



City of Grand Prairie &

Dallas County Flood Control District #1

TPDES Phase II Small MS4 General Permit Annual Report

Extended Year 5: August 13, 2012 - August 12, 2013

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List of Acronyms

BMP	Best Management Practice
CRP	Clean Rivers Program
DCFCD	Dallas County Flood Control District #1
EPA	Environmental Protection Agency
ESD	City of Grand Prairie Environmental Services Department
GIS	Geographic Information Systems
GPISD	Grand Prairie Independent School District
HHW	Household Hazardous Waste
KGPB	Keep Grand Prairie Beautiful
MEP	Maximum Extent Practicable
MCM	Minimum Control Measure
MS4	Municipal Separate Storm Sewer System
NCTCOG	North Central Texas Council of Governments
NPDES	National Pollutant Discharge Elimination System
P2	Pollution Prevention
SIC	Standard Industrial Classification
SSO	Sanitary Sewer Overflow
SWMP	Storm Water Management Program
SWPP	Storm Water Pollution Prevention
SWP3	Storm Water Pollution Prevention Plan
TCEQ	Texas Commission on Environmental Quality
TPDES	Texas Pollutant Discharge Elimination System

Part I. General Information

Municipality/Permit #: City of Grand Prairie/ TXR040065

District/Permit #: Dallas County Flood Control District #1/ TXR040255

TPDES Permit #: TXR040000

TCEQ NOI Form #: 20368

Extended Year 5 Reporting Period: August 13, 2012 – August 12, 2013

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Part II. Interlocal Agreement

The City of Grand Prairie and Dallas County Flood Control District #1 (DCFCD) jointly submitted the Storm Water Management Program as described in an interlocal agreement approved by the aforementioned entities on February 5, 2008 (Appendix A). According to Part III of the General Permit, a permittee may enter into interlocal agreements with municipalities where the small MS4 is located in order to meet the goals of the permit if the permittee does not have enforcement authority and is unable to meet the goals of the general permit through its own powers. Approximately 20% of the DCFCD is located within the City of Grand Prairie boundaries; however, the DCFCD does not have enforcement capabilities. As a result, the City of Grand Prairie and DCFCD agreed to the joint submission of the SWMP where the DCFCD is solely responsible for only two (2) BMPs (BMP 6.10 and 6.11). The City of Grand Prairie is entirely responsible for all other BMPs described in the SWMP.

For the aforementioned reason, the City of Grand Prairie and DCFCD have jointly submitted this annual report.

Part III. Additional Information

1. No changes were made to or proposed for the SWMP in extended Year 5.

Future BMP activities are dependent upon amendments to the reissued Phase II MS4 Permit.

Correspondence with the TCEQ regarding revisions made to the SWMP **following** NOI submittal and **before** submittal of the Year 1 annual report and TCEQ approval of the NOI and SWMP may be found in Appendix B. **These revisions were documented in the Year 1 annual report.**

2. The City of Grand Prairie and DCFCD have *not* annexed lands since obtaining permit coverage.
3. There are no newly listed receiving waterbodies for this MS4 on the 2012 Texas 303(d) list.

On September 24, 2013, the TCEQ adopted bacteria TMDLs for the Lower West Fork of the Trinity River and tributaries. This includes sections located within Grand Prairie. Upon approval by the EPA, the TMDLs will become part of the state's Water Quality Management Plan. On December 20, 2000, TMDLs were approved by the TCEQ for legacy pollutants in segments 0841 (Lower West Fork of Trinity River) and 0841A (Mountain Creek Lake).

4. The MS4 *has* conducted analytical monitoring of stormwater quality. See BMP 3.6, BMP 3.16, and BMP 3.17 for the discussion and summary of stream, Joe Pool Lake inlet, and Joe Pool Lake beach monitoring results, respectively.

Part IV. Narrative Provisions

Status of the Compliance with Permit Conditions

The City of Grand Prairie and DCFCD have completed the required self-assessment and have determined that the City and DCFCD are in compliance with all permit conditions. The City and DCFCD: 1) are currently in compliance with the SWMP as submitted to and approved by the TCEQ, 2) are in compliance with recordkeeping and reporting requirements, and 3) meet the eligibility requirements of the permit.

Appropriateness and Effectiveness of Extended Year 5 BMPs for Reducing Pollutants

Each of the extended Year 5 BMPs was assessed as appropriate. Table 1 describes the estimated level of effectiveness of all extended Year 5 BMPs as they relate to the reduction of the discharge of pollutants to the maximum extent practicable (MEP).

Table 1: BMP Effectiveness and Progress Towards Reducing the Discharge of Pollutants to the MEP

<i>BMP</i>	<i>Description</i>	<i>Effectiveness</i>	<i>Comment</i>
1.2	Clean Rivers on Website	Low	Reaches only those perusing the City's stream monitoring website; however, once on the Clean Rivers site, citizens are able to better understand water quality issues
1.3	Lawn and Garden	Low	Reaches only those picking up brochure, perusing website, or seeking to understand SmartScape demonstration gardens, but increases awareness of alternative chemicals and benefits to planting native species
1.4	HHW Program	High	Encourages the proper disposal of hazardous waste and informs citizens of when and where they can dispose of waste
1.5	Don't Bag It	Moderate	Encourages a reduction in potential storm water contaminants such as fertilizers, insecticides and herbicides, while preserving valuable landfill space
1.6	Pet Waste	Moderate	Give-a-ways and brochures target the appropriate audience and encourage proper disposal of pet waste
1.7	H2O Line	Moderate	Reminds industrial facilities of reporting deadlines and gives them BMP information to increase compliance with industrial stormwater permit
1.8	Environmental Workshop	High	Surveys indicate that information helps facilities comply
1.9	Commercial/Industrial Floatables Education	Moderate	Educational materials discuss methods for reducing floatables. Reaches the appropriate audience as brochures are distributed during inspections, classes, workshops, and at the Development Center
1.10	Information for ARB	High	Compliance has increased significantly
1.11	School Curriculum	High	The City purchased and distributed Major Rivers Educational Packets for GPISD. This program emphasizes the importance of stormwater pollution controls to young students who in turn may relay this information to their older parents/guardians.
1.12	Interactive watershed model	Low	Effective method of teaching the concept of a watershed; however, the model has limited outreach capabilities
1.13	Utility Bill Insert	High	This is the most widely read city publication
1.14	Stream/Watershed Road Signs	Low	Signs are installed at 8 different locations throughout the City; the signs have limited outreach capabilities

1.15	Multimedia Education	Moderate	Promotes watershed awareness to Grand Prairie citizens through creative video productions and through the City's website
1.16	Non-English	High	High population of only Spanish speaking citizens in Grand Prairie
1.17	Auto Watch	Moderate	Targeted information for automotive sector
1.18	KGPB Programs	High	Tons of trash and debris are removed from neighborhoods, streams, and creeks
1.19	Construction BMPs	Low	Reaches developers seeking out educational information
1.20	Visitor Education	Moderate	Website visited by anyone with access to the internet. Brochures are available at the City's Visitor Center
1.21	Take Care of Texas	Low	Dependent upon those receiving information
2.1	Public Notice	Low	Not applicable
2.2	Texas Stream Team	High	Stream monitors sample at different locations and/or times than the City's stream monitoring. Data collected has the potential to reveal areas needing further monitoring, remediation, and/or enforcement
2.3	Master Composter	Moderate	Provides students with practical alternatives to over-applying fertilizer, potentially reducing the amount of excessive nutrients to local waterways
2.4	Drain Markers	Moderate	Increases awareness of the storm drain system to citizens and to those installing markers
2.5	Educational Event	High	Event focuses on stormwater issues and reaches hundreds of residents in one day
2.7	Illegal Dumping Hotline	High	City staff are made aware of polluted areas that they may have otherwise missed
2.8	Stakeholder Meetings	High	Citizens and City staff come together to make most appropriate decisions for SWMP
2.9	KGPB Programs	High	Includes residents, students, companies, civic groups, neighborhoods, and churches in an effort to prevent litter and other pollutants from entering the stormwater system. Actively removes floatables from waterways.
2.10	Neighborhood Outreach	Moderate	Neighborhood associations are encouraged to form cleanup committees
2.11	School Outreach	High	Gets students and faculty involved in stewardship oriented activities, including Adopt-A-Stream cleanup efforts, storm drain marking projects, water quality monitoring programs and wetland education programs, resulting in the reduction of storm water pollutants
2.12	Corporate Involvement	High	This recognition based program has helped to remove pollutants from creeks and prevents polluting activities
2.14	Request for Drainage/Design Comments	High	Contractors and other professionals make revision recommendations for the manual. Necessary revisions are made based on the comments received.
2.15	HHW Events	High	Actively allows citizens to participate and dispose of HHW properly. In extended Year 5, 1,183 households participated in the events and ~28,165 pounds of hazardous waste products were recycled.
2.16	Annual Awards	High	Mandates storm water compliance to achieve recognition
2.17	ARB Mailing	Moderate	Increases ability to reach targeted audiences consistently
3.1	GIS MS4 Database	High	Map used to trace illicit discharges to waterbodies. Field verification detects illicit discharges
3.2	Complaint database	Moderate	Tracks spills and creates historical information for assessment
3.3	Complaint response	High	Creates response mechanism. Incidents such as spills or sanitary sewer overflows are mitigated
3.4	Spill response	High	Abates pollutants and prevents them from entering streams
3.5	BPR Process	High	Mandates compliance prior to operation

3.6	Clean Rivers Program	High	Atypical results are investigated and mitigated
3.7	SSO Response	High	Ensures the protection of our waterways following an SSO
3.8	IDDE Education	Moderate	Stormwater BMP posters, brochures, and videos were used to target the appropriate audience
3.9	Stormwater Ordinance	High	Regulations and enforcement increases compliance
3.10	Industrial Inspection Program	High	Ensure TPDES compliance
3.11	Commercial/Industrial Floatables	Moderate	Enforcement helps to ensure compliance
3.12	Litter Collection	High	Approximately 83.6 TN of litter were collected in extended Year 5 and sent to the Grand Prairie Landfill. By preventing litter from remaining in the environment, both surface and groundwater are protected from potential contamination associated with it
3.13	Illegal Dumping Clean-up	High	Clean-up reduces potential pollutants
3.14	Floatables Assessment	Low	This BMP is in the initial stages. Letters and educational materials were sent out to 28 facilities in Year 5.
3.15	IDDE	High	Detects illicit discharges which are then mitigated
3.16	Joe Pool Lake Sampling	High	Atypical results are investigated and mitigated
3.17	Beach Sampling Program	Moderate	Reduces health risks to citizens
3.18	Rapid Bioassessment Program	Low	This BMP is in the initial stages. Year 5 marked the first round of sampling for this program. Samples were sent to an outside lab for identification in extended Year 5.
3.19	On Site Sewage System Permitting	Low	Only one (1) permit was issued in extended Year 5
3.21	Auto Inspection Program	High	Enforcement and education encourages businesses to prevent pollutants from coming into contact with stormwater
4.1	Review Infrastructure Plans and Designs	High	Determines the effectiveness of the drainage and erosion control measures in plans and provides comments for revisions by the designer to reduce to the maximum extent practicable potential site specific erosion control concerns
4.2	Inspect Erosion Control Measures	High	Erosion control inspections are performed by City inspectors on a routine basis. Inspectors enforce permit provisions
4.3	Earthwork Permit	High	Prior to any land disturbing activity, all erosion controls must be in place according to the plan. By tracking the number of earthwork permits issued, the City monitors sites and maintains compliance before activities begin
4.4	Stormwater Pollution Prevention Plan During Construction	High	The City requires a Stormwater Pollution Plan in accordance with the regulatory authorities' permit process. A copy of the NOI is required before a permit is issued.
4.5	Complaint Response	High	City investigator ensures problem areas are brought back into compliance, thus reducing pollution runoff
4.9	Redefine Construction Site Inspection Program	High	Current BMP conditions were addressed at each location

