the permittee is unable to enter into inter-local agreements, notify the TCEQ's Field Operations Division as needed to report discharges or incidents that it can not itself enforce against.

The controls and Best Management Practices (BMPs) included in the SWMP constitute effluent limitations for the purposes of compliance with the requirements of 30 TAC Chapter 319, Subchapter B, related to Hazardous Metals.

The Stormwater Management Program (SWMP) developed by the City of Mansfield is described in the following sections. The City has not opted to include the seventh minimum control measure (MCM) for municipal construction activities and instead will submit an individual Notice of Intent for each construction project as needed. The following sections describe the six MCMs and the best management practices (BMPs) employed by the City to accomplish the goals for the individual MCMs. An implementation schedule for each of the BMPs is included, as well as the measurable goals and responsible parties associated with individual BMPs.

The resulting BMPs were selected for their perceived effectiveness to prevent water quality impairments and/or flooding hazard. A short description of the BMP has been developed, and included in this description is a brief justification statement for why the BMP is perceived to be effective. Throughout the implementation period of this permit, 5 years, evaluation of the measurable goals associated with the BMPs will determine their effectiveness. BMPs identified as ineffective will be altered to become more effective, or replaced with BMPs that are more effective. The City of Mansfield will provide feedback on BMP effectiveness to other municipalities in the region and will evaluate the experiences of other municipalities in the region by attending meetings hosted by the North Central Texas Council of Governments (NCTCOG) to develop a comprehensive and effective SWMP.

Prior to a substantive change, removal or replacement of a BMP identified within this SWMP, the City shall comply with the general permit requirement to submit a Notice of Change as specified in the general permit. In an effort to maximize program effectiveness and resource allocation, the City respectfully requests permission to implement BMPs above and beyond those listed in the following sections, and identify those actions as additional BMPs upon submittal of the annual report for which the BMP is associated. Some of these BMPs may be transient in nature, as part of a pilot program, or otherwise unplanned opportunities for improving water quality that requires fast action to take advantage of educational opportunities. To go through the entire process of editing the SWMP, having the edits approved by City Management or the City Council, and filing an NOC with the State and then awaiting approval before proceeding may prevent the timeliness of many messages. An NOC form for these additional BMPs shall be submitted at the time of the annual report, and it shall be noted whether the additional BMP was short-lived or shall become part of the permanent SWMP. This request shall allow staff to focus and concentrate on actions leading to water quality improvements during implementation, and provide the flexibility to produce an effective program, without the worry at the time of how these BMPs may fit into the SWMP. Additionally, as the State will retain the ability to review these BMPs for appropriateness and effectiveness, this method does not encumber State oversight of the City's SWMP.

The City shall retain the right to assert a *force majeure* defense to alter the implementation of the SWMP as stated in the following sections due to war, strike, riot, other catastrophe or an act of God without applying for a NOC or otherwise notifying the State of a change in implementation status in order to effectively deal with the event, and shall, as soon as the City is able, submit an amended SWMP to the State with an NOC identifying alterations to the implementation of parts, or all, of the SWMP due to the event causing the suspension of implementation. The NOC shall identify the event causing the alteration(s) as well as a justification for why activities were altered, and a new timeline for implementation shall be adopted for affected BMPs.

City staff developed the SWMP for the City of Mansfield by considering permit requirements, other City SWMPs, comments from NCTCOG meetings and other resources. The City of Mansfield will also participate in appropriate portions of the Regionally Developed Initiative (RDI) program developed through the NCTCOG. This program is designed to provide stormwater quality improvements on a regional scale by sharing information and coordinating resources and efforts. Participation in this program will be above and beyond the minimum permit requirements.

The City Manager shall direct a staff position, within the Environmental Services Department, or other City department or division as seen appropriate, as the primary point of contact for SWMP questions and comments. Contact information is contained in Appendix II for the primary point of contact and all other parties with responsibilities for implementing the SWMP. Should this position change title, or otherwise be altered, an NOC form shall be submitted to the state to update the records for contact.

1. PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS

1.I. *Regulatory Requirement*

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: residents, visitors, public service employees, businesses, commercial and industrial facilities, 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 that they can take to reduce pollutants in storm water runoff.

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

1.II. *Overall Program*

The City of Mansfield has several established methods of providing educational information to residents and other sectors of the City's population. Many of these methods will be used to circulate Stormwater related educational materials developed by City staff, as well as applicable materials developed by other organizations. The methods and materials used for this MCM will be designed to address the population groups identified in the regulatory requirements of the permit.

The individual BMPs are identified in Section 1.3, along with their description, responsible parties, measurable goals and implementation schedule. Section 1.4 identifies the BMPs addressing each population group as required by Part III A.1(a) of TXR0400000.

1.III. *Public Education and Awareness Best Management Practices*

BMP 1.1 – Utility Bill Inserts

Description - Stormwater pollution prevention materials or messages will be included in utility bill inserts at least biennially. Copies of the inserts or messages will be provided with the applicable annual report. Additionally, the inserts or messages will contain contact information (phone/email) for questions and comments. Inserts will be changed on a regular basis to highlight a different area of stormwater pollution prevention. The use of utility bill inserts or messages has been shown to be an effective means of increasing awareness of problems associated with water quality, particularly when it is a component of a larger awareness campaign.

Measurable Goals/Evaluation - The number of addresses with utility inserts, and ,if practical, number of contacts for questions and comments from the utility inserts will be recorded and reported.

Responsible Parties - Stormwater – Environmental Services; Public Information Office; Utilities Billing

Implementation Schedule -

Year 1 – Develop utility insert or message outlining general hazards of polluted stormwater to be included in residents’ utility bills the fiscal year quarter after the permit is approved by the TCEQ. Additionally, develop another utility insert or message to be included later in the implementation year addressing a more specific stormwater pollution prevention item.

Year 2 – Develop a new utility insert or message developed to increase awareness about 2 new aspects of stormwater pollution prevention. Utility inserts or messages should be sent out at approximately 6 month intervals and should address seasonally appropriate stormwater concerns.

Year 3 – Review previous utility inserts or messages, and determine if stormwater pollution prevention topics have not been addressed. If so, develop new utility inserts or messages as needed, or send previous year messages as appropriate.

Year 4 – Review previous utility inserts or messages, and determine if stormwater pollution prevention topics have not been addressed. If so, develop new utility inserts or messages as needed, or send previous year messages as appropriate.

Year 5 – Review previous utility inserts or messages, and determine if stormwater pollution prevention topics have not been addressed. If so, develop new utility inserts or messages as needed, or send previous year messages as appropriate.

BMP 1.2 – City Newsletter Articles

Description - A City wide circulated newsletter is published once a quarter. This newsletter receives broad approval from residents and has been used as an effective tool for communicating City programs to the public in the past. Articles addressing stormwater pollution prevention may be included in the citywide newsletter periodically. Further, the newsletter will be an avenue for advertising public involvement activities. Copies of any newsletter articles will be included in the annual report. Additionally, the articles will include contact information (phone/email) for questions and comments. The City Newsletter is an existing avenue of public outreach and education. Developing articles related to the stormwater program, pollution prevention, and encouraging public participation should not be time consuming or difficult and should result in a reasonable return in increased awareness.

Measurable Goals/Evaluation - The annual report will include the number of newsletters sent out. If feasible, the number of contacts for questions and comments from the newsletter articles will also be recorded and reported.

Responsible Parties - Stormwater - Environmental Services; Public Information Office

Implementation Schedule -

Years 1-5 – Develop articles to be printed in the City Newsletter on a schedule of no less than two articles per year.

BMP 1.3 – Stormwater Web Pages on City Website

Description – Maintain up to date stormwater information on web pages included as part of the City of Mansfield website. Information is provided about the risks of polluted stormwater, ways to reduce pollution, City activities and other pertinent information. A website provides a great opportunity to inform and involve the public about City programs and activities. A website also provides an excellent opportunity to provide an archive of documents the public can view at their leisure on topics meeting their interests.

Measurable Goals – Summary information provided by the Information Technology department will be included with the annual report. It is not clear at this time how specific the summary information will be.

Responsible Parties - Stormwater - Environmental Services; Public Information Office; Information Technology

Implementation Schedule -

Year 1 – Maintain the existing basic information on the website regarding stormwater pollution. Included on this website is information on some potential sources of stormwater pollution and ways to prevent these sources from impacting waterways. A links to regulations, including City SWMP and applicable City ordinances, as Ordinances will be available as soon as those documents have been ratified by the City Council, and or the State. Links to outside sources containing useful information have also been included. Contact information for stormwater staff is readily available, but further public comments options will be investigated.

Year 2 – Continue website maintenance as needed. Update information as needed.

Year 3 –If applicable, include calendar of events for participation. Begin development of Photo Gallery of acceptable/unacceptable construction measures.

Year 4 – Finalize development of acceptable/unacceptable construction measures. Create online form for accepting comments/questions/ concerns on the website.

Year 5 – Continue website maintenance as needed. Update information as needed.

BMP 1.4 – Development Review Committee and Other Construction Meetings

Description - City staff are made available every Wednesday to answer questions and review City policies regarding development within the City. City staff are also made available to review City expectations and regulations for pre-construction meetings, and other construction related meetings as needed. Currently attending City staff will be provided information on stormwater regulations and requirements for the purpose of providing guidance to builders and developers attending the meetings. Brochures and handouts may be developed in order to support the goals of the SWMP. The

Development Review Committee is one of the first chances to interact with the development community. It is an important time to inform potential developers of City stormwater expectations and reinforce State and Federal requirements.

Measurable Goals/Evaluation - Document meeting attendance and type of meeting. Document point of contact for developer or builder. Brochures or handouts created for developers or builders to be distributed at meeting will be submitted with the Annual Report.

Responsible Parties - Environmental Services; Engineering; Planning

Implementation Schedule -

Years 1 thru 5 – Parts of this BMP are already in place. The Stormwater Manager, other designated and trained current City staff or new staff will begin attending meetings to discuss stormwater concerns with attendees and distribute materials as deemed necessary.

BMP 1.5 – Stormwater Education and Awareness Materials

Description - City staff will develop educational and informative brochures and fact sheets regarding the hazards of stormwater pollution, City policies and activities and other information as deemed necessary. These materials will be available to the public in applicable venues for the target audience, or as deemed appropriate by City staff. A variety of materials have been shown to be effective. Examples include, but are not limited to: brochures, fact sheets, videos, and public presentations. The City will evaluate the effectiveness of different types of materials when selecting which to use. Some materials will have been developed by other communities, or organizations, and simply edited to reflect the goals of the City's SWMP.

Measurable Goals/Evaluation - Document materials used and circulation locations with target audiences associated with the item. Materials will contain contact information (phone/email) for questions and comments. If feasible, the number of contacts for questions and comments from the materials will be recorded and reported.

Responsible Parties - Stormwater - Environmental Services; Public Information Office; Municipal Library System

Implementation Schedule -

Year 1 –Make available materials regarding stormwater pollution and prevention. Make available at least 1 brochure, fact sheet, or other public awareness item highlighting stormwater pollution prevention for each population group, excluding “Visitors”.

Year 2 –Make available materials regarding stormwater pollution and prevention. Make available at least 1 brochure or fact sheet highlighting stormwater pollution prevention for each population group, excluding “Visitors”.

Year 3 –Make available at least 2 more materials addressing stormwater pollution prevention for the “Residents” population group, at least one brochure or fact sheet for the “Businesses” group and at least one brochure or fact sheet for the “Construction Site Personnel” group.

Year 4 – Develop or otherwise acquire new materials for “Residents, Businesses and Construction Site Personnel” if deemed necessary, if no new materials developed continue distributing developed materials. Evaluate developed materials using responses from individuals receiving materials. Develop and distribute at least one brochure or fact sheet for “Commercial and Industrial Facilities.”

Year 5 – Evaluate materials as used to this point based on responses from individuals receiving materials, and make new materials available as deemed necessary. Continue materials availability as necessary.

BMP 1.6 – Stormwater Public Education Task Force Regionally Developed Initiative

Description - Exchange professional experience, share public education resources, develop and implement opportunities for regional cooperation by participating in the Stormwater Public Education Task Force. The Task Force provides municipal coordinators an opportunity to share information and learn about local, regional and national initiatives in the area of stormwater education. The Task Force facilitates and maximizes the impact and effectiveness of outreach activities.

Measurable Goals/Evaluation - Attend Task Force meetings as feasible. Participate in Task Force initiatives and cooperative opportunities as appropriate. Share information regarding City activities, their implementation and effectiveness. Provide implementation information of Task Force created initiatives to the NCTCOG for consolidation into regional report to be attached as an appendix to the City’s Annual Report.

Responsible Parties - Stormwater - Environmental Services

Implementation Schedule -

Years 1 thru 5 – Attend meetings as feasible and document initiatives developed by Task Force to be implemented by the City. Additionally document cooperative activities between other participants and the City of Mansfield. Participate in the Stormwater Education Task Force Regionally Developed Initiative.

BMP 1.7 – Annual Builders/Developers Workshop

Description - Bringing representatives from the construction community together for question/answer sessions, as well as other education topic presentations is useful way of making information available to this important sector. City staff shall evaluate the need for a builders/developers workshop, and if one should be deemed useful, coordinate the meeting. Topics covered may include current Construction General Permit updates/requirements, current best management practices, preparing a Stormwater Pollution Prevention Plan (SWPPP) and other information deemed useful to the construction industry. The use of outside organizations to help coordinate the workshop or lead sessions may be accepted.

Measurable Goals/Evaluation - The number of attendees, date and time of workshops shall be reported in the Annual Report, if a workshop is held. Along with this information will be included a flyer, brochure or other item of advertising the event, a list of speakers with a brief biography of qualifications, and a list of topics covered. Additionally, a survey may be requested of the attendees and the results of

the survey shall be submitted as available.

Responsible Party - Stormwater - Environmental Services

Implementation Schedule -

Years 1-5 – Determine need, if any, to host a workshop for construction personnel. Determine topics to be covered, coordinate speakers, and other aspects of hosting the event. Conduct workshop and elicit comments from attendees to gain insight into how successful the event was deemed to be, and to provide suggestions on how to improve events in the future.

1.IV. Other Applicable BMPs

The following is a list of BMPs from other MCMs in the SWMP that have a public education and outreach component. The primary purpose of these BMP is to address the MCM in which they are contained.

2.1 NOI and SWMP Notification – postings in newspapers to increase awareness about the stormwater program and encourage public participation.

2.2 Storm Drain Inlet Markers – volunteers participating in the storm drain inlet marking will be briefed on the purpose of marking drains and the potential to improve water quality.

2.3 Stormwater Hotline – the hotline will require advertising so that the public is aware of the hotline and its purpose.

2.4 Stormwater Workshops – workshops will be developed for different groups. The purpose of the workshop will depend on the audience, but an educational component will be present in all workshops.

2.5 Clean Up Programs – an educational component will be presented to address the reason for the cleanup activities and how it will help improve water quality.

2.6 Texas Smartscape Program – educational materials will need to be developed so that the public will understand what the Smartscape program is, and how it can help improve water quality.

3.1 IDDE Program Internal Audit – City staff will need to be educated about illicit discharges and how we can keep illicit discharges out of the City’s MS4.

3.2 Illicit Discharge Ordinance – public announcements will be made to allow the public the opportunity to comment on the discharge ordinance. Additionally, educational materials will be created to educate the City Council.

3.4 IDDE Awareness Campaign – by nature this BMP will have a heavy public education and awareness component.

4.2 Pollution Prevention Training – educational and outreach materials will be developed for educating City staff about pollution prevention for O&M activities.

4.3 Pollution Prevention Audit – City staff O&M activities will be evaluated to identify activities with a potential to impact water quality, and precautions will be taken to minimize the potential for

water pollution.

5.1 Drainage Design Criteria Manual – this manual will establish the methods for designing and constructing drainage structures. There will be an educational and outreach component to implementing this BMP to make the development community aware of these requirements.

5.2 Erosion and Sediment Control Ordinance – public announcements will be made to allow the public the opportunity to comment on the discharge ordinance. Additionally, educational materials will be created to educate the City Council and the development community.

5.3 Inspection and Enforcement Program – one of the primary goals of the inspection and enforcement program will be to increase compliance by making the development community aware of problems on their site, and ensuring they are resolved.

5.4 Stormwater Management Guidance Documents – guidance documents have an obvious educational and outreach component. These documents will be addressed specifically to the development community.

6.1 Post Construction Ordinance – public announcements will be made to allow the public the opportunity to comment on the discharge ordinance. Additionally, educational materials will be created to educate the City Council and the development community.