5.1	Development Review Process	High	Review of plans is used for the mitigation of impact. The number of plans that have been approved reflect the impact on post construction runoff will be minimal to the detention areas as well as to floodplains associated with the site, if applicable. The review process may require several modifications of a drainage plan by the engineer to allow the BMPs to operate at the maximum extent practicable
5.2	Stream Buffer Preservation	High	The City strives to create structural controls that are multi-purpose, while realizing that each site, project, and watershed presents different challenges and opportunities. The City encourages the preservation of natural hydrology and drainage ways and the reduction of impervious cover. The goal is to make efficient use of the natural features of the sites to prevent stormwater impact at the maximum extent practicable
6.2	Existing SWP3s	High	Inspections result in necessary updates to City SWPPPs. BMP improvements and/or additions are researched and implemented. Training City staff increases effectiveness of BMPs and helps to prevent pollutants from coming into contact with stormwater
6.3	Storm Sewer and Drainage Maintenance	High	Maintenance includes cleaning, clearing, seeding, and overall maintenance of the storm sewer systems
6.5	SWPP for City	Moderate	Educational materials were created and used to increase water quality awareness
6.6	Native/Adaptive Vegetation	Low	Possible locations for future vegetation promotion along floodplain easements were selected in Year 5
6.7	Mosquito Management	High	Controls products used and establishes processes so that applicators remain at a distance from fresh waterbodies
6.8	Street Sweeping	High	Removing contaminants from the roadways reduces the associated risk to the environment. 233.86 TN of materials were collected and delivered to the Grand Prairie Landfill for proper disposal in extended Year 5
6.9	Inspect City Facilities	Moderate	City facilities not covered by a specific TPDES permit were inspected for stormwater issues
6.10	DCFCD#1 Storm Sewer and Drainage Maintenance	Moderate	As situations arise in the DCFCD#1 that require maintenance or waste removal, this BMP helps to reduce the discharge of pollutants

Part V. Summary of Minimum Control Measures

The following summary of minimum control measures includes the BMPs for each MCM, measurable goals, responsible party, target date, and activities completed for each BMP. The listed *Target Date* for each measurable goal is defined as the scheduled start date for that goal where Year 1 starts on August 13, 2007, Year 2 starts on August 13, 2008, Year 3 starts on August 13, 2009, and so forth. Dates listed under *Activities Completed* are the completion dates for said activity.

Included in this summary are also 1) the progress towards reducing the discharge of pollutants as determined through sampling data (this is in addition to the aforementioned Table 1) and a summary of information used to evaluate reductions in the discharge of pollutants, 2) an evaluation of the BMPs progress, and 3) a discussion of obstacles or challenges for a BMP, if applicable.

Future BMP activities are dependent upon amendments to the reissued Phase II MS4 Permit.

See Table 5 for the number of non-municipal construction activities as provided to the City via notices of intent or site notices.

MCM 7 is not utilized for this permit.

MCM 1: Public Education and Outreach

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
1.1 Environmental Education Specialist	Employ an Environmental Education Specialist who supports the education initiative of this SWMP.	1. Employ an Environmental Education Specialist who will actively seek to broaden educational opportunities within the school district and the city 2. Conduct 2 storm water outreach activities annually	Environmental Services Department	Years 2 – 5

This BMP was completely removed from the SWMP in Year 1 before this permit was authorized by the TCEQ (see Year 1 Annual Report).

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
1.2 Clean Rivers Program	Stream monitoring information is made available for review on the Clean Rivers Program (CRP) website. Access to this site will be provided through the city's website.	1. Provide a link to the Clean Rivers Program's website on the city's website	Environmental Services Department, Environmental Quality Division	Years 2 – 5

All activities for this BMP are complete for extended Year 5.

BMP 1.2 Activities Completed

Date: 08/13/2012 **Responsible Party:** Echo Rexroad, Sr. Environmental Specialist

Website link

Approximate Cost = \$0; Labor = 0.5 hours

Provided link to Clean Rivers Program on City website. The Clean Rivers Program allows the public to search for and view sampling results of the waterways in the area: www.gptx.org/EnvironmentalQuality/StreamMonitoring.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
1.3 Lawn and Garden Education for Homeowners	Efforts will be made to encourage lawn and garden low maintenance concept into existing education programs throughout the city through the purchase and distribution of educational materials and other promotions. Low maintenance garden concepts will be created on city properties.	1. Provide information about native and adaptive plants on the city website and by distributing educational materials at 2 venues located throughout the city	Environmental Services Department, Environmental Quality Division	Years 1 – 5
		2. Maintenance of Texas SmartScape™ Demonstration Garden at the Prairie Paws Adoption Center		Years 1 – 5

The City exceeded the goals for this extended Year 5 BMP.

BMP 1.3 Activities Completed

Date: 08/13/2012 **Responsible Party:** Public Works Department

Water Utilities SmartScape Garden

Approximate Cost = \$285/month; Labor = 2 hours/week

The Water Utilities SmartScape demonstration garden was maintained in extended Year 5.

Date: 08/13/2012 **Responsible Party:** Environmental Services Department

Prairie Paws Demonstration Garden

Approximate Cost = \$3,270 for supplies/plants (partially a previous purchase); Labor = 1 hour/month

The Prairie Paws SmartScape demonstration garden was maintained in extended Year 5 (Figure 1).

Figure 1: Prairie Paws Demonstration Garden



Date: 08/13/2012 **Responsible Party:** Environmental Quality Division

SmartScape Educational Material

Approximate Cost = \$32 (previous purchase); Labor = 0.5 hours/month

Texas SmartScape educational materials were distributed at the Memorial Library and the Development Center.

Date: 08/13/2012 **Responsible Party:** Echo Rexroad, Sr. Environmental Specialist

Native and Adaptive Information on Website

Approximate Cost = \$0; Labor = 0.5 hours

Posted information on Texas SmartScape on the City of Grand Prairie Storm Water website. According to NCTCOG's user statistics, the Texas SmartScape website received 330 visits from Grand Prairie.

"What is Storm Water?" page:

"Select native and adapted plants and grasses that are drought and pest resistant. Native plants require less water, fertilizer, and pesticides. Learn more about native and adaptive plants at www.txsmartscape.com."

"Lawn Chemicals" page:

"Want to learn more about how you can reduce fertilizer and pesticide use? Become a Certified Master Composter or visit the Texas SmartScape™ official website."

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
1.4 Household Hazardous Waste (HHW) Program	Reduction of household hazardous waste dumping will be promoted through the distribution of educational materials and through HHW events that provide city residents the opportunity to dispose of household hazardous waste.	1. Continue pamphlet and/or wheel distribution at 3 venues located throughout the city	Environmental Services Department, Environmental Quality Division	Years 1 – 5
		2. Discuss hazards of household hazardous waste at least 1 time per year in the city newsletter		Years 1 – 5
		3. Handout HHW magnets to at least 100 citizens per year		Years 1 – 5

The City exceeded the goals for this extended Year 5 BMP.

BMP 1.4 Activities Completed

Date: 08/12/2013 **Responsible Party: Environmental Quality Division**

HHW Magnets

Approximate Cost = \$0.34 per magnet (previous purchase); Labor = 0.5 hours/month

The City distributed approximately 1,400 Household Hazardous Waste magnets in extended Year 5. Magnets were distributed during Household Hazardous Waste events, during which we had 1,183 participants, and were made available to visitors at the Development Center, during MayFest, and during complaint inspections.

Date: 08/12/2013 **Responsible Party: Environmental Quality Division**

Pipeline Articles

Approximate Cost = \$1,213 to print Pipeline and free to mail in utility bill; however, contains multiple articles; Labor = 1.5 hours each

Eleven (11) articles advertising HHW events and/or discussing the hazards of disposing of household hazardous waste improperly were printed in the Pipeline, a City newsletter distributed via water utility bills.

Date: 08/12/2013 **Responsible Party: Environmental Quality Division**

HHW Wheel Distribution

Approximate Cost = \$2,263 for 2,500 wheels (previous purchase); Labor = 0.5 hours/month

The City distributed "Earth Saver" wheels at the Memorial Library, Betty Warmack Library, Development Center, and at Household Hazardous Waste events.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
1.5 Don't Bag It! Program	Encourage participants to mulch grass and yard clippings as a compost instead of application of commercial fertilizers.	1. Distribute public education materials about the program at 3 venues located throughout the city	Environmental Services Department, Solid Waste Division	Years 1 – 5
		2. Provide information about the program in the water bill insert to 80% of the city's water customers		Years 1 – 5

The City exceeded the goals for this extended Year 5 BMP.

BMP 1.5 Activities Completed

Date: 08/13/2012 and 05/01/2012 **Responsible Party: Solid Waste Division**

Don't Bag It!

Approximate Cost = \$1,213 to print the Pipeline each month and free to mail in utility bill; however, the Pipeline has multiple articles; Labor = 1.5 hours

One (1) Don't Bag It! article was printed in the Pipeline.

Date: 08/12/2013 **Responsible Party: Solid Waste Division**

Don't Bag It! Educational Materials

Educational materials about the Don't Bag It! program were distributed at the Development Center, Landfill, City libraries, and during the following events:

- Farmers Market, September 8, 2012
- Fall Master Composter Training, October 2012
- Pumpkin Run, October 13, 2012
- Spring Master Composter Training, March 2013
- Arbor Day Event, April 26, 2013
- Cinco de Mayo festival, May 4 2013
- MayFest, May 18 2013
- Dig into Reading launch at library, June 10, 2013

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
1.6 Pet Waste Management Education	Promote awareness of the hazards to health and the environment from pet waste through several forms of outreach. (The pet waste dispensers also satisfy minimum control measure for public involvement).	1. Purchase 500 shovels for distribution	Environmental Services Department, Environmental Quality Division and Animal Services Division	Year 1
		2. Create cooperative “Doo the Right Thing” video by the end of Year 1; make video available on the city website and play on cable television annually		Years 1 – 5
		3. Annually distribute a minimum of 200 informative brochures at the Development Center		Years 1 – 5
		4. Annually distribute at least 200 informative brochures to customers adopting pets at the Prairie Paws Adoption Center and display poster in the Environmental Services Department office		Years 1 – 5
		5. Install 2 pet waste collection dispensers at any future pet park to promote proper owner disposal of pet waste		Year 4

The City exceeded the goals for this extended Year 5 BMP.

BMP 1.6 Activities Completed

Date: 08/13/2012 ***Responsible Party: Environmental Quality Division***
Pet Waste Poster
Approximate Cost = \$0; Labor = 0 hours

"If you think picking up poop is unpleasant, try drinking it" poster remains displayed in Environmental Quality Division's office from Year 1.

Date: 08/13/2012 **Responsible Party:** Environmental Quality Division

Doo the Right Thing Video

Approximate Cost = NA (previous purchase); Labor = 0.10 hours/day

The "Doo the Right Thing" video remains posted on the City's website from Year 1 at www.gptx.org/EnvironmentalQuality/PetWaste. In addition, this video was aired on GPTV every day, twice a day from August 2012 to August 2013.

Date: 10/11/2012 **Responsible Party:** Environmental Quality Division

Doo the Right Thing Banner

Approximate Cost = \$60; Labor = 0.5 hour

The City purchased a "Doo the Right Thing" banner for display at the Prairie Paws Adoption Center.

Date: 05/18/2013 **Responsible Party:** Environmental Quality Division

Dog Waste Pledges

Approximate Cost = \$0.0; Labor = 6 hours

The City collected forty-one (41) Doo the Right Thing pledges at MayFest. Dog waste dispensers were distributed to individuals who signed a pledge.