6.2 Post Construction Guidance Documents – guidance documents have an obvious educational and outreach component. These documents will be addressed specifically to the development community.

6.4 Post Construction Control Measure O&M – educational materials will be developed for the responsible parties for different post construction control measures.

1.V. Population Groups and BMPs

The following table is a summary of which population groups are to be the intended recipients of educational and outreach materials and activities for individual BMPs throughout the SWMP:

| Population Group | Applicable BMPs |
|--------------------------------------|--|
| Residents | 1.1; 1.2; 1.3; 1.5; 2.1; 2.2; 2.3; 2.5; 2.6; 3.2; 3.4; 3.6; 5.2; 5.4; 6.1; 6.2; 6.4 |
| Visitors | 1.3 |
| Public Service Employees | 1.2; 1.3; 1.4; 1.5; 2.1; 2.2; 2.3; 2.4; 2.5; 2.6; 3.1; 3.2; 3.4; 3.5; 3.6; 4.1; 4.2; 4.3; 5.1; 5.2; 5.5; 5.4; 6.1; 6.2; 6.3; 6.4 |
| Businesses | 1.1; 1.2; 1.3; 1.5; 2.3; 2.4; 2.5; 2.6; 3.2; 3.4; 6.1; 6.2; 6.4 |
| Commercial and Industrial Facilities | 1.1; 1.2; 1.3; 1.5; 2.3; 2.4; 2.5; 2.6; 3.2; 3.4; 6.1; 6.2; 6.4 |
| Construction Site Personnel | 1.3; 1.4; 1.5; 2.1; 2.3; 2.4; 2.6; 3.2; 3.4; 5.1; 5.2; 5.3; 5.4; 6.1; 6.2; 6.3; 6.4 |

2. Public Involvement/Participation

2.I. *Regulatory Requirement*

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.

2.II. *Overall Program*

The overall objective of the public involvement/participation program for the City of Mansfield SWMP is to encourage input and contribution from all stakeholders concerning the development and progress of the SWMP. The City is aware that the effectiveness of the public involvement/participation program will be influenced by the effectiveness of the public education campaign. Many of the public education BMPs contain public involvement/participation components but will not be listed in this section, as their primary goals are public education. Some public involvement/participation activities will contain educational components, but are not included in the public education section as their primary goal is involvement or participation. The City will evaluate questions, comments, and concerns submitted by stakeholders and changes to the SWMP will be incorporated as deemed necessary by the City.

Public involvement/participation activities will be designed to encourage contribution in the SWMP for stakeholders from different interests. The City will follow all local and State public notice requirements for activities requiring notification of the public and will strive to seek contributions from all stakeholders.

2.III. *Public Involvement/Participation Best Management Practices*

BMP 2.1 – NOI and SWMP Notification

Description - The City will comply with local and State policies regarding public notification of the submittal of the NOI and SWMP to the TCEQ, as well as the Executive Director's decision on the City's NOI and SWMP as directed under TXR040000 Part III. Section D. Paragraph 12.

Measurable Goals/Evaluation - Copies of publicized information will be submitted with the first Annual Report and as needed when qualified changes occur.

Responsible Parties - Stormwater - Environmental Services; Public Information Office

Implementation Schedule -

Year 1 – Publish public notification in compliance with Part III. Section D. Paragraph 12 of TCEQ permit TXR040000.

Other public notifications will follow as applicable when qualifying changes have been made.

BMP 2.2 – Storm Drain Inlet Markers (Check for RDI)

Description - The City will solicit volunteers from different organizations or individuals to participate in a storm drain marking campaign. The City of Mansfield will participate in the North Central Texas Council of Governments (NCTCOG) regional stormwater initiative by purchasing storm drain markers through NCTCOG. This will help to deliver a cohesive message throughout the region on the risks of stormwater pollution. Volunteers will be provided with some safety equipment to ensure they are visible. Storm drain inlet markers will be restricted to residential neighborhoods, or business parking lots to increase safety of volunteers. Volunteers will be provided educational instruction on the importance of reducing stormwater pollutant to answer basic questions while installing storm drain markers. If feasible, volunteers will be provided literature to distribute to residences in the area to increase awareness about stormwater pollution hazards and the purpose of placing the markers on storm drains, or some other avenue of advertising this program may be used. Storm drain inlet markings provide an opportunity to educate the volunteers as well as the local community where the inlets are located. Current experience indicates that marking all inlets is not effective, and that some should remain unmarked. It is the goal of the City of Mansfield to mark between 40%-75% of all inlets for a given area. This may vary based on location and proximity of inlets to one another.

Measurable Goals/Evaluation - The number of participants, number of drains marked, and percentage of marked drains will be recorded and reported. A database of the drain location and installation date will be created to facilitate maintenance and inspection.

Responsible Parties - Stormwater - Environmental Services; Public Information Office

Implementation Schedule -

Year 1 – Solicit volunteers for the Storm Drain Marking Program by advertising in local media and other outlets and avenues. Upon contact from volunteers, determine area to be marked, and provide maps of inlets, adhesive, markers and other supplies necessary for project. Collect information from volunteers and update the SDMP layer in the GIS database. Order new markers or additional adhesive as necessary.

Years 2-5 – Continue activities from previous year. If no volunteers come forward, or all identified inlets have been marked, then this shall be indicated within the Annual Report.

BMP 2.3 – Clean Up Programs

Description - The Keep Mansfield Beautiful Committee (KMBC) has been hosting Household Hazardous Waste collection events, as well as soliciting sponsorship for roadside maintenance from businesses, individuals and other organizations. The KMBC has also been participating in at least one Clean Up activity. City staff will assist KMBC in coordination and hosting of Clean Up events designed to keep large items, floatables and debris, from entering the waterways. Clean Up events are an excellent activity to create local ownership of environmental resources, educating the public and preventing pollutants from entering local waterways.

Measurable Goals/Evaluation - If possible, the City will track the location of Clean Up events, the number of participants, and the weight/volume of items removed for inclusion in the annual report. If an event cannot be coordinated, this shall be noted in the Annual Report with an explanation.

Responsible Parties - Stormwater - Environmental Services; Public Information Office; Parks; Keep Mansfield Beautiful Commission

Implementation Schedule -

Year 1 – Identify potential locations to host Clean Up events. Consider safety, accessibility, and other pertinent issues for locations. Identify at least one location where a Clean Up event can be hosted and coordinate for event. Coordination efforts will include safety and access issues as well as disposal of items removed.

Year 2 – Determine feasibility of hosting one Clean Up event sometime in or around the Spring season and one sometime in or around the Fall season. If feasible, make necessary arrangements and host both events.

Year 3-5 – Continue activities from previous year.

BMP 2.4 – Texas SmartScape Program and Regionally Developed Initiative

Description - The Texas SmartScape program was developed as a tool to provide solutions for homeowners and businesses to use low impact vegetation in their landscaped areas. The program is developed around the usage of native and adaptive plants. The plants use less water, and require fewer pesticides and herbicides to be applied in order to thrive. The City of Mansfield will create a program to promote usage of the Texas SmartScape tools and principles. City staff will evaluate the most effective and appropriate means to promote the usage of the Texas SmartScape tools and principles, and encourage the selection of native and adaptive vegetation for landscaped areas. Additionally, the City will participate in the Annual March is Texas SmartScape Month Regionally Developed Initiative.

Measurable Goals/Evaluation - Document the types of promotional materials and activities in support of Texas SmartScape program. Document other relevant information as appropriate. Participate in the Regionally Developed Initiative for Texas SmartScape by registering SmartScape outreach activities with the NCTCOG. Provide Texas SmartScape program implementation information to the NCTCOG for consolidation into regional report to be attached as an appendix to the City's Annual Report.

Responsible Parties - Stormwater - Environmental Services; Public Information Office; Parks; Keep Mansfield Beautiful Commission

Implementation Schedule -

Years 1 thru 5 – Make available materials promoting usage of the Texas SmartScape tools and principles, highlight stormwater quality improvements from those using Texas SmartScape vegetation practices. Participate in the Texas SmartScape Regionally Developed Initiative.

2.IV. Other Applicable BMPs

The following is a list of BMPs from other MCMs in the SWMP that have a public education and outreach component. The primary purpose of these BMP is to address the MCM in which they are contained.

1.1 Utility Bill Inserts – utility bill inserts will be developed covering several topics that have an impact on water quality, and identify the public’s role in protecting our local waterways.

1.2 City Newsletter Article – articles for the City’s newsletter will be developed to discuss water pollution topics and actions the public can take to help keep our local waterways clean.

1.3 Stormwater Web Page – the internet is a unique tool for delivering information to the public. Web content will be developed to increase awareness about activities with a potential to affect water quality and ways the public can help keep our local waterway.

1.4 Development Review Committee and Construction Meetings – meetings with the development community provides a chance to give and receive input about the stormwater program.

1.5 Stormwater Education and Awareness Materials – the materials developed for public education and awareness will contain information for the public to act upon, as well as avenues for the public to provide input to the City about the stormwater program.

3.2 Illicit Discharge Ordinance – public announcements will be made to allow the public the opportunity to comment on the discharge ordinance.

3.4 IDDE Awareness Campaign – this campaign will address several topics on illicit discharges and provide ways for the public to be involved in the stormwater program.

5.2 Erosion and Sediment Control Ordinance - public announcements will be made to allow the public the opportunity to comment on the discharge ordinance.

5.3 Inspection and Enforcement Program – one of the primary goals of the inspection and enforcement program will be to increase compliance by making the development community aware of problems on their site, and ensuring they are resolved.

5.4 Stormwater Management Guidance Documents – these documents will be addressed specifically to the development community, but will provide information on ways they can help prevent pollution from entering our local waterways.

6.1 Post Construction Ordinance - public announcements will be made to allow the public the opportunity to comment on the discharge ordinance.

6.2 Post Construction Guidance Documents - these documents will cover a variety of post construction topics and will provide information on ways the public can help prevent pollution from entering our local waterways.

6.3 Land Use Impacts and Zoning Requirements – if this BMP is determined to be feasible, there will be opportunity for the public to review the City’s policies on planning and zoning considerations in regard to the impact on the environment.

6.4 Post Construction Control Measure O&M – educational materials will be developed for the responsible parties for different post construction control measures, informing them on the benefits of properly maintaining stormwater controls and how they can help keep pollutants out of our local

waterways.

3. Illicit Discharge Detection And Elimination

3.I. *Regulatory Requirement*

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

Detection - The SWMP must list the techniques used for detecting illicit discharges; and

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.

Allowable Non-Storm Water Discharges

Non-storm water flows listed in Part II.B and Part VI.B. 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 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 described in Part IV.B.2. of this general permit, and must meet the requirements of Part II.D.3. of the general permit.

A map of the storm sewer system must be developed and must include the following: the location of all outfalls; the names and locations of all waters of the U.S. that receive discharges from the outfalls; and any additional information needed by the permittee to implement its SWMP.

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.II. *Overall Program*

The City of Mansfield is committed to eliminating water pollution from illicit connections to the storm sewer system maintained by the City. GIS layers of storm sewer features are being created, and are updated regularly. The City has developed a list of allowable non-stormwater discharges based on guidance from the TCEQ and other sources of information, as it is believed they do not pose a risk to the quality of the waterways in the area. An illicit discharge and elimination (IDDE) plan will be developed by City staff to maximize the resources available. The current intent of the City is to use the 8 component guidelines in *Illicit Discharge Detection and Elimination Manual* published by the Center for Watershed Protection and Robert Pitt as a rough guideline, retaining the ability to change, delete or otherwise edit the guidelines to meet the City's needs and resources. The following BMPs are believed to be the most effective means of implementing an IDDE program in the City of Mansfield.

3.III. *Illicit Discharge Detection and Elimination Best Management Practices*

BMP 3.1 – IDDE Program Internal Audit

Description - City staff will coordinate to identify program goals, and review existing resources and legal authority to create an inventory of existing program assets and identify program deficiencies. A draft IDDE program plan will be created outlining program goals and implementation and shall be retained as a collection of any of the following document types: standard operating procedures (SOPs), guidance documents, policies or other pertinent document forms.

Measurable Goals/Evaluation - The number of participating members and input from other departments, as it is related to the completion of the IDDE draft program plan will be included in the first annual report.

Responsible Parties - Stormwater - Environmental Services; Public Works; Water Utilities; Others

Implementation Schedule -

Year 1 –Coordinate staff meetings to identify IDDE program goals, existing resources and legal authority. Provide comments from staff meeting to facilitate draft of IDDE program.

Year 2 – Present draft IDDE program during public session for consideration by City Council and comments from public stakeholders. Draft resolution to adopt draft IDDE program after consideration of Council and stakeholder comments.

Years 3-5 – Host meeting of staff implementing IDDE program to review effectiveness and make changes as necessary.

BMP 3.2 - Illicit Discharge Ordinance

Description - The City of Mansfield will include in its Stormwater Quality Protection Ordinance a component to address illicit discharges. The illicit discharge component will provide the City the authority to inspect properties within its jurisdiction. The authority will allow specifically for inspections of any facility suspected of releasing contaminated discharges into the storm collection system. The ordinance will also provide for enforcement actions for those properties found to be in noncompliance or that refuse to allow access to their facilities. A guidance document will also be created to specifically define illicit discharges and allowable non-stormwater discharges.

Measurable Goals/Evaluation - City staff will write acceptable language into the Stormwater Quality Protection Ordinance for the City of Mansfield to address illicit discharge detection and elimination to meet permit requirements. The Stormwater Quality Protection Ordinance will be adopted by the City Council with the illicit discharge detection and elimination permit requirements included.

Responsible Parties - Stormwater - Environmental Services; Legal Office; Water Utilities; Others as necessary

Implementation Schedule -

Year 1 –Using information from surrounding communities already implementing IDDE programs, compose a draft for the illicit discharge portion of Stormwater Quality Protection Ordinance. Prepare documents and presentations, post public hearing announcements in accordance with local and State public hearing requirements and present illicit discharge portion of Stormwater Quality Protection Ordinance to City council during a public hearing session. Address council and resident concerns, and make changes as needed to ensure illicit discharge portion of Stormwater Quality Protection Ordinance is presented to City council for adoption.

Years 2-5 – Review changes in technology and practices to ensure ordinance remains currently applicable.

BMP 3.3 – Storm Sewer System Map Features

Description - The City is currently creating GIS layers for storm sewer system features using record drawings and as-built plans. The created storm sewer system features will be updated periodically. These updates will be accomplished with as-built plans and field verification, as available. The City currently possesses a GIS streams layer.

Measurable Goals/Evaluation - City staff will make every effort to update storm sewer system features within 12 months from as-built plan submittals and GPS field verification as available.

Responsible Parties - Stormwater - Environmental Services; Geographic Information Systems

Implementation Schedule -

Years 1-5 – As time and staff positions permit, field verify as many outfalls to waters of the U.S. as possible. Field verification may include any of the following means: using GPS technology to obtain latitude and longitude coordinates to be converted into a GIS layer; use GPS technology to directly create GIS layer information; use aerial photography to more accurately place and locate outfalls and inlets. Changes to stream locations, or the placing of streams into underground storm sewer systems shall be mapped as the information becomes available.

BMP 3.4 – IDDE Awareness Campaign

Description - City staff will develop, at a minimum, print materials and web content addressing areas of illicit discharges such as: recreational vehicle waste disposal; illegal dumping; outdoor

chemical storage; fats, oils and grease disposal (especially turkey frying grease); excess irrigation; portable cleaning operations; and other topics as deemed necessary. An IDDE awareness campaign will help increase awareness about the hazards associated with illicit discharges, and how the public can help keep our local waterways clean.

Measurable Goals/Evaluation – Documentation, indicating targeted audience and message, of print materials and web content, example of materials, and number of print materials circulated and web site visits, if feasible, will be included in the annual report..

Responsible Parties - Stormwater - Environmental Services; Public Information Office; GIS

Implementation Schedule -

Year 1 – Identify at least the top five illicit discharge pollutants most likely to contribute impairment of local waterways, and develop, or otherwise acquire, and make available materials to target audiences using methods deemed appropriate by staff.

Year 2 – Identify other illicit discharge areas with a potential to discharge pollutants into local waterways, and develop, or otherwise acquire, and make available materials to target audiences using methods deemed appropriate by staff.

Years 3-5 – Continue previous activities.

BMP 3.5 – Potential Problem Area Identification

Description - Analysis of problem land use categories, business categories, and sewage system areas will be performed to identify stormwater outfalls that have a higher likelihood to develop illicit discharge connections to the storm sewer system, i.e. areas converted from septic to sanitary sewer and areas with a history of illegal dumping. This will assist monitoring activities. Areas may be added to the Potential Problem Area GIS layer if monitoring activities show a history of pollutant presence. The identification of potential problem areas will benefit the IDDE program by providing locations to concentrate illicit detection and elimination efforts.