Date: 08/12/2013 **Responsible Party:** Environmental Services Department

Pet Waste Brochures

Approximate Cost = \$0.76/brochure and \$0.10/brochure, respectively (previous purchase); Labor = 0.5 hours/month

The City distributed Pet Waste & Water Quality brochures (in English and Spanish) explaining the environmental issues associated with pet waste and how to dispose of the waste properly. Two-hundred (200), or as many as needed, of these brochures were distributed at the Development Center, Memorial Library, and Prairie Paws Adoption Center.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
1.7 H₂O Line	Produce and distribute a newsletter to selected industrial sectors and automotive related businesses featuring storm water topics.	1. Produce and distribute a quarterly newsletter promoting pollution prevention awareness to at least 200 businesses	Environmental Services Department, Environmental Quality Division	Years 1 – 5
		2. Distribute to at least 50% of businesses during industrial inspections		Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 1.7 Activities Completed

Date: 08/12/2013 **Responsible Party:** Environmental Quality Division

H2O Line Distribution

Approximate Cost = \$0; Labor = 0.5 hours to email and 0.10 hour/inspection

City inspectors regularly distributed the H2O Line during industrial inspections. In addition, each H2O Line was sent to approximately 330 contacts via email.

Date: 08/12/2013 **Responsible Party:** Environmental Quality Division

H2O Line

Approximate Cost = \$515 to print; Labor = 40 hours (10 hours each)

The Environmental Quality Division created and distributed four (4) H2O Line newsletters in extended Year 5.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
1.8 Environmental Compliance Workshops	Pollution Prevention (P2) measure concepts are promoted to industries to reduce waste generated and the potential sources of storm water pollution.	1. Encourage P2 measures through semi-annual environmental compliance workshops	Environmental Services Department, Environmental Quality Division	Years 1 – 5

The City exceeded the goals for this extended Year 5 BMP.

BMP 1.8 Activities Completed

Date: 11/14/2012 **Responsible Party:** Environmental Quality Division

4th Quarter 2012

Approximate Cost = \$75 to \$100 for food; Labor = 15 hours

Conan Reed, Health and Safety Specialist for Ensafe, spoke on the new OSHA hazard communication requirements.

Date: 01/16/2013 **Responsible Party:** Environmental Quality Division

1st Quarter 2013

Approximate Cost = \$75 to \$100 for food; Labor = 15 hours

Craig Pritzlaff, an environmental lawyer and litigator in Dallas, spoke on The Clean Water Act and the US Supreme Court.

Date: 04/24/2013 **Responsible Party:** Environmental Quality Division

2nd Quarter 2013

Approximate Cost = \$75 to \$100 for food; Labor = 15 hours

Tom Caldwell, environmental manager with American Eurocopter, gave a presentation on the ISO 14001 certification.

Date: 07/11/2013 **Responsible Party:** Environmental Quality Division

3rd Quarter 2013

Approximate Cost = \$75 to \$100 for food; Labor = 15 hours

Mark Cline, EH&S Manager, and Wayne Carswell, Emergency Preparedness Subcommittee Chairman, with Pratt & Whitney spoke about Emergency Planning in the workplace.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
1.9 Commercial and Industrial Activity Education on the Impacts of Floatables	Awareness of and responsibility for floatables control and responsibility of commercial and industrial businesses will be integrated into existing activities by distributing information to selected facilities during routine inspections. (Refer to BMP 3.11).	1. Find or create informative handouts about litter associated with commercial and industrial activity to distribute	Environmental Services Department, Environmental Quality Division	Year 2
		2. Distribute informative brochures to 60% of the food permit holders inspected each calendar year; make both English and Spanish versions available		Years 2 – 5
		3. Make available on the city website		Years 2 – 5

All activities for this BMP are complete for extended Year 5.

BMP 1.9 Activities Completed

Date: 08/13/2012 **Responsible Party:** Environmental Quality Division

Brochure Distribution

Approximate Cost = \$982 for 2,000 brochures (excludes previously purchased brochures); Labor < 0.10 hour/inspection

Distributed English and Spanish "Clean It Right" brochures to food permit holders during inspections, at Food School, and at the Development Center. "An Industry's Guide for Protecting Grand Prairie's Watershed" was distributed during industrial inspections and at the Development Center.

Date: 08/13/2012 **Responsible Party: Environmental Quality Division**

Brochures on Website

Approximate Cost = \$0; Labor = 0.5 hours

The "Clean it Right" and "An Industry's Guide for Protecting Grand Prairie's Watershed" brochures remained posted on the City's website since Year 2. These brochures may be found at www.gptx.org/environmentalquality/FoodService and www.gptx.org/environmentalquality/Industrial, respectively.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
1.10 Informational Material for Automotive Related Businesses	Awareness of the impact of the automotive sector's pollutants on water quality will be integrated into existing activities by distribution of information on BMPs and use of BMPs for automotive activities during routine Certificate of Occupancy inspections.	1. Distribute automotive and storm water quality informative material during Certificate of Occupancy inspections	Environmental Services Department, Environmental Quality Division	Years 1 – 5
		2. Make auto related business BMPs available on the city website		Years 2 – 5

All activities for this BMP are complete for extended Year 5.

BMP 1.10 Activities Completed

Date: 08/13/2012 **Responsible Party: Environmental Quality Division**

ARB Educational Materials

Approximate Cost = NA (previous and current purchases); Labor < 0.10 hour/inspection

Environmental Specialists with the Environmental Quality Division distributed automotive and stormwater quality educational materials during Certificate of Occupancy inspections. Materials included items such as posters, Auto Watch (an Environmental Quality and Code Enforcement publication), "Protect Our Water, Don't Dump" notepads, TCEQ's "The Used Oil Recycling Handbook, Guidance for Used Oil Handlers", Small Business and Local Government Assistance materials, a list of State permitted liquid and solid waste haulers, the City's Automotive Related Business ordinance, Operational Requirements for Mobile Wash Vendors, and An Environmental Guide for Texas Automotive/Autobody Repair Shops.

Date: 08/13/2012 **Responsible Party: Environmental Quality Division**

ARB BMPs on Website

Approximate Cost = \$0; Labor = 0 hours

Auto related BMPs remained posted on Environmental Quality's Auto Related Business Education Web page since Year 2. This page may be found at www.gptx.org/EnvironmentalQuality/ARB.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
1.11 Funding for Elementary School Curriculum on Storm Water Quality	Education on storm water quality and pollution prevention will be provided to elementary schools in Grand Prairie ISD through the purchase of curriculum.	1. Purchase Major Rivers© or similar curriculum as needed for additional fifth grade Grand Prairie ISD classrooms	Environmental Services Department, Environmental Quality Division	Years 2 – 5

All activities for this BMP are complete for extended Year 5.

BMP 1.11 Activities Completed

Date: 05/18/2013 **Responsible Party:** Environmental Quality Division

Major Rivers Program

Approximate Cost = \$1,340; Labor = 1 hour

The City purchased and distributed to GPISD 67 English Replacement Packets.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
1.12 Interactive Watershed Model Display on Storm Water Quality	Demonstrate to multiple age groups the effects of various residential and commercial pollutants on storm water quality.	1. Review the kit's contents after each use and purchase any replacement parts or updates if necessary	Environmental Services Department, Environmental Quality Division	Year 1
		2. Annually display an interactive watershed model or similar display during the child related water quality education events		Years 1 – 5

The City exceeded the goals for this extended Year 5 BMP.

BMP 1.12 Activities Completed

Date: 08/13/2012 **Responsible Party:** Environmental Quality Division

Replacement Parts

Approximate Cost = \$5; Labor = 1 hour

Environmental Quality staff review the EnviroScape kit's contents after each use and purchase replacement parts if necessary.

Date: 04/26/2013 Responsible Party: Environmental Quality Division

Arbor Day Festival

Approximate Cost = \$0; Labor = 4 hours

Environmental Quality Division Staff demonstrated the EnviroScape at the Arbor Day festival held by the City. Approximately 1,000 children and adults attended.

Date: 05/18/2013 Responsible Party: Environmental Quality Division

MayFest 2013

Approximate Cost = \$0; Labor = 6 hours

The Environmental Quality Division demonstrated the importance of keeping our watersheds clean of pollution by demonstrating the EnviroScape during MayFest 2013.

Date: 05/07/2013 and 05/31/2013 Responsible Party: Environmental Quality Division

EnviroScape for Adams Middle School

Approximate Cost = \$0; Labor = 16 hours

Environmental Quality staff demonstrated the EnviroScape on May 7, 2013 and May 31, 2013 for 7th grade Adams Middle School students.

Date: 06/24/2013 Responsible Party: Environmental Quality Division

EnviroScape at Loyd Park Day Camp

Approximate Cost = \$0; Labor = 6 hours

Environmental Quality staff demonstrated the EnviroScape on June 17, 2013 and June 24, 2013 for a day camp being held by the Park and Recreation Department at Loyd Park.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
1.13 Utility Bill Insert	Raise awareness of storm water issues for citizens by placing articles in the water utility bill insert.	1. Annually distribute information about storm water issues in the water utility bill insert to 80% of the city's customers	Environmental Services Department, Environmental Quality Division	Years 1 – 5

The City exceeded the goals for this extended Year 5 BMP.

BMP 1.13 Activities Completed

Date: 08/12/2013 Responsible Party: Environmental Services Department

Pipeline Articles

Approximate Cost = \$1,213 to print Pipeline each month and free to mail in utility bill; each Pipeline has multiple articles; Labor = 1.5 hours per article

The City distributed stormwater related articles with the water utility bill in extended Year 5. Eleven (11) Pipeline articles contained information on household hazardous waste issues and events, one (1) contained information on how to properly handle grass clippings, and two (2) articles included information on the master composter classes offered by the City.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
1.14 Stream and Watershed Name Road Signs	Raise awareness of local watersheds for citizens and visitors. Develop ownership of the watersheds.	1. Develop road sign design and obtain approval	Environmental Services Department, Environmental Quality Division; Public Works Department, Streets Division	Year 2
		2. Select at least 5 sites within city limits the signs will be posted	Environmental Services Department, Environmental Quality Division	Year 3
		3. Install road signs at the 5 streams selected	Public Works Department, Streets Division	Years 4-5

There are no activities listed for this BMP for extended Year 5.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
1.15 Multimedia Storm Water Public Education	Promote watershed awareness for both citizens and visitors using multiple types of media, including a website and the city’s cable channel.	1. Have storm water quality educational program on GPTV at least once per year	Environmental Services Department, Environmental Quality Division	Years 1 – 5
		2. Develop information for city website and post		Year 2
		3. Provide and maintain Storm Water Pollution Prevention information on the city's website		Years 3 – 5

The City exceeded the goals for this extended Year 5 BMP.

BMP 1.15 Activities Completed

Date: 08/13/2012 **Responsible Party:** Echo Rexroad, Sr. Environmental Specialist

Website Information

Approximate Cost = \$0; Labor = 0.5 hours/month

Created and posted stormwater educational material for Environmental Quality website in Year 1. This information is updated as needed. Includes pages for the following topics: Stormwater, What are Watersheds?, Pet Waste, Cooking Oils, Lawn Chemicals, Volunteering, Stream Monitoring, Kids Activities, Storm Water Management Program, and Texas Stream Team.

The City's website was redesigned in Year 2 and is regularly maintained. The address to this website is: www.gptx.org/EnvironmentalQuality/Stormwater.

Date: 08/12/2013 **Responsible Party:**

Stormwater PSAs on GPTV

Approximate Cost = NA (previous purchase); Labor = 0.10 hrs/day

The City airs the following stormwater pollution prevention PSA videos on GPTV once a day, seven days a week: Fats, Oil, & Grease, Leave it on the Lawn, Automotive Fluids, and Fertilizers. The City also airs the Doo the Right Thing video twice a day, seven days a week on GPTV.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
1.16 Tailor Outreach Programs to non-English languages	Evaluate and translate all educational materials created during the permit to Spanish.	1. Evaluate 80% of educational materials that can be translated	Environmental Services Department, Environmental Quality Division	Year 1
		2. Translate 25% of materials that have been evaluated as being available in Spanish		Year 3
		3. Begin purchasing and distributing brochures		Year 4

The City exceeded the goals for this extended Year 5 BMP.