Measurable Goals/Evaluation - Create GIS layers and maps to aid in implementation of monitoring and detection program components.

Responsible Parties - Stormwater - Environmental Services; Water Utilities; GIS

Implementation Schedule -

Year 1 – Identify neighborhoods and businesses that may have a higher likelihood of developing illicit discharges.

Year 2 – Create GIS layers for neighborhoods and businesses, associate with corresponding outfalls, and create maps highlighting the outfalls and areas.

Years 3-5 – Update GIS layers as more information is made available or as dictated from other information.

3.IV. Other Applicable BMPs

The following is a list of BMPs from other MCMs in the SWMP that have a public education and outreach component. The primary purpose of these BMP is to address the MCM in which they are contained.

1.1 Utility Bill Inserts – utility bill inserts will be developed covering several topics that have an impact on water quality, with a possibility for topics covering preventing and/or reporting illicit discharges.

1.2 City Newsletter Article – articles for the City’s newsletter will be developed to discuss water pollution topics, including a possibility for topics covering preventing and/or reporting illicit discharges.

1.3 Stormwater Web Page – the internet is a unique tool for delivering information to the public. Web content will be developed to assist the public in identifying and reporting illicit discharges.

1.5 Stormwater Education and Awareness Materials – the materials developed for public education and awareness will contain information on identifying and reporting illicit discharges. Many of these materials for illicit discharges will be created under BMP 3.4 IDDE Awareness Campaign.

1.6 Public Education Task Force – topics discussed at the Public Education Taskforce meeting often involve approaches for dealing with illicit discharges.

2.2 Storm Drain Inlet Markers – help raise awareness about keeping our local waterways clean by keeping substances out of the storm drain system.

2.3 Stormwater Hotline – the hotline will be one of the avenues for the public to report illicit discharges.

2.5 Clean Up Programs – clean up programs help reduce the amount of large debris available to enter our local waterways. Additionally, volunteers will receive information on the importance to water quality of keeping our landscapes clean.

2.6 Texas Smartscape Program – the SmartScape program advocates the use of native and adaptive plants. This helps reduce the amount of fertilizers and pesticides in use for urban landscapes; potentially reducing the chance these materials will enter the storm drain system.

4.1 Storm Sewer System Maintenance – properly maintained storm sewer systems are less likely to contribute illicit discharges themselves. Additionally, visual inspections of the storm drain system assist identifying problem areas.

4.2 Pollution Prevention Training for Municipal O&M Staff – this training will be designed to help staff with duties that could have an impact on water quality identify activities posing a hazard to water quality, and steps to take to reduce that risk.

4.3 Pollution Prevention Audit for Municipal O&M Activities – this audit will help staff identify activities that pose a risk to water quality, and steps that can be taken to reduce the risk.

5.2 Construction Erosion and Sediment Control Ordinance – this ordinance will help reduce

discharges from construction sites.

5.3 Inspection and Enforcement Program – the inspection and enforcement program will educate the development community about illicit discharges, as well as assess penalties when necessary.

5.4 Stormwater Management Guidance Documents – these documents will be addressed specifically to the development community and topics covered will include reducing illicit discharges from construction sites.

6.1 Post Construction Ordinance – this ordinance will increase awareness about illicit discharges from permanent storm water control measures.

6.2 Post Construction Guidance Documents - these documents will cover a variety of post construction topics, including reducing illicit discharges from permanent control measures.

6.4 Post Construction Control Measure O&M – proper operation and maintenance of permanent storm water control measures will lead to a reduction of risk for illicit discharges.

4. Construction Site Stormwater Runoff Control

4.I. Regulatory Requirement

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 runoff 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.

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.

Requirements for construction site contractors to, at a minimum: implement appropriate erosion and sediment control BMPs; and 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.

The MS4 operator must develop procedures for: site plan review which incorporate consideration of potential water quality impacts; receipt and consideration of information submitted by the public; and site inspection and enforcement of control measures to the extent allowable under state and local law.

4.II. Overall Program

Currently the City of Mansfield implements an erosion control program for construction sites. The basis for current requirements comes from the City's Erosion and Sedimentation Control Ordinance. The ordinance sets forth the requirement for property owners, developers, contractors, etc. to control erosion from their site. The ordinance provides minimum performance standards and notice and penalty provisions for noncompliance. Per the ordinance, the City requires all applicants for development of land to submit an erosion and sedimentation control plan for approval prior to the commencement of construction. The City provides enforcement of the ordinance through a plan review and site inspection program that requires operators to design, install, maintain and correct erosion control measures. Any future changes to the City Ordinances regarding erosion and sediment protection shall not alter these requirements. City staff members are made available for pre-construction and development review committee meetings to discuss City expectations, regulations, and requirements.

4.III. Construction Site Stormwater Runoff Control Selected Best Management Practices

BMP 4.1 – Drainage Design Criteria Manual

Description - The City of Mansfield will develop a drainage criteria manual, based on the NCTOCG *i*SWM Design Manual for Site Development, to be used in designing stormwater management measures. This manual will be adopted by the City for use in designing stormwater management elements for new construction and redevelopment in the City with a Local Guidance chapter detailing City specific requirements for development within City limits. City staff will evaluate and update the plans review process as needed to support the new design criteria with consideration. A useful drainage design manual will assist developers and builders in the City to design and construct effective temporary and permanent storm water control measures. In addition, the current City policy for erosion and sediment control measures is the latest edition of the NCTOCG Design Manual for Construction, which contains information, details, and other information regarding a variety of different construction site BMPs. The initial adoption of this manual will not include water quality considerations, but the City policy of maintaining existing vegetative channels and measures used to control flooding have water quality improvement impacts.

Measurable Goals/Evaluation - The City will adopt applicable portions of the *i*SWM Design Manual for Site Development, to include the creation of a Local Guidance chapter, for the design of stormwater management measures for construction projects by resolution or other regulatory mechanism as they are viewed as being applicable and appropriate for the City. The City will continue to use the Design Manual for Construction as its guideline for erosion and sediment control measures for construction sites. Measures not contained or discusses in the manual may be used on sites, as determined by the erosion control plan review process.

Responsible Parties - Stormwater - Environmental Services; Public Works; Engineering; Public Information Office

Implementation Schedule -

Year 1 – The City began developing its local criteria for the *i*SWM Design Manual for Site Development on September 27, 2007. The City shall continue to develop the local criteria section until complete, and then shall adopt the document.

Year 2 –Develop materials to make available to developers and homebuilders to increase awareness of new requirements regarding stormwater management measures.

Years 4-5 – Consider the adoption of any revisions made to the NCTCOG *i*SWM Manual for Site Design as well as any additional sections regarding water quality protection design standards.

BMP 4.2 – Construction Erosion and Sediment Control Ordinance

Description - The City of Mansfield is currently in the process of adopting a Stormwater Quality Protection Ordinance which shall replace the current erosion and sediment control and contain a section addressing construction requirements. The new Stormwater Quality Protection Ordinance will provide the legal authority for enforcement actions under the City’s Stormwater Management Plan. The City shall require the submittal of an erosion control plan to be reviewed and approved as part of the permit review on all construction projects, excluding single-lot residential permit submittals. In

addition, the City shall require the installation, inspection and maintenance of erosion and sediment controls, litter control, concrete waste management, and sanitary waste management.

Measurable Goals/Evaluation - The City will adopt and distribute the new Stormwater Quality Protection Ordinance. The Public Works Division, in conjunction with the City's Legal Department, will prepare the new Stormwater Quality Protection Ordinance. The Mansfield City Council will be presented the new ordinance for adoption. The construction activities portion of the Ordinance will require proper installation, maintenance and removal of control measures as described in the TCEQ Construction permit requirements. The construction activities portion of the Ordinance will define enforcement escalation procedures designed to ensure compliance with City Ordinance and State Permit requirements.

Responsible Parties - Stormwater - Environmental Services; Public Works; Legal Office

Implementation Schedule -

Year 1 – Complete a rough draft of construction erosion and sediment controls portion of Stormwater Quality Protection Ordinance. Prepare documents and presentations, post public hearing announcements in accordance with local and State public hearing requirements and present Stormwater Quality Protection Ordinance to City council during a public hearing session. Address council and resident concerns regarding construction activities portion of Stormwater Management Ordinance and present Stormwater Quality Protection Ordinance to City council for adoption.

Years 2-5 – Review changes in legislation, technology and practices to ensure ordinance remains currently applicable.

BMP 4.3 – Inspection and Enforcement Program

Description - The City's inspection and enforcement program may not be used in place of regularly scheduled inspections for construction activities as required by TCEQ permit TXR#150000. The City of Mansfield will review and revise its existing inspection and enforcement program for construction site control measures. City staff will develop inspection and enforcement protocols for the City's construction site inspection program with the intent to ensure compliance with City Ordinances and stormwater general practices. City inspectors involved with construction site inspections will be trained accordingly. Construction site operators will be required to correct any deficiencies in stormwater management measures in accordance with City Ordinance. Inspection duties shall be spread upon different departments, depending on what of construction is taking place as determined by the City's erosion and sediment control inspection policy.

Measurable Goals/Evaluation – Inspection duties shall be spread upon several departments within the City. It is not feasible for all inspectors to keep a log of inspection information. The Stormwater Inspector(s) shall keep a log of all inspections, noting any deficiencies identified, a time frame for correcting those deficiencies and any enforcement actions taken in order to achieve compliance. It is the goal of the City for this information to be maintained electronically and submitted as part of the Annual Report.

Responsible Parties – Stormwater-Environmental Service; Public Works; Development Services

Implementation Schedule -

Year 1 – An erosion and sediment protection policy is currently in place. The erosion and sediment protection policy shall be reviewed and revised as necessary over the course of the permit cycle. Cross training of existing inspectors in the Engineering and Development Services departments has occurred. An additional position as Stormwater Inspector may be added in order to better achieve the City’s goals.

Year 2 – Continue inspections of construction sites, and review inspections materials and procedures for efficiency and thoroughness, edit as needed. Evaluate inspection schedule for appropriateness, modify as needed. Continue activities.

Years 3-5 – Continue previous activities.

BMP 4.4 – Erosion Control Plan Building Permit Review

Description - The City currently requires erosion control plans be developed for all commercial and industrial construction projects. In addition, all residential subdivision developments are required to submit an erosion control plan as well. There is no City requirement that single-lot residential single-family permits submit an erosion control plan with their permits. This may be added at a later time if it is determined to be needed. The current City plan review policy also requires a copy of the Notice of Intent or Construction Site Notice for the site must be submitted to the City prior to permit approval. The City will continue to review erosion control plan review process as is, as well as the State permit paperwork requirements as this aids in improving the quality of erosion and sediment control practices and raises awareness about stormwater issues. The City shall consider additional plan or permit review requirements that may also benefit water quality for inclusion in future ordinances or policies.

Measurable Goals/Evaluation - The number of permits reviewed shall be included in the Annual Report. Any additional consideration and their findings shall be included in the Annual Report in which those considerations were made.

Responsible Parties - Stormwater-Environmental Services

Implementation Schedule -

Year 1 – Continue activities as defined in current policy. Consider any expansions or changes as deemed appropriate.

Years 2-5 – Continue previous activities.

BMP 4.5 – Public Comments Regarding Construction Sites

Description - The City is committed to responding quickly and appropriately to comments from residents. A complaint sheet has been developed and shall be used to collect pertinent information regarding residents input for construction sites. This information shall be used to trigger a complaint inspection, which shall be conducted in a reasonable amount of time, based on the information collected. If contact information is provided, and request has been made, the resident shall be conducted regarding the disposition of the information provided.

Measurable Goals/Evaluation - The number of calls, their nature, location, and any associated construction industry businesses shall be included as part of the Annual Report as well as the disposition of the findings.

Responsible Parties - Stormwater-Environmental Services

Implementation Schedule –

Years 1-5 – As policies are in place, the City shall simply to implement its current program. If deemed appropriate or necessary, advertisement or other awareness activities may be conducted in order to increase awareness among residents of the ability to identify the City of potential problems on construction sites.

4.IV. Other Applicable BMPs

The following is a list of BMPs from other MCMs in the SWMP that have a public education and outreach component. The primary purpose of these BMP is to address the MCM in which they are contained.

1.3 Stormwater Web Page – the internet is a unique tool for delivering information to the public. This tool will be leveraged as much as possible to provide information for the development community.

1.4 Development Review Committee Meetings – this will be the first instance that City staff will be able to express requirements and expectations to the development community.

1.5 Stormwater Education and Awareness Materials – BMP 5.4 will have a strong education and outreach component.

1.6 Public Education Task Force – topics discussed at the Public Education Taskforce meeting often involve approaches for dealing with the development community.

2.1 NOI and SWMP Notification - postings in newspapers to increase awareness about the stormwater program and encourage public participation in the development process.

2.3 Stormwater Hotline – municipal employees and the public will be able to report erosion and sedimentation problems from construction sites using the hotline.

3.2 Illicit Discharge Ordinance – public announcements will be made to allow the public, including the development community, the opportunity to discuss this ordinance.

3.4 IDDE Awareness Campaign – City staff and the public will be provided materials to identify the signs of an illicit discharge, and how to report the discharge to the appropriate staff members.

3.6 Dry Weather Screening Program – outfall screening will help identify areas where sedimentation from construction may have occurred.

4.1 Storm Sewer System Maintenance – during storm sewer maintenance it may be possible to identify areas where sedimentation from a construction site has caused problems.

4.2 Pollution Prevention Training for Municipal O&M Staff – parts of this training will be designed to help staff identify erosion and sedimentation problems on construction sites.

6.1 Post Construction Ordinance – this ordinance will affect the development community as permanent control measures are installed.

6.2 Post Construction Guidance Documents - these documents will cover a variety of post construction topics and may be distributed to City staff responsible for maintaining permanent control measures.

5. Post Construction Stormwater Management For New Development/ Redevelopment

5.I. Regulatory Requirement

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: develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for the community; 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 ensure adequate long-term operation and maintenance of BMPs.

5.II. Overall Program

The City of Mansfield has requirements for new development and redevelopment project designs that have the ability to improve stormwater quality. Landscaping, parkland dedication, buffer yard and setback, and erosion and sediment control requirements all assist in improving water quality. The City also has a Natural Resources Preservation Ordinance (or Tree Preservation) to encourage preservation of natural areas. For all major streams in its jurisdiction, the City of Mansfield has completed Master Drainage Plans. These MDPs provide ultimate developed hydrologic conditions floodplain and floodway delineation. These ultimate developed floodways have tentatively been adopted FEMA as its official floodway delineations. Development within an identified floodway is prohibited. For development along unstudied streams, the Floodplain Development Ordinance requires a study to define the development limits. These limits are defined by the ultimate 100-year water surface elevation and floodway delineations of allowable encroachment as defined by the Engineering Department. The defined limits are platted as Drainage Easement and required to be maintained by the owner. With this policy on unstudied streams the City promotes leaving stream buffers intact and undisturbed. Pre-development hydrology is also required in select locations, where the City is aware of existing drainage problems, especially downstream flooding or other impacts.

5.III. Post Construction Stormwater Management for New Development/Redevelopment Best Management Practices

BMP 5.1 – Post Construction Stormwater Management Ordinance

Description - The City of Mansfield will include in its Stormwater Quality Protection Ordinance a component to address post construction stormwater management. The post construction component will provide the City the authority to require long-term maintenance and operation for water quality BMPs, inspections of such measures, and enforcement actions when control measures are not installed or maintained in compliance with the City Ordinance and State permit requirements. The City will evaluate other city programs, available technology in the region and other sources to determine the most effective way to implement the post construction program.

Measurable Goals/Evaluation - The City will adopt and distribute the new Stormwater Quality Protection Ordinance. The Public Works Division in conjunction with the City's Legal Department will prepare the new Stormwater Quality Protection Ordinance. The Mansfield City Council will adopt the new ordinance. Guidance documents highlighting changes and important requirements within the ordinance will be created and distributed to private developers and builders, and any contractors for City projects.

Responsible Parties - Stormwater - Environmental Services; Public Works; Legal Office; Public Information Office

Implementation Schedule -

Year 2 – Explore and evaluate post construction stormwater controls, and other city requirements to determine the most effective and efficient way to implement the post construction program and how to formulate the ordinance for the City.

Year 3 – Complete a rough draft of post construction portion of Stormwater Quality Protection Ordinance.