BMP 1.16 Activities Completed

Date: 08/13/2012 **Responsible Party:** Environmental Quality Division

Spanish Brochure Distribution

Approximate Cost = NA (previous and ongoing purchases); Labor = 0 hours

Well over 25% of the stormwater educational materials distributed by the City are provided in Spanish. This includes, but is not limited to,

the following: Lawn Care Maintenance, Fat Free Sewers, A Guide for Auto Service, Repair and Maintenance Businesses, Steps to Obtain Construction Permits for Storm Water Discharges, Pet Waste & Water Quality, Preventing Stormwater Pollution at Construction Sites, Clean It Right, After the Storm: A Citizen's Guide to Understanding Stormwater, the AutoWatch newsletter, Clean Shop posters, and the Auto Related Business Ordinance.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
1.17 Auto Watch	Create and distribute a water quality and code enforcement publication featuring environmental issues specific to automotive related businesses.	1. Continue to create and distribute publication to at least 300 businesses annually	Environmental Services Department, Environmental Quality Division, Code Enforcement Division	Years 1 – 5

The City exceeded the goals for this extended Year 5 BMP.

BMP 1.17 Activities Completed

Date: 01/11/2013 **Responsible Party:** Environmental Quality Division

Auto Watch - Volume 7, Issue 1

Approximate Cost = \$639 for 600 to print; Labor = 60 hours

Volume 7, Issue 1, Winter 2013, Auto Watch newsletter given to automotive businesses in Grand Prairie explaining automotive regulations and other pertinent topics.

Date: 07/16/2013 **Responsible Party:** Environmental Quality Division

Auto Watch - Volume 7, Issue 2

Approximate Cost = \$639 for 600 to print; Labor = 60 hours

Volume 7, Issue 2, Summer 2013, Auto Watch newsletter given to automotive businesses in Grand Prairie explaining automotive regulations and other pertinent topics.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
1.18 Keep Grand Prairie Beautiful Education Programs	Conduct KGPB programs that promote environmental education, including storm water and pollution prevention awareness.	1. Conduct or host at least 3 KGPB education programs annually	City Manager’s Office, Keep Grand Prairie Beautiful Program	Years 1 – 5

The City exceeded the goals for this extended Year 5 BMP.

BMP 1.18 Activities Completed

Date: 08/25/2012 **Responsible Party: City Manager's Office, Special Projects Manager**

Compost 101 Class

Approximate Cost = \$0; Labor = 7 hours prep and presentation

Keep Grand Prairie Beautiful Hosts a monthly compost class for the community garden program. The class is taught by State Certified Master Composters and Dallas County Master Gardeners. Each class includes classroom instruction, a tour of local composting sites and the building of a compost pile. The participants learn that plants fed with compost are more disease and pest resistant thus reducing the need to use chemicals in the garden.

Date: 10/18/2012 **Responsible Party: City Manager's Office, Special Projects Coordinator**

Keep Grand Prairie Beautiful Night at Golden Corral

Approximate Cost = \$0; Labor = 8 hours set up, event, and cleanup

Golden Corral hosted Keep Grand Prairie Beautiful for a fundraiser and volunteer appreciation event. Staff used the opportunity to give an overview of the year-to-date accomplishments and to solicit volunteers for the upcoming Fall Cleanup season.

Date: 11/08/2012 **Responsible Party: City Manager's Office, Special Projects Manager**

Litter Hurts Presentation and Walnut Creek/Joe Pool Lake Adopt-A-Stream Cleanup Report

Approximate Cost = \$0; Labor = 4 hours to prepare presentations

Keep Grand Prairie Beautiful gave the Litter Hurts presentation to the members of Girl Scout Troop 3217 and showed them a PowerPoint about the Walnut Creek/Joe Pool Lake Cleanup which they participated in a few weeks earlier. The Troop all agreed they would never litter again.

Date: 12/14/2012 **Responsible Party: City Manager's Office, Special Projects Manager**

Holiday Volunteer Appreciation Event

Approximate Cost = \$440 food; Labor = 6 hours set up, event, cleanup

Keep Grand Prairie Beautiful hosted a holiday volunteer appreciation event during which a slide presentation was played showing the various KGPB programs. The guests receive education about litter prevention and cleanup, the Adopt-A-Street and Adopt-A-Stream Programs, Community Gardening, composting and other programs.

Date: 02/01/2013 **Responsible Party: City Manager's Office, Special Projects Manager**

Litter Hurts Presentation to Seguin Elementary

Approximate Cost = \$0 (previous purchase); Labor = 2 hours

Keep Grand Prairie Beautiful presented the "Litter Hurts" PowerPoint presentation to students and their parents at Seguin Elementary. The presentation educates about the sources of litter and explains the Adopt-A-Street and Adopt-A-Stream programs, as well as how to get involved in these programs. KGPB also brought the Water Drop and Trash Can mascots.

Date: 03/28/2013 **Responsible Party: City Manager's Office, Special Projects Manager**

Ruthe Jackson Cable TV Show

Approximate Cost = \$0; Labor = 1.5 hours preparation and taping

Keep Grand Prairie Beautiful's litter prevention efforts were highlighted during a taping of the Ruthe Jackson Show featuring Keep Grand Prairie Beautiful Commissioner Kelley Shaw and Special Projects Manager Tammy Chan. Topics discussed included the Litter Free Hotline, Weed & Seed Litter Collection Crew efforts, litter receptacles in the medians and the Adopt-A-Street and Adopt-A-Stream programs.

Date: 04/19/2013 **Responsible Party:** City Manager's Office, Special Projects Manager

Good Bug Bad Bug EarthKind Gardening Class

Approximate Cost = \$700; Labor 16 hours shopping, preparation and taping

Keep Grand Prairie Beautiful sponsored an EarthKind training for the community garden program. The training focused on insect identification and methods of managing the insects, including manual methods (plucking and squishing), good cultural practices (removing old plant debris that might have insect eggs and diseases) and organic techniques such as spraying water to wash the insects off. Some supplies, including kaolin clay, garlic pepper tea, orange oil and bug vacuums were distributed to the garden leaders. The hope is that this training will prevent the improper use of pesticides to kill the insects.

Date: 05/12/2013 **Responsible Party:** City Manager's Office, Special Projects Manager

7th Day Adventist Lecture

Approximate Cost = \$0; Labor = Used pre-existing presentation

Tammy Chan, Special Projects Manager, who manages the Keep Grand Prairie Beautiful program, spoke about KGPB's litter prevention, beautification and community improvement strategies to a 7th Day Adventist Church.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
1.19 Educational Material for Construction Site Personnel	Create or find educational materials on BMPs and erosion control for construction site personnel.	1. Create or find brochure and/or link on construction BMPs and erosion control requirements	Environmental Services Department, Environmental Quality Division	Year 2
		2. Distribute at least 200 brochures a year at the Development Center and/or provide a link to the educational material on the city's website	Planning and Development Department and Environmental Services Department	Years 2– 5

All activities for this BMP are complete for extended Year 5.

BMP 1.19 Activities Completed

Date: 08/13/2012 **Responsible Party:** Environmental Quality Division and Planning and Development Department

Educational Materials for Construction Site Personnel

Approximate Cost = \$0 (printed in house and previous purchase); Labor = 0.5 hours/3 months

"Steps to Obtain Construction Permits for Storm Water Discharges" brochures were distributed at two locations at the Development Center and were posted on the City's Environmental Services (www.gptx.org/EnvironmentalServices) and Engineering (<http://www.gptx.org/index.aspx?page=1296>) websites. "Preventing Stormwater Pollution at Construction Sites" brochures were available at

the Development Center, on the Environmental Quality Division's Stormwater website (www.gptx.org/EnvironmentalQuality/Stormwater), and on Engineering's Construction General Permit & BMP FAQ website (<http://www.gptx.org/index.aspx?page=1296>).

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
1.20 Storm Water Education for Visitors	Provide educational materials featuring water quality issues for Grand Prairie visitors.	1. Provide information about storm water issues on the city website and at Grand Prairie's visitors center	Environmental Services Department, Environmental Quality Division	Year 2

There are no required activities listed for this BMP for extended Year 5; however, the City continued this activity in extended Year 5.

BMP 1.20 Activities Completed

Date: 08/13/2012 **Responsible Party: Environmental Quality Division**

Visitor Education

Approximate Cost = \$0 (previous purchase); Labor = 0.5 hours/month

"Nonpoint Source Pollution: You are the Key to the Cleanup" brochures are available for distribution at the City's Visitor's Center.

Date: 08/13/2012 **Responsible Party: Environmental Quality Division**

Stormwater Website

Approximate Cost = \$0; Labor = 0.5 hours/month

Created and posted stormwater educational material for the Environmental Quality website in Year 1.

This information is continuously updated. The website includes pages for the following topics: Stormwater, What are Watersheds?, Pet Waste, Cooking Oils, Lawn Chemicals, Volunteering, Stream Monitoring, Kids Activities, Storm Water Management Program, and Texas Stream Team.

The City's website was redesigned in Year 2 and is regularly maintained. The address to this website is: www.gptx.org/EnvironmentalQuality/Stormwater.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
1.21 Take Care of Texas Brochure	Distribute brochures that describe what residents may do to protect the environment.	1. Distribute at least 200 Take Care of Texas brochures	Environmental Services Department, Environmental Quality Division	Year 1

There are no required activities listed for this BMP for extended Year 5; however, the City continued this activity in Year 5.

BMP 1.21 Activities Completed

Date: 08/13/2012 **Responsible Party:** Environmental Quality Division

Take Care of Texas Brochures

Approximate Cost = \$0; Labor = 0.10 hours/month

"Take Care of Texas-Do Your Part!" brochures were available for distribution at the Development Center.

MCM 2: Public Involvement & Participation

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.1 Public Notice in Development of SWMP	Comply with federal, state, and local public notice requirements when implementing the SWMP.	1. Continue to make the document available for comments on the city website and at the Environmental Services Department office	Environmental Services Department, Environmental Quality Division	Years 1 – 5
		2. Make presentations to applicable city council committees		Year 1

All activities for this BMP are complete for extended Year 5.

BMP 2.1 Activities Completed

Date: 08/13/2012 **Responsible Party:** Environmental Quality Division

SWMP at Development Center

A copy of the City's Storm Water Management Program is available for review and comments at the Environmental Quality Division office located at 206 W. Church Street, 2nd Floor, Grand Prairie Texas 75050.

Date: 08/13/2012 **Responsible Party:** Environmental Quality Division

SWMP and Survey on Website

The City's Storm Water Management Program is available on the City's Storm Water Management Program website (www.gptx.org/EnvironmentalQuality/SWMP). The following survey is also posted on this website:

Storm Water Management Program Questionnaire

The City of Grand Prairie has developed a Storm Water Management Program in order to comply with the Texas Pollutant Discharge Elimination System (TPDES) Phase II Permit. This program is mandated by the Texas Commission on Environmental Quality (TCEQ) in an

effort to improve the quality of water discharged through a municipality’s separate storm sewer system. Many of the activities described in the Storm Water Management Program have already been enacted by the City. This program documents how the City will continue to make efforts to improve water quality. As required by the TPDES Phase II Permit, the City of Grand Prairie seeks public comment on the Storm Water Management Program. Please take a few minutes to review this program and identify any concerns you may have using this questionnaire.