Year 4 – Prepare documents and presentations, post public hearing announcements in accordance with local and State public hearing requirements and present Stormwater Quality Protection Ordinance to City council during a public hearing session. Ensure Post Construction portion of Stormwater Quality Protection Ordinance is presented to City council for approval.

Year 5 – Review changes in technology and practices to ensure ordinance remains currently applicable.

BMP 5.2 – Post Construction Guidance Documents

Description – Should new post construction requirements be passed City staff develop, or otherwise acquire, and make available guidance documents identifying some of the post construction control measures to increase awareness of changes made to the City's Development Regulations. Locations for viewing any newly adopted development regulations, as well as the Stormwater Quality Protection Ordinance, will be included in the guidance documents.

Measurable Goals/Evaluation - City staff will develop guidance documents for the construction industry and internal personnel regarding the development regulations. The documents and materials developed will highlight the goals of the SWMP and benefits provided by following guidelines as well as reviewing the requirements themselves.

Responsible Parties - Stormwater - Environmental Services; Public Works; Public Information Office

Implementation Schedule -

Years 1-3 – No activity

Year 4 – Should the City amend the Stormwater Quality Protection Ordinance to include post construction requirements, begin developing materials and guidance documents highlighting new requirements. Distribute materials using appropriate delivery methods for target audience.

Year 5 – Continue development and distribution of materials as needed.

BMP 5.3 – Post Construction Control Measure Maintenance and Operation

Description - Many post construction control measures require periodic maintenance, such as dredging of detention ponds, vegetation management, etc... It is important that the party responsible for maintenance and operation of the control measures be clearly identified, understand their responsibilities and understand the proper maintenance and operation procedures as the measure ages. City staff will evaluate the possibility of generating a fee schedule for developers, or other responsible parties, for maintaining and operating control measures. City staff will also evaluate the possibility of developing binding agreements for the transfer of responsibility from one party to another. Control measures associated with repeated public complaints or inspection failures need to be identified, tracked, and evaluated for effectiveness. There are legal questions as to the City's ability to require operation and maintenance of post construction control measures on private property and access to inspect these measures. These issues will be evaluated and the City's decision to proceed for this BMP will be based upon that evaluation.

Measurable Goals/Evaluation - The generation of a fee schedule and/or procedures for ensuring proper transfer of responsibility. City staff will also develop guidance documents for developers and other responsible parties addressing maintenance and operation responsibilities, stressing the importance of proper maintenance for water quality and quantity control. Prepare documents or other materials to assist responsible parties become more familiar with proper maintenance procedures to ensure proper maintenance activities are conducted.

Responsible Parties - Stormwater - Environmental Services; Public Works; Legal Office; Public Information Office

Implementation Schedule -

Year 1 – No activity.

Year 2 – Evaluate the most cost-effective, most efficient way to implement this permit requirement and maintain legality.

Years 3-5 – Implement fee schedule and transfer agreements if determined feasible and permissible. Create and distribute brochures and/or factsheets if determined to be effective.

5.IV. *Other Applicable BMPs*

The following is a list of BMPs from other MCMs in the SWMP that have a public education and outreach component. The primary purpose of these BMP is to address the MCM in which they are contained.

1.1 Utility Bill Inserts – utility bill inserts will be developed covering several topics that have an impact on water quality, and identify the public's role in protecting our local waterways.

1.2 City Newsletter Article – articles for the City’s newsletter will be developed to discuss water pollution topics and actions the public can take to help keep our local waterways clean.

1.3 Stormwater Web Page – the internet is a unique tool for delivering information to the public. Web content will be developed in regard to permanent control measure maintenance requirements.

1.4 Development Review Committee and Construction Meetings – meetings with the development community provides a chance to give and receive input about the stormwater program.

1.5 Stormwater Education and Awareness Materials – BMP 6.2 will produce materials that have an education and outreach component.

1.6 Public Education Task Force – topics discussed at the Public Education Taskforce meeting may provide information for consideration in the post construction measure management program.

2.1 NOI and SWMP Notification - postings in newspapers to increase awareness about the stormwater program and encourage public participation in the development process.

2.3 Stormwater Hotline – municipal employees and the public will be able to report erosion and sedimentation problems from construction sites using the hotline.

2.4 Stormwater Workshops – workshops will be developed for different groups. The purpose of the workshop will depend on the audience, and the topic to be covered.

3.4 IDDE Awareness Campaign – discharges from failing permanent control measures may be identified through the IDDE campaign.

3.6 Dry Weather Screening Program – outfall screening will help identify areas where discharges are occurring from failing permanent control measures.

4.1 Storm Sewer System Maintenance – storm sewer maintenance activities may identify permanent control measure failures.

4.2 Pollution Prevention Training for Municipal O&M Staff – parts of this training will be designed to help staff identify permanent control measure failures.

5.3 Inspection and Enforcement Program – the inspection and enforcement program will evaluate the installation of permanent control measures, and may be present to observe these measures in action.

6. Pollution Prevention/Good Housekeeping For Municipal Operations

6.I. *Regulatory Requirement*

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: park and open space maintenance; street, road, or highway maintenance; fleet and building maintenance; storm water 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.

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. Materials may be developed, or obtained from the EPA, states, or other organizations and sources. Examples or descriptions of training materials being used must be included in the SWMP.

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: maintenance activities; maintenance schedules; and long-term inspection procedures for controls used to reduce floatables and other pollutants.

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: dredge spoil; accumulated sediments; and floatables.

The SWMP must include a list of all: municipal operations that are subject to the operation, maintenance, or training program developed under the conditions of this section; and municipally owned or operated industrial activities that are subject to TPDES industrial storm water regulations.

6.II. *Overall Program*

The overall goal of the Pollution Prevention/Good Housekeeping program for the City of Mansfield is to reduce the risk of water pollution using proper maintenance and operation procedures, training City staff for awareness about the hazards, and internal audits to track the effectiveness of the program. The City does own and operate a water treatment plant; the only municipally owned industrial activity subject to TPDES industrial activity regulations known at this time. Training materials developed by the North Central Texas Council of Governments, or other materials, will be used to develop targeted training

programs for City staff with responsibilities involving potential water pollution or protection of water quality. Control measures managed by the City will be properly installed and maintained. A GIS layer will be developed identifying the location and type of control measure, and will be used to assist in the maintenance of the control measures. Any waste generated by City activities, particularly dredge materials, accumulated sediments and floatables, will be disposed of as provided by the regulations directing the disposal of dredge materials. As of the submittal of this SWMP, a thorough assessment of all City facilities, activities, policies, and other items having an impact on stormwater quality has not been conducted.

6.III. *Pollution Prevention/Good Housekeeping Best Management Practices*

BMP 6.1 – Storm Sewer System Maintenance

Description - City staff shall consider developing an inspection and maintenance-tracking program for the stormwater quality control features maintained by the City. The tracking program will allow City staff to track stormwater quality control measures in need of maintenance, stormwater quality control features with repetitive repair issues, and other potential problems associated with the aging of stormwater quality control features. As needed, City staff will be trained, or hired, to assist in the inspection and maintenance of the stormwater quality control system. Proper maintenance of the storm drainage system will ensure design capacity is maintained, and any water quality improvements are preserved.

Measurable Goals/Evaluation – If determined to be necessary, the tracking program procedures and methods will be outlined in a City policy to ensure continuity of the program through time. A database will be created to assist in tracking the information, and features can be displayed on a map using GIS. A brief description of maintenance activities and the number of stormwater quality control feature inspections conducted during the permit year will be included in the annual report. Features with repetitive repair issues will be evaluated for effectiveness, and replaced as deemed necessary.

Responsible Parties - Stormwater - Environmental Services; Public Works

Implementation Schedule -

Year 1 – Create an inventory of stormwater quality control features maintained by the City. Include date of installation and date of last inspection, if known, and maintenance activities, if any. Develop inspection and maintenance guidelines for stormwater quality control measures.

Year 2 – Begin pilot inspection and maintenance program. Evaluate results of pilot program to determine inspection frequency, maintenance schedules, remark items, and other information to streamline the inspection and maintenance process.

Year 3 – Continue pilot program implementation and evaluation.

Year 4 – Using results from pilot program develop City policies regarding stormwater quality control feature inspection and maintenance. Fully develop inspection and maintenance program.

Year 5 – Continue program implementation and evaluation.

BMP 6.2 – Pollution Prevention Training for Municipal O&M Staff (check for RDI)

Description - The City of Mansfield has been a participating member in the Regional Stormwater Management Coordinating Council of the North Central Texas Council of Governments. The RSWMCC has produced a series of training modules directed at pollution prevention for municipal activities. Modules applicable to City needs will be used to develop City staff stormwater pollution prevention training. Other materials developed by the City or other sources may supplement the developed modules. A properly trained staff is less likely to engage in activities that pose a risk to the quality of our local waterways. A list of potential staff positions will be developed as part of the pollution prevention audit BMP 6.3.

Measurable Goals/Evaluation - City staff positions with responsibilities that could result in stormwater quality impairments or improvements will be identified to determine applicable modules to be used in creating the City stormwater pollution prevention-training program. The selected modules will be evaluated for completeness; additional items will be created or used from other sources to provide a complete and comprehensive training program for identified staff positions. The number of employees attending training, their responsibilities, and potential effect on stormwater quality will be included in the annual report for the permit year. Training activities will continue until all staff positions have attended their respective training modules. Refresher training activities will be conducted as needed to address changes in technology, practices, policies, procedures or regulations and newly hired employees.

Responsible Parties - Stormwater - Environmental Services; Human Resources; Attending Departments

Implementation Schedule -

Year 1 – Identify City staff positions that are determined to have an impact on stormwater quality. Determine NCTCOG training modules applicable to identified staff positions. Evaluate training modules for completeness and supplement modules as needed.

Year 2 – Conduct pilot training for staff positions with greatest potential to degrade or improve stormwater quality. Use attendee comments to refine training materials and delivery.

Year 3 – Continue training material development as needed; expand pilot training to broader staff positions.

Years 4-5 – Evaluate training program to identify positions in need of refresher training, if any. Develop new training materials as needed, and conduct new training sessions as deemed necessary.

BMP 6.3 – Pollution Prevention Audit for Municipal O&M Activities

Description - Several municipal activities can have an impact on stormwater quality. A list of activities with a potential to affect stormwater quality will be created, as well as a list of staff positions with oversight or responsibility of those activities. Activities that have a positive effect on stormwater quality will be encouraged, and activities with a potential to degrade stormwater quality will be evaluated and modified to ensure all preventive measures are being followed to prevent

pollutants from entering local waterways. The identification of activities posing a risk to water quality, and steps to be taken to reduce the risk will benefit the quality of our local waterways.

Measurable Goals/Evaluation – A thorough assessment of current activities will be conducted in order to identify positive and negative water quality activities and behaviors. The results of the audit will be used in tailoring the pollution prevention training materials needed in BMP 6.2.

Responsible Parties - Stormwater - Environmental Services; Public Works; Participating Departments

Implementation Schedule -

Year 1 – Conduct audit of activities and current prevention practices. Group activities into stormwater improving or degrading activities. Determine if further preventive measures need to be taken in order to prevent pollutants from entering local waterways.

Years 2-5 – Conduct periodic exploratory audits to assess training effectiveness and new activities or behaviors that have a positive or negative impact on stormwater quality.

BMP 6.4 – Street Sweeping

Description - Roadways buildup debris from everyday use. Occasional cleaning of roadways using Street Sweepers helps to remove this debris. Removing debris using Street Sweepers helps to prevent the substances contained in the debris from entering the storm sewer system. The City of Mansfield is committed to keeping pollutants out of the storm drain system and will contract to have City roads swept at least three times per year.

Measurable Goals/Evaluation - Document dates and names of where Street Sweeping activities occurred. Record weight of debris removed if possible, or linear distance if not.

Responsible Parties - Public Works; Street Maintenance

Implementation Schedule -

Years 1-5 – The City currently contracts to have some City streets swept at least three times per year.

BMP 6.5 – Structural Control Maintenance

Description - The City shall conduct an assessment of stormwater infrastructure to identify any stormwater quality measures to the best of the City’s ability. Measures requiring maintenance shall be added to a database. If practical, an inspection program shall be developed, for any current or future stormwater quality devices, and the results of inspections shall be used to determine maintenance needs. Should inspections be unfeasible, the date of installation shall be used to estimate when maintenance most likely will be needed. In the event an inspection cannot be performed, or the date of installation is unknown, some other method of determining the maintenance needs shall be developed.

Measurable Goals/Evaluation - The list of devices discovered, and any associated dates shall be included in the Annual Report. Additionally, a maintenance plan shall be developed and submitted with the Annual report in which the plan is developed.

Responsible Parties – Stormwater - Environmental Services; Public Works; Engineering

Implementation Schedule –

Year 1 – No activity.

Year 2 – No activity.

Year 3 – Conduct assessment to attempt to identify measures under City control that require maintenance and have a stormwater quality improvement function. Track new devices as they are installed.

Year 4 – Create database of identified measures, and add new devices to the database as needed.

Year 5 – Develop maintenance plan based on information contained in database and general maintenance requirements for the devices discovered.

BMP 6.6 - Proper Waste Disposal

Description – The City make every effort to ensure that any work performed by, or on behalf of, the City shall follow proper disposal requirements as associated to dredge material, accumulated sediments and floatable materials.

Measurable Goals/Evaluation – The City shall make every effort to gather and report information on the disposal of these items as it occurs.

Responsible Parties – Stormwater – Environmental Services; Public Works; Parks

Implementation Schedule –

Years 1-5 – Notify City departments of this require and ask for assistance in identifying materials disposed of, and how the disposal occurred.

BMP 6.7 – Municipal Industrial Operation

Description - As part of the audit conducted under BMP 6.3, a list of industrial activities subject to TPDES industrial stormwater regulation shall be created. Every effort shall be made by the City to ensure that all appropriate activities have been identified and included in the list. The list shall include the name of the primary point of contact, their staff title, a contact number and the address of the facility. The TPDES permit number shall also be included in the list.

Measurable Goals/Evaluation - The list of City industrial operations shall be included in the Annual Report for the year in which the audit is conducted. Additional City industrial operations shall be added to the list as these operations are identified.

Responsible Parties - Stormwater – Environmental Services; Public Works

Implementation Schedule –

Year 1 – Conduct audit and create list.

Years 2-5 – Evaluate new City operations for TPDES permit coverage.

6.IV. Other Applicable BMPs

The following is a list of BMPs from other MCMs in the SWMP that have a public education and outreach component. The primary purpose of these BMP is to address the MCM in which they are contained.

1.3 Stormwater Web Page – the internet is a unique tool for delivering information to the public. This tool will be leveraged as much as possible to provide information for municipal employees.

1.5 Stormwater Education and Awareness Materials – BMP 4.1 and BMP 4.2 will include some materials for educating municipal employees about storm water pollution hazards.

2.2 Storm Drain Inlet Markers – some City staff may need to be trained in order to oversee the inlet marker program.

2.3 Stormwater Hotline – City staff will need to be trained on how to classify comments from the hotline, as well as whom the comments should be directed to.

2.6 Texas Smartscape Program – the SmartScape program advocates the use of native and adaptive plants. City staff involved in landscaping will be encouraged to use these principles on City grounds.

3.2 Illicit Discharge Ordinance – additional City staff will need to be educated to assist in the development of the Stormwater Quality Ordinance.

3.4 IDDE Awareness Campaign – City staff will be trained to monitor for signs of an illicit discharge.

3.6 Dry Weather Screening Program – City staff and/or volunteers will be trained on the procedures for conducting a dry weather screening of an outfall.

5.2 Construction Erosion and Sediment Control Ordinance – additional City staff will need to be educated to assist in the development of the Stormwater Quality Ordinance.

5.3 Inspection and Enforcement Program – some City staff will need to attend training on inspecting storm water control measures at construction sites.

6.1 Post Construction Ordinance – additional City staff will need to be educated to assist in the development of the Stormwater Quality Ordinance.

6.2 Post Construction Guidance Documents - these documents will cover a variety of post

construction topics and may be distributed to City staff responsible for maintaining permanent control measures.

6.4 Post Construction Control Measure O&M – City staff will review maintenance practices for permanent control measures under City management. Additional training may be necessary as new control measures are developed or built.

APPENDIX A - Responsible Party Information

A list of the responsible parties for the different BMPs along with a brief description of what the responsibilities will be developed as part of the first implementation year.

APPENDIX B - Implementation Schedule Summary

A table of the implementation timeline shall be developed as part of the first implementation year activities.

APPENDIX C
Pollution Prevention Staff Positions Training

A list of staff positions whose duties or activities may affect water quality will be developed during the Pollution Prevention Audit for O&M Staff, BMP 6.3.