Please rank the issues that concern you (high, medium or low):

1. Trash in Creeks*

[Select an answer] Low Medium High

2. Water Quality*

[Select an answer] Low Medium High

3. Water Color*

[Select an answer] Low Medium High

4. Not enough education about storm water*

[Select an answer] Low Medium High

5. Other*

[Select an answer] Low Medium High

6. What recommendations would you like to make for the authors of the Grand Prairie Storm Water Management Program?

7. Contact Information (Optional):

8. Would you like to become a volunteer? (Activities include our Texas Stream Team monitoring program and installing storm drain markers.)*

Yes

No

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
2.2 Texas Stream Team Volunteer Stream Monitoring Program	Involve volunteers in the stream monitoring process through Texas Stream Team.	1. Hold at least 1 Texas Stream Team training session for volunteers or corporations annually	Environmental Services Department, Environmental Quality Division	Years 2 – 5

All activities for this BMP are complete for extended Year 5.

BMP 2.2 Activities Completed

Date: 07/25/2013 **Responsible Party:** Echo Rexroad, Sr. Environmental Specialist
 Lockheed Martin Missiles and Fire Control: Phase I, II, and III

Biff Bivens, Kate Young, Paru Nambiar, and Ronda Scott, with Lockheed Martin Missiles and Fire Control, completed Phase I and II of Texas Stream Team training on July 15, 2013. They completed Phase III on July 25, 2013. They are now certified Texas Stream Team members.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.3 Master Composter Program	Involve the public in lawn and garden compost waste training that will encourage reductions in fertilizer and pesticide use. Participants attend three days of hands-on training and can become a Certified Master Composter.	1. Conduct 2 Master Composter classes per year	Environmental Services Department, Solid Waste Division	Year 1
		2. Distribute yard care educational materials to at least 20 Master Composter participants annually		Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 2.3 Activities Completed

Date: 10/10/2012 **Responsible Party:** Solid Waste Division
 Master Composter Classes and Materials

The Solid Waste Division distributed Rodale's Composting Book and the TCEQ Green Guide to Yard Care to master composter participants in extended Year 5. Master Composter classes were held on October 10-12, 2012 (12 participants) and March 21-23, 2013 (19 participants).

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.4 Storm Drain Markers	Install storm drain markers “Protect Our Water, Don’t Dump” to promote awareness of the storm drain system.	1. Purchase and have installed through volunteer help 100 of the city’s unmarked storm drain curb inlets annually	Environmental Services Department, Environmental Quality Division	Years 2 – 5

All activities for this BMP are complete for extended Year 5.

BMP 2.4 Activities Completed

Date: 09/04/2013 **Responsible Party:** Environmental Quality Division

Storm Drain Markers

The City of Grand Prairie placed a total of 105 “Don’t Dump” stormdrain markers at the Paragon Outlet Mall and around City Hall/downtown.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.5 Public Education Event	Hold an interactive educational event that promotes storm water BMPs and awareness of the Trinity River watershed.	1. Annually hold a public education event that focuses on education through involvement and promotional giveaways	Environmental Services Department, Environmental Quality Division	Years 1 – 5
		2. Collect and use at least 20 participant surveys for evaluation of the event		Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 2.5 Activities Completed

Date: 05/18/2013 **Responsible Party:** Environmental Quality Division

MayFest 2013

Each year the GPISD and City of Grand Prairie co-host MayFest, a free educational event that focuses on water quality issues (Figure 2). In extended Year 5, MayFest goers enjoyed a wide variety of water quality exhibits (i.e. EnviroScape, stream simulator, water testing), Country Critters Petting Farm, the Eco Shopping Game, Wildlife on the Move, Purple Martin Landlords, rainwater harvesting, Master Composters, conservation tips, a recycle relay, Prairie Paws pet adoption information, kids arts and crafts, GPISD musical and dramatic performances, and other programs. There were approximately 1,000 to 1,500 participants in 2013.

Figure 2: MayFest 2013



Date: 05/18/2013 **Responsible Party:** Environmental Quality Division
 MayFest 2013 Survey

During MayFest 2013, 21 surveys were collected in order to evaluate the success of the event.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.6 Storm Water Ordinance	Involve the public in the development of a Storm Water Ordinance (refer to BMP 3.9). Public comment will be incorporated in the finalization of the ordinance.	1. Hold at least 1 public hearing on the storm water ordinance; additional hearings will be held provided there is significant public interest	Environmental Services Department, Environmental Quality Division	Year 2

There are no required activities listed for this BMP for extended Year 5.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.7 Illegal Dumping Hotline	Encourage citizens to report violators of dumping by participating in an inter-local response to an illegal dumping hotline.	1. Continue to make the Illegal Dumping Hotline available on the city's website.	Planning and Development Department, Code Enforcement Division	Years 1 – 5
		2. Add link to Environmental Services storm water Web page promoting Illegal Dumping Hotline	Environmental Services Department, Environmental Quality Division	Years 2 – 5

All activities for this BMP are complete for extended Year 5.

BMP 2.7 Activities Completed

Date: 08/13/2012 **Responsible Party: Environmental Quality Division**
Stormwater Website

Included on the City's Stormwater Web page at www.gptx.org/EnvironmentalQuality/Stormwater:

"You Can Protect Our Waterways:

Report Illegal Dumping. If you have witnessed illegal dumping in the City of Grand Prairie or know of a location where illegal dumping has occurred, please call the Illegal Dumping Hotline at 972-237-8064."

Date: 08/13/2012 **Responsible Party: Code Enforcement Division**
Code Enforcement Website

The number of the City's Illegal Dumping Hotline may be found on the Code Enforcement's website at <http://www.gptx.org/index.aspx?page=219>.

"Illegal Dumping Hotline: 972-237-8064"

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.8 Stakeholder Meetings	Keep citizens and other stakeholders involved in the decision process for managing the Storm Water Management Program.	1. Hold one stakeholder meeting per year	Environmental Services Department, Environmental Quality Division	Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 2.8 Activities Completed

07/18/2012 **Responsible Party: Echo Rexroad, Sr. Environmental Specialist**
Bacteria TMDLs Stakeholder Meeting

Echo Rexroad attended the Lower West Fork Trinity River Watershed Bacteria TMDLs meeting hosted by North Central Texas Council of Governments (of which the City is a member).

Date: 05/01/2013 **Responsible Party: Cindy Mendez, Environmental Quality Manager**
TMDL Coordination Committee Meeting

Cindy Mendez attended the TMDL Coordination Committee meeting hosted by North Central Texas Council of Governments (of which the City is a member).

Date: 05/22/2013 **Responsible Party: Echo Rexroad, Sr. Environmental Specialist**
Regional Stormwater Management Coordinating Council

Echo Rexroad attended this meeting held by North Central Texas Council of Governments (of which the City is a member) on 8/29/12, 11/14/12, 2/13/13, and 5/22/13. Echo Rexroad sits on this Council as a representative of the West Fork of the Trinity River. Topics of interest included regulatory updates and work program status reports. Special presentations during extended Year 5 included “Overview of TCEQ’s Small MS4 Permit Compliance Investigation Program” by TCEQ’s Brent Candler and updates on USACE Section 404 Permitting Program with US Army Corps of Engineers’ David Madden.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.9 Keep Grand Prairie Beautiful Programs	Encourage participation in Keep Grand Prairie Beautiful programs, such as Adopt-a-Street, Adopt-a-Stream, Adopt-A-Wetland, Youth Environmental Action (YEA!), and the Great American Cleanup.	1. Host at least 5 events per year to encourage community participation	City Manager’s Office, Keep Grand Prairie Beautiful Program	Years 1 – 5

The City exceeded the goals for this extended Year 5 BMP.

BMP 2.9 Activities Completed

Date: 10/12/2012 **Responsible Party: City Manager's Office, Special Projects Manager**

Monthly Adopt-A-Stream Canoe and Kayak Roll Practice at the Kirby Creek Natatorium and Bowles Life Pool

Keep Grand Prairie Beautiful’s Adopt-A-Stream program hosts monthly canoe and kayak roll practices so that volunteers can be safe and comfortable in the water, especially when reaching for trash. The monthly roll practices are led by Certified Canoe and Kayak instructors from the North Texas River Runners (NTRR) who donate their time to train others. Participants include general public, Girl Scouts, Scout Explorers and members of the NTRR.

Date: 10/20/2012 **Responsible Party:** City Manager's Office, Special Projects Manager

Trinity Trash Bash Adopt-A-Stream Cleanup on Walnut Creek

The North Texas River Runners, along with Girl Scout Troop 1373 and students from Dubiski Career and Technology High Schools Advanced Placement Environmental Science class participated in Keep Grand Prairie Beautiful's Adopt-A-Stream program by helping to clean the new canoe trail on Walnut Creek at Joe Pool Lake.

Date: 11/17/2012 **Responsible Party:** City Manager's Office, Special Projects Manager

Fall Adopt-A-Street Cleanups and Post Cleanup Volunteer Appreciation Party

Adopt-A-Street groups conducted fall cleanups and then attended a volunteer appreciation party. The event coincided with Texas America Recycles Day e-waste collection event, so many participants also brought their personal e-waste for recycling.

Date: 02/09/2013 **Responsible Party:** City Manager's Office, Special Projects Manager

Johnson Creek and Godwin Branch Adopt-A-Stream Cleanup

Keep Grand Prairie Beautiful Adopt-A-Stream members from the Nottingham Neighborhood, Larson Elementary and the Grand Prairie Weed & Seed Program cleaned both Johnson Creek and the Godwin Branch in north Grand Prairie. They removed 408 lbs. of trash from the creeks.

Date: 02/16/2013 **Responsible Party:** City Manager's Office, Special Projects Manager

Beacon Branch Adopt-A-Stream Cleanup

The Beacon Hill Homeowner's Association has adopted a section of the Beacon Branch creek in south Grand Prairie. They've conducted annual cleanups for eight years. Due to new development on the west side of the neighborhood, there has been more trash. The volunteers collected 516 lbs. of trash during this cleanup (Figure 3).

Figure 3: Beacon Branch Cleanup



Date: 03/09/2013 **Responsible Party: City Manager's Office, Special Projects Manager**

Adopt-A-Highway/Adopt-A-Street Day

Keep Grand Prairie Beautiful hosted a special event recognizing International Adopt-A-Highway Day, which is March 9th of each year. The event included an opportunity for groups to come and re-commit to cleanup their streets for another year. The Dalworth Park Church of Christ Youth Group re-committed during this event. Adopt-A-Street groups commit to pick up litter along their streets at least four times a year and turn in quarterly post cleanup report forms. Keep Grand Prairie Beautiful provides trash bags, safety vests and gloves.

Date: 04/20/2013 **Responsible Party: City Manager's Office, Special Projects Manager**

Earth Day Adopt-A-Street Cleanups and Volunteer Appreciation Party

Keep Grand Prairie Beautiful Adopt-A-Street volunteers conducted their spring litter cleanups on the morning of April 20, 2013, and then attended KGPB's post-cleanup volunteer appreciation Party.

Date: 06/01/2013 **Responsible Party: City Manager's Office, Special Projects Manager**

2nd Quarter Adopt-A-Street Cleanups

Adopt-A-Street Groups conducted their 2nd Quarter Adopt-A-Street cleanups. Most groups cleaned up in a group for Earth Day.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.10 Neighborhood Outreach Program	Program encourages the involvement of neighborhood associations for the purpose of educating them about various concerns, including storm water related issues, and providing opportunities to participate in various neighborhood-specific projects that can impact water quality (ex. Clean and Beautiful Neighborhoods Program). (Also satisfies MCM 1).	1. Annually coordinate neighborhood projects, such as stream/wetland cleanups, tree planting projects and awareness events	City Manager's Office, Keep Grand Prairie Beautiful Program	Years 1 – 5

The City exceeded the goals for this extended Year 5 BMP.

BMP 2.10 Activities Completed

Date: 08/16/2012 **Responsible Party: City Manager's Office, Special Projects Manager**

Shady Grove Community Garden & Orchard Monthly Meetings

The Shady Grove Community Garden and Orchard is located on the north side of town. It includes 40 raised beds and a ¼ acre no till row garden. The gardeners have adopted Texas AgriLife Extension's EarthKind gardening philosophy. They meet monthly and topics of discussion include composting, crop rotation, succession planting, mulching and good cultural practices.

Date: 10/31/2012 **Responsible Party: City Manager's Office, Special Projects Manager**

Oaks and Acorns Garden Club Meeting

Residents of the Wildwood Oaks and Nottingham Neighbors area in the Northwest part of the city have been meeting for over 50 years in a group called the Oaks and Acorns Garden Club. Both Wildwood Oaks Neighborhood Association and the Nottingham Neighbors Association have adopted street segments and pick up litter on a quarterly basis. Keep Grand Prairie Beautiful had the opportunity to update them about

the upcoming Fall Adopt-A-Street Cleanups, e-waste collection event and the Johnson Creek/Godwin Branch Adopt-A-Stream Cleanups in February 2013.

Date: 11/03/2012 **Responsible Party: City Manager's Office, Special Projects Manager**

Bush Neighborhood Association Neighborhood Awareness Event

Bush Elementary staff and residents planned and implemented a door-to-door neighborhood awareness event to let the residents know that the area has a neighborhood association and to encourage them to participate. The neighborhood has adopted several streets and they have a community garden on the campus. The school has divided the campus in to sections with each grade level taking responsibility for litter prevention in their assigned section. The school recycles plastic bottles, aluminum cans, paper, food waste, plastic bags and cell phones. They wanted to let the community know about these efforts so they can participate. The school also has an award winning school garden. Both gardens need the residents to bring their grass clippings and leaves rather than putting them in the trash or blowing them down the storm drain. The volunteers walked every street in the neighborhood and made contacts. They had English and Spanish speakers as part of the team.

Date: 02/15/2013 **Responsible Party: City Manager's Office, Special Projects Manager**

Luckett Community Garden and Tree Farm in the Dalworth Neighborhood Monthly Meetings

The Luckett Community Garden is located in the Dalworth Neighborhood. It includes 46 raised beds and a ¼ acre native tree farm. The gardeners have adopted Texas AgriLife Extension's EarthKind gardening philosophy. They meet monthly and topics of discussion include composting, crop rotation, succession planting, mulching and good cultural practices which means they don't need to use fertilizers, herbicides, pesticides or fungicides.

Date: 03/16/2013 **Responsible Party: City Manager's Office, Special Projects Manager**

Amesbury Estates Homeowner's Association Annual Adopt-A-Stream Cleanup

The Amesbury Estates Homeowner's Association has conducted an annual cleanup for the past five years. The stream segment that traverses their neighborhood has shown great improvement over the years. There are still floatables, but the neighborhood has done a great job of keeping it as clean as possible. They also installed a beautification project including flags, a decorative wall and some shrubs. Their intention is to put the Broken Window Theory to test. The theory posits that where litter prevention efforts are evident, people are less like to litter.

Date: 04/27/2013 **Responsible Party: City Manager's Office, Special Projects Manager**

NeighborWoods and ShadeMakers Tree Planting Programs

Residents from various neighborhoods participated in the spring ShadeMakers Citizen Forestry class where, upon completion of the full training, they can receive a free tree (through our NeighborWoods program) for their front yard, or, if they are a representative of their neighborhood association, they can receive three trees for planting in a public space with pre-approval of the location and a watering plan required. The ShadeMakers training includes information about how trees can help to prevent stream bank erosion and filter stormwater runoff. Their class project was to plant three fruit trees at the Grand Prairie Family Church Community Garden. They also toured a local tree farm/nursery.

Date: 06/15/2013 **Responsible Party: City Manager's Office, Special Projects Manager**

Luckett Community Garden and Tree Farm Project in the Dalworth Neighborhood

Volunteers from the Church of Latter Day Saints in Grand Prairie volunteered at the Luckett Community Garden and Tree Farm in the Dalworth Neighborhood. They helped the gardeners to clear out weeds, make compost, pick up litter and add soil to the beds. Lynn Oxendine, a Dallas County Master Gardener and Grand Prairie Master Composter taught the volunteers about composting. Ken Braswell, also

a Dallas County Master Gardener and Composter, showed the volunteers how we practice EarthKind gardening to avoid using pesticides, fertilizers, herbicides and fungicides.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.11 School Outreach Programs	Partnership between the City’s Keep Grand Prairie Beautiful Program and a local school district that encourages student and campus participation, fosters the development of campus clubs, and provides opportunities for involvement and education.	1. Annually facilitate at least 10 activities for the campus programs	City Manager’s Office, Keep Grand Prairie Beautiful Program	Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 2.11 Activities Completed

Date: 09/25/2012 **Responsible Party: City Manager's Office, Special Projects Manager**
Green & Clean Campus Coordinator Report

Barbara Bush Elementary Green & Clean Campus Coordinator Stacey Ansley reported to the Bush Neighborhood Association about their need for support for their outdoor habitat. The students need more grass clippings and leaves for composting. Ms. Anseley also asked the neighborhood to support the schools environmental activities by bringing their plastic bottles, aluminum cans and paper to their collection stations. She explained that the school gets money for these items and the money helps to fund their afterschool Bush Environmental Science Team (BEST) and Earth Club activities.

Date: 11/13//2012 **Responsible Party: City Manager's Office, Special Projects Manager**
South Grand Prairie High School Adopt-A-Stream Cleanup

Members of the South Grand Prairie High Advanced Placement Environmental Science class conducted a cleanup along the banks of Kirby Creek.

Date: 01/05//2013 **Responsible Party: City Manager's Office, Special Projects Manager**
Reagan Fine Arts Academy Adopt-A-Stream Cleanup

Reagan Fine Arts Academy has signed up for the Green & Clean Campus Program. Their participation includes an Earth Force service based learning club and they have adopted the section of Fish Creek that runs by their school. They have also adopted Bardin Road and clean it quarterly. They conducted an Adopt-A-Stream Cleanup along their adopted section of the creek in January 2013.

Date: 02/28/2013 **Responsible Party: City Manager's Office, Special Projects Manager**
Green & Clean Campus Meeting at Rayburn Elementary

Green & Clean Campus coordinators from various schools meet monthly when school is in session to network and learn about resources that the City and the GPISD have to offer to support their environmental efforts. At this meeting, they learned from Jeff Raska, with the Texas AgriLife Extension Service, about installing drip irrigation in their raised beds at their schools.

Date: 03/25//2013 **Responsible Party: City Manager's Office, Special Projects Manager**

Junior Master Gardener Training

Keep Grand Prairie Beautiful sponsored a Junior Master Gardener training for 11 GPISD schools on March 25, 2013. The training included all the supplies each school would need to host a Junior Master Gardner club for up to 30 students after school. The training was conducted by Tamra McGaughey and Jeff Raska who are educators with the Texas AgriLife Extension Service and who are 4-H leaders. The Junior Master Gardener Program is a 4-H Program. Soil percolation rates, soil particle size and erosion were among the 24 lessons the teachers learned to teach.

Date: 03/30/2013 **Responsible Party:** City Manager's Office, Special Projects Manager

Green & Clean Campus Meeting at Bush Elementary

Green & Clean Campus Coordinators from the various schools meet monthly when school is in session to network and learn about resources that the City and the GPISD have to offer to support their environmental efforts.

Date: 04/26/2013 **Responsible Party:** City Manager's Office, Special Projects Manager

Arbor Day Celebration at The Summit

Keep Grand Prairie Beautiful participated in the City's Annual Arbor Day celebration which focuses on 5th graders. Our booth included information about tree preservation, proper tree planting and good trees for our area. Properly planted trees can help to filter stormwater runoff.

Date: 05/13/2013 **Responsible Party:** City Manager's Office, Special Projects Manager

Green & Clean Campus Plastic Recycling

KGPB's Green & Clean Campus partnership with the GPISD includes plastic recycling. The students learn through the Litter Hurts presentation and classroom instruction that plastics are a petroleum based product that can breakdown and pollute water. The students are encouraged to recycle plastic at school and to bring it from home. The plastic is collected by KGPB and transferred to Abitibi Bowater/Waste Management who weighs the plastic and issues checks based on the plastic tonnage to the GPISD for Green & Clean Campus program activities.

Date: 05/22/2013 **Responsible Party:** City Manager's Office, Special Projects Manager

Green & Clean Campus Volunteer Appreciation Event

Bush Elementary hosts an annual Green & Clean Campus volunteer event to thank the volunteers who helped their Bush Environmental Science Team (BEST) and their Earth Club activities.

Date: 05/28/2013 **Responsible Party:** City Manager's Office, Special Projects Manager

Green & Clean Campus End of School Year Meeting at The Oasis

The Green & Clean Campus coordinators meet at the end of the school year to network and share environmental education and stewardship success stories. The Green & Clean Campus Coordinator of the Year receives special recognition.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.12 Corporate Involvement Program	Partnership between the City and the Grand Prairie Chamber of Commerce that encourages company involvement in litter prevention and cleanup programs, as well as serve as a vehicle to educate companies about	1. Annually hold at least 1 meeting to recruit new companies	City Manager's Office, Keep Grand Prairie Beautiful Program	Years 1 – 5

storm water related issues.

2. Facilitate annual
Cleanup Company
meetings or activities for
companies involved

Years 1 – 5

The City exceeded the goals for this extended Year 5 BMP.

BMP 2.12 Activities Completed

Date: 09/24/2012 **Responsible Party: City Manager's Office, Special Projects Manager**

City Staff meets with Clean Company Members

Representatives of local businesses, including Clean Company member Prime Outlets Mall, and neighborhood associations met with City staff to discuss SmartScape landscaping designs for the I-20 at Great Southwest intersection.

Date: 10/12/2012 **Responsible Party: City Manager's Office, Special Projects Manager**

Triumph Industries Volunteers at Crockett Elementary

Clean Company members Triumph Industries continued to support the community by sending employees to help upgrade the school garden at Crockett Elementary. While there, they helped to install a perennial garden with drought tolerant plants that will attract pollinators. Staff from Real School Gardens were on hand to educate the volunteers about the types of plants they were installing.

Date: 11/17/2012 **Responsible Party: City Manager's Office, Special Projects Manager**

Clean Company Texas America Recycles E-Waste Collection Event

Keep Grand Prairie Beautiful's Clean Company Program partnered with the Chamber of Commerce to collect electronic waste from our Clean Company and community members at a site sponsored by the First United Methodist Church. Youth for Environmental Action (YEA!) Club members helped to host the event along with Weed & Seed Job Training program participants who collected the e-waste from the vehicles and distributed it into the appropriate bins. Commodity Solutions partnered with Keep Grand Prairie Beautiful for the e-waste recycling. These events prevent these items from being dumped illegally.

Date: 04/20/2013 **Responsible Party: City Manager's Office, Special Projects Manager**

Clean Company Texas America Recycles E-Waste Collection Event

Keep Grand Prairie Beautiful's Clean Company Program partnered with the Chamber of Commerce and First United Methodist Church to collect electronic waste from our Clean Company members. Participants in the City's Weed & Seed Job Training Program helped to collect the e-waste from the company vehicles and distribute it into the appropriate bins. Clean Company participants Chick-Fil-A and Lone Star Park sent their mascots to help make the event more festive.

Date: 06/07/2013 **Responsible Party: City Manager's Office, Special Projects Manager**

Clean Company Member Triumph Industries at the Luckett Community Garden and Tree Farm in the Dalworth Neighborhood

Employees of Triumph Industries' Industrial Engineering Division helped to put compost in the raised beds for the senior citizens who garden at the Luckett Community Garden. They also helped to pull weeds and put mulch on top of the beds. The mulch helps to retain water in the soil and breaks down over time to become compost and nutrients for the plants. They also gave suggestions to improve efficiency in our garden, especially in our compost making operation.

Date: 07/02/13 **Responsible Party:** City Manager's Office, Special Projects Manager
Clean Company Program Recruitment Meeting with Niagara Water

Keep Grand Prairie Beautiful explained the Clean Company Program to the Plant Manager and Water Quality Staff at Niagara Water. They decided to join the Clean Company Program and the Adopt-A-Stream Program. They selected Level 4 - Texas Stream Team Water Quality Monitoring as their level of participation. Plans are to provide Phase I through III of the Stream Team Training in the fall of 2013.

Date: 07/24/2013 **Responsible Party:** City Manager's Office, Special Projects Manager
Clean Company Member Triumph Industries at Crosspoint Community Garden

Employees of Triumph Industries in Grand Prairie learned about organic gardening when they helped to construct a new no-till row garden at the Crosspoint Community Garden. They also helped turn the compost and make a new pile. The no-till row garden helps to prevent erosion because the ground is undisturbed. Organic materials are layered on top of the soil. This method of row gardening provides nutrients for the plants because the soil is fed by the organic layers, thus eliminating the need for chemical fertilizers.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.13 Poster and Picture Contest	Host a poster and picture contest for GPISD students to encourage environmental stewardship and education.	1. Host a poster and picture contest for GPISD students	Environmental Services Department, Environmental Quality Division	Year 1

There are no required activities listed for this BMP for extended Year 5.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.14 Request for Drainage and Design Comments	Request comments from environmental consultant on revisions to drainage and design manual.	1. Request and receive comments on revisions to drainage and design manual	Planning and Development Department	Years 2 – 5

All activities for this BMP are complete for extended Year 5.

BMP 2.14 Activities Completed

Date: 08/12/2013 **Responsible Party:** Planning and Development Department
Drainage Design Manual

The City completed draft revisions of the Drainage Design Manual for distribution to a committee of review consultants for comment and finalization. A request for comments or recommendations to the Drainage Design Manual was placed on January 2013 and again on July 2013, to the City's consultants. Completion of the revision process was finalized and the revised Manual was released to the public in

extended Year 5.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.15 Household Hazardous Waste (HHW) Collection Events	Encourage citizens to dispose of HHW properly by participating in city hosted events	1. Maintain contract with Forth Worth annually to allow Grand Prairie citizens to drop off HHW at the Environmental collection center	Environmental Services Department, Environmental Quality Division	Years 1– 5
		2. Annually hold at least 1 HHW collection event in Grand Prairie		Years 1– 5

The City exceeded the goals for this extended Year 5 BMP.

BMP 2.15 Activities Completed

Date: 08/13/2012 **Responsible Party:** Environmental Quality Division
Contract with Forth Worth ECC

The City of Grand Prairie maintained a contract with the Fort Worth Environmental Collection Center for the proper disposal of household hazardous waste. This contract allows City of Grand Prairie residents to dispose of their household hazardous waste during the regular operating hours of the collection center. In addition, the Environmental Quality Division takes all household hazardous waste collected during HHW events to the collection center.

Date: 06/11/2013 **Responsible Party:**
HHW Events

The Environmental Quality Division held nine (9) Household Hazardous Waste events in extended Year 5. During this time 1,183 households participated in the events and ~28,165 pounds of hazardous waste products were recycled.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.16 Annual Environmental Compliance Achievement Awards	Encourage industrial facilities to obtain industrial permit as required by the SIC code.	1. Annually recognize facilities who achieve 100% compliance	Environmental Services Department, Environmental Quality Division	Years 1– 5

All activities for this BMP are complete for extended Year 5.

BMP 2.16 Activities Completed

Date: 08/09/2012 **Responsible Party:** Cheri Hebison, Sr. Environmental Specialist
Annual Compliance Awards

The City annually recognizes Grand Prairie industries achieving 100% compliance. The City held two Annual Compliance Awards meetings in Year 5 (September 30, 2011 and August 9, 2012) and will hold the next Annual Compliance Awards meeting on October 10, 2013. As a result, one of the Year 5 meetings may be credited to the extended Year 5.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.17 Auto Related Business (ARB) and Industrial Facility Mailing List	Maintain mailing list of ARB and industrial facilities and mail out informative material.	1. Annually mail information regarding storm water BMPs	Environmental Services Department, Environmental Quality Division	Years 1– 5

All activities for this BMP are complete for extended Year 5.

BMP 2.17 Activities Completed

Date: 08/13/2012 **Responsible Party:** Environmental Quality Division
Distribution Lists

The City currently distributes the H2O Line newsletter to approximately 330 contacts via email using a maintained e-mail contact list.

In addition, the Auto Watch newsletter is distributed to approximately 560 contacts using a maintained mailing list. This list is made up of English and Spanish speaking contacts.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
2.18 Rain Barrel Class	Conduct a class that instructs citizens on how to make a rain barrel that will collect and recycle rainwater.	1. Conduct one Rain Barrel class	Environmental Services Department, Solid Waste Division	Year 1

There are no required activities listed for this BMP for Year 5; however, the City continued this activity in extended Year 5.

BMP 2.18 Activities Completed

Date: 05/07/2013 **Responsible Party:** Public Works Department
Rain Barrel Class

The City held a Rainwater Harvesting class on May 7, 2013. Eight (8) residents constructed rain barrels to use at home.

MCM 3: Illicit Discharge Detection & Elimination

A list of allowable non-stormwater discharges was *not* developed. Future BMP activities are dependent upon amendments to the reissued Phase II MS4 Permit.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
3.1 Create a GIS Database of the MS4	Create an updated map of the locations of all outfalls and the names of all receiving US Waters, and provide the source(s) of information used to develop and update the map.	1. Review of the current drainage system map and addition of new growth once per year 2. Field verify 20% per year of all city stream miles for storm drain outfall locations	Environmental Services Department, Environmental Quality Division and Information Technology Department, GIS Division	Year 1 – 5 Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 3.1 Activities Completed

Date: 08/13/2012 **Responsible Party:** GIS Division
Year 5 MS4 Database

The outfall map with receiving US Waters is continuously reviewed and updated primarily using Engineering asbuilts and then error-corrected using orthographic photos (aerials). Differences noted in the field are reported and print corrected.

At the end of Year 4, 100% of the outfalls were mapped and field verified. During Year 5 and extended Year 5, new outfalls were mapped as they were constructed.

In addition, the City hired Alan Plummer Associates, Inc. to determine the condition of the outfalls located north of Interstate 30 (~300 outfalls). This project was still in progress at the end of extended Year 5.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
3.2 Complaint Database	A database is kept of all citizen complaints regarding illicit discharges.	1. Maintain the complaint database	Environmental Services Department	Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 3.2 Activities Completed

Date: 08/13/2012 **Responsible Party:** Environmental Quality Division
Garrison

The Environmental Quality Division uses Garrison, a Web based database, to track all citizen complaints regarding stormwater.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
3.3 Complaint Response	All citizen complaints are to be investigated.	1. Maintain a response of 80% within 5 days	Environmental Services Department	Years 1 – 5

The City exceeded the goals for this extended Year 5 BMP.

BMP 3.3 Activities Completed

Date: 08/12/2013 **Responsible Party:** Environmental Quality Division
Investigate Complaints

The Environmental Quality Division investigated well over 80% of residential complaints within five (5) working days in extended Year 5. The average response time for complaints in extended Year 5 was 2.0 days. Twenty (23) spills and ten (10) SSOs were investigated and resolved during this permit year.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
3.4 Spill Response	Coordinate with the Fire Department on emergency spill response, using a private contractor for clean-up and remediation.	1. Continue response and training	Environmental Services Department	Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 3.4 Activities Completed

Date: 08/13/2012 **Responsible Party:** Environmental Quality Division
Eagle SWS and TAS Environmental Services

The Environmental Quality Division had a contract with Eagle SWS for hazardous materials emergency response. This contract was for the period of April 18, 2012 through April 17, 2013. The City currently has a contract with TAS Environmental Services for the period of April 18, 2013 through April 17, 2014.

Date: 08/12/2013 **Responsible Party: Environmental Quality Division**
Specialist Response and Training

Environmental Specialists from the Environmental Quality Division respond to spills, sanitary sewer overflows, and other environmental hazards 24 hours a day, 365 days a year. Specialists are continuously educated through emergency responders meetings and through peer to peer training.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
3.5 Building Project Review Process	Environmental Specialist reviews and inspects for any illicit connections or water quality hazards during the building project review process.	1. Continue to review at least 80% of new construction plans for water quality hazards 2. Continue to inspect at least 80% of Certificates of Occupancy that have a potential to impact storm water	Environmental Services Department, Environmental Quality Division	Years 1 – 5

The City exceeded the goals for this extended Year 5 BMP.

BMP 3.5 Activities Completed

Date: 08/12/2013 **Responsible Party: Environmental Quality Division**
Certificate of Occupancy Inspections

The Environmental Quality Division received 657 Certificate of Occupancy applications in extended Year 5. 100% of the COs with the potential to impact stormwater were inspected for water quality hazards.

Date: 08/12/2013 **Responsible Party: Terri Blocker, Senior Environmental Specialist**
Plans Reviewed

The Environmental Quality Division received 465 Building Projects in extended Year 5. 100% of the Projects with the potential to impact stormwater were reviewed for water quality hazards.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
3.6 Clean Rivers Program	Participate in CRP by conducting monthly stream monitoring of 10 sites within or near the city limits. Atypical results have been investigated for illicit discharge.	1. Participate in CRP and monitor and investigate for atypical results monthly	Environmental Services Department, Environmental Quality Division	Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 3.6 Activities Completed

Date: 08/12/2013 **Responsible Party:** Environmental Quality Division

Stream Monitoring

The Environmental Quality Division has voluntarily conducted stream sampling since 1986.

Currently, 23 stream sites are sampled on a monthly, quarterly, and annual basis. The data collected during these monitoring events is used to detect and eliminate illicit discharges or other threats to human and environmental health. Atypical results are identified, researched, and resolved. In addition, this stream monitoring data is provided to the Clean Rivers Program for quality monitoring, assessment, and public outreach.

A monthly summary of the stream sampling data collected in extended Year 5 is attached in Appendix C. One area of concern was identified in extended Year 5. Table 2 is a summary of this atypical result.

Table 2: Atypical Stream Sampling Result

Date	Location	Parameter	Value	Actions Taken
Ongoing	Site 19 – Mountain Creek @ Singleton Blvd.	Ammonia Nitrogen	> 1.0 ppm	Ammonia nitrogen has been high at this location sporadically for over a year. E. coli has also been high at this location. Discussions with the Trinity River Authority (TRA) are ongoing, as this sampling location is adjacent to the TRA property. A determination of the cause of the high ammonia nitrogen has not been reached.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
3.7 Sanitary Sewer Overflow Response Plan	Follow the plan created and implemented for the response of Water Utilities and Environmental Services to SSOs. ESD’s response ensures the protection of the waterways through professional advice and field testing.	1. Maintain the plan for Water Utilities and Environmental Services to respond all to SSOs	Environmental Services Department, Public Works Department, Water Utilities Division	Years 2 – 5

All activities for this BMP are complete for extended Year 5

BMP 3.7 Activities Completed

Date: 08/13/2012 **Responsible Party:** Environmental Quality Division

Standard Operating Procedure

The City's Water Utility and Environmental Quality Divisions respond to all sanitary sewer overflows by following a Standard Operating Procedure. Water Utility's responsibilities include, but are not limited to, cleaning, containing, and recovering sewage, and clearing, repairing, and/or replacing pipeline failures. Environmental Quality Division's responsibilities include, but are not limited to, noting visual observations and sampling for ammonia nitrogen in receiving waterbodies (if applicable). Water Utility and Environmental Quality work together to determine the cause of the overflow and the appropriate clean up response.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
3.8 Illicit Discharge Awareness Campaign for City Employees, Businesses, and General Public	Utilize training developed by NCTCOG for informing public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste. (This BMP also addresses the minimum control measure for public education.)	1. Acquire and format NCTCOG Storm Water training materials and determine an effective means of distribution	Environmental Services Department, Environmental Quality Division	Year 2
		2. Distribute materials to city employees and 33% of potential polluting businesses and general public annually		Years 3 – 5

All activities for this BMP are complete for extended Year 5

BMP 3.8 Activities Completed

Date: 08/12/2013 **Responsible Party:** Environmental Quality Division

Food for Thought Newsletter

"Cease the Grease" and Storm Drain Protection" articles were included in the City's Food for Thought newsletter that is distributed to local restaurants.

Date: 04/30/2013 **Responsible Party:** Environmental Quality Division

Illicit Discharge Detection and Elimination Training

Joe Redding, Senior Environmental Technician, attended the Illicit Discharge Detection and Elimination Training conducted by NCTCOG.

Date: 07/25/2013 **Responsible Party: Environmental Quality Division**

New Employee Orientation

Presented "Preventing Storm Water Pollution: What We Can Do" video to seventeen (17) new City employees during New Employee Orientation.

Date: 04/26/2013 **Responsible Party: Environmental Quality Division**

Arbor Day Festival

Environmental Quality Division Staff displayed and distributed stormwater pollution prevention information at the Arbor Day festival held by the City. Free trees were also distributed. Approximately 1,000 children and adults attended.

Date: 05/16/2013 **Responsible Party: Echo Rexroad, Sr. Environmental Specialist**

Meter Training

Staff experienced with stormwater meters trained other members of the Environmental Quality staff on when and how to use the meters.

Date: 07/25/2013 **Responsible Party: T Sury, Environmental Specialist**

Oil water Don't MIX and Spill Prevention, Control & Countermeasure Videos by EXCAL Visual LLP

Training videos were shown to City staff at three MSGP facilities. Six (6) Service Center Staff members viewed the videos on 7/25/13 (remaining 60 staff members viewed the videos on 9/20/13), twenty (20) Landfill Staff members viewed the videos on 6/27/2013, and five (5) Airport Staff members viewed the videos on 6/11/13.

Date: 08/12/2013 **Responsible Party: Environmental Quality Division**

Illicit Discharge Brochures

Stormwater educational materials addressing illicit discharges were distributed throughout extended Year 5. This includes, but is not limited to, the following: An Industry's Guide for Protecting Grand Prairie's Watershed, Lawn Care Maintenance, Fat Free Sewers, A Guide for Auto Service, Repair and Maintenance Businesses, Preventing Stormwater Pollution at Construction Sites, Clean It Right, After the Storm: A Citizen's Guide to Understanding Stormwater, the AutoWatch newsletter, the Auto Related Business Ordinance, and the H2O Line.

Date: 08/12/2013 **Responsible Party: Environmental Quality Division**

ARB Posters

Environmental Specialists distributed "7 Ways to Keep a Clean Shop" posters to Auto Related Businesses. The posters illustrated best management practices for these facilities and were available in English and Spanish.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
3.9 Storm Water Ordinance	Develop a storm water ordinance to effectively prohibit non-storm water discharges into the storm sewer system and implement enforcement procedures and actions. (Refer to BMP 2.6) Include a description of local controls and conditions established for common and	1. Develop a draft ordinance	Environmental Services Department, Environmental Quality Division	Year 1
		2. Finalize ordinance		Year 2

incidental non-storm water discharges not considered illicit.	3. Implement ordinance	Years 3 – 5
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All activities for this BMP are complete for extended Year 5.

BMP 3.9 Activities Completed

Date: 08/12/2013 **Responsible Party:** Environmental Quality Division
Implemented Stormwater Ordinance

The Stormwater Ordinance was implemented in extended Year 5. Multiple citations, summonses, and Notice of Violations were issued as a result of stormwater violations discovered throughout extended Year 5.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
3.10 Storm Water Industrial Inspection Program	Require that facilities comply with any NPDES or TPDES storm water permit applicable under the SIC code.	1. Continue to provide 75% of industries the applications for coverage, when applicable	Environmental Services Department, Environmental Quality Division	Years 1 – 2
		2. Enforce failure to apply for or obtain permit coverage		Years 3 – 5
		3. Perform inspections once every 3 years		Years 3 – 5

The City met the goals for this extended Year 5 BMP.

BMP 3.10 Activities Completed

Date: 08/12/2013 **Responsible Party:** Environmental Quality Division
Applications, Enforcement and Inspections

100% of industries were provided applications for NPDES or TPDES coverage, when applicable. Notice of Violations and/or citations were given to facilities that failed to apply for or obtain stormwater coverage. Inspections of industrial facilities are performed at least once every 3 years.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
3.11 Illicit Detection of Commercial and Industrial Floatables	Promote the elimination of floatables from commercial and industrial facilities through inspection activities. (Refer to BMP 1.9).	1. Add floatables and litter control to the health compliance checklist 2. Enforce efforts to remove floatables through issuance of Notice of Violations and citations for non-compliance	Environmental Services Department, Environmental Quality Division	Year 2 Years 2 – 5

All activities for this BMP are complete for extended Year 5.

BMP 3.11 Activities Completed

Date: 08/12/2012 **Responsible Party: Environmental Quality Division**
Floatables Enforcement

Environmental Specialists issued Notice of Violations and citations for floatables during inspections and complaint investigations in extended Year 5 of the permit.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
3.12 Litter Collection Program	Keeping the major through fares clean and free of litter will reduce the amount of floatables that reach water ways. A contractor is employed to clear litter from these roadways.	1. Remove litter from major through fares weekly	Environmental Services Department, Solid Waste Division	Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 3.12 Activities Completed

Date: 08/12/2013 **Responsible Party: Solid Waste Division**
Litter Collection

Throughout extended Year 5, the City maintained a contract with the City's Special Projects Office for litter collection. The contract requires collection of litter from major through fares on a weekly basis. The Keep Grand Prairie Beautiful Litter Crew collected 83.6 TN of litter in extended Year 5.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
3.13 Illegal Dumping Clean-Up	Cleaning up debris in a timely fashion reduces the amount of illegal dumping. The city investigates all illegal dumping and ensures the removal of debris.	1. Continue efforts to remove all illegally dumped debris at least 30 days from the day the violation was reported	Planning and Development Department, Code Enforcement Division	Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 3.13 Activities Completed

Date: 08/12/2013 **Responsible Party:** Code Enforcement Division

Illegal Dumping Response

The City responded to 65 illegal dumping complaints in extended Year 5. Complaints included illegally dumped brush, trash, tires, furniture, hazardous waste, etc. Once on site, City staff cleaned up the debris or required the property owner or responsible party to do so. Citations and warnings were issued as necessary. Illegally dumped debris was usually removed within a week of receiving the complaint (it was always removed within 30 days).

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
3.14 Source Assessment for Floatables	A study of contributing sources of floatables will be used in source abatement. This might include an assessment of materials from clean-ups, an assessment of illegal dumps, or other similar studies.	1. Develop a plan	Environmental Services, Environmental Quality Division	Year 2
		2. Conduct an assessment of floatables		Years 3
		3. Compile assessment results and analyze data		Year 4
		4. Use assessment in re-focus of education efforts and enforcement efforts		Year 5

There were no required activities for Year 5 for this BMP.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
3.15 Illicit Discharge Detection and Elimination	Develop a program to detect and address non-storm water discharges, including illegal dumping, into the storm sewer system. Standard operating procedures will be developed for the detection of and elimination of illicit	1. Identify additional program requirements and resource/ training needs	Environmental Services Department, Environmental Quality Division	Year 2

discharges.	2. Create a project plan and an assessment, enforcement, and elimination process and acquire needed resources	Year 3
	3. Conduct dry weather screening of 20% of city's outfalls per year	Year 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 3.15 Activities Completed

Date: 08/12/2013 **Responsible Party:** Environmental Quality Division

Dry Weather Screening

By the end of Year 5, 100% of the City's outfalls were inspected for anomalies (Appendix D). Inspectors looked for and reported issues such as erosion, siltation, debris, vegetation, structure damage, and illicit discharges. If flow was observed, a sample was taken and tested for pH, temperature, turbidity, chlorine, copper, detergents, and dissolved oxygen. Illicit discharges were investigated and resolved. In extended Year 5, 310 outfalls were inspected by the City's contractor, Alan Plummer Associates, Inc.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
3.16 Joe Pool Lake Reservoir Surface Water Sampling	Sample the inlets of the reservoir that are influenced by the city's MS4 to determine the water quality of the MS4 at this sensitive water supply system.	1. Determine at least 3 sampling points	Environmental Services Department, Environmental Quality Division	Year 2
		2. Acquire needed supplies for sampling		Year 3
		3. Monitor selected inlets annually		Years 4 – 5

All activities for this BMP are complete for extended Year 5.

BMP 3.16 Activities Completed

Date: 06/12/2013 **Responsible Party: Environmental Quality Division**

Joe Pool Lake Sampling

Three inlet locations at Joe Pool Lake were sampled during extended Year 5. Bowman Creek at Mirabella, Loyd Creek at Loyd Park, and Walnut Creek at Highway 360 were sampled for E. Coli (Table 3). Temperature, turbidity, dissolved oxygen, pH, and conductivity were also sampled at these sites. All results were within acceptable ranges.

Table 3: Joe Pool Lake Inlet Sampling Results

Joe Pool Lake Inlet Sampling Results for June 12, 2013	
Location	E. Coli MPN/100ML
Bowman Creek at Mirabella	87
Loyd Creek at Loyd Park	44
Walnut Creek at Hwy 360	37

1. This is the third year of sampling at these sites.
2. The recommended limits for contact recreation are 394 MPN/100mL for single samples.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
3.17 Beach Sampling Program	Help reduce health risk to the visitors of Joe Pool Lake swim beaches by minimizing the public’s exposure to diseases in the water.	1. Follow an SOP for beach sampling once a month during the summer or swimming months	Environmental Services Department, Environmental Quality Division	Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 3.17 Activities Completed

Date: 08/13/2012 **Responsible Party: Environmental Quality Division**

Beach Sampling SOP

The beach sampling standard operation procedure is followed during sampling events.

Date: 08/12/2013 **Responsible Party: T Sury, Environmental Specialist**

Joe Pool Lake Beach Sampling Results

See Table 4.

Table 4: Results for Loyd Park and Lynn Creek Beach Sampling

Beach Sampling 2013 – E. Coli MPN/100mL								
Month	Loyd Park West	Loyd Park Middle	Loyd Park East	Geo Mean	Lynn Creek West	Lynn Creek Middle	Lynn Creek East	Geo Mean
May	15	6	4	7.0	6	8	4	5.8
June	15	2	4	4.9	237	40	32	64.4
July	2	2	17	4.1	91	62	8	34.4
Aug	4	4	2	3.2	24	2	2	4.6

1. Results that are less than reportable limits are conservatively treated as at detection limits (i.e. <4 is 4)
2. The recommended limits are 126 MPN/100mL Geom. Mean for contact recreation. This is currently proposed to be raised to 206 MPN/100mL
3. June and July results are reflective of the summer vacation for schools. Lynn Creek is free to enter for Grand Prairie residents, resulting in greater contact recreation activities than at Loyd Park.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
3.18 Rapid Bioassessment Program	Better understand water quality impacts by comparing habitat and biological conditions with existing physical water quality data.	1. Develop a rapid bioassessment plan	Environmental Services Department, Environmental Quality Division	Year 3
		2. Acquire necessary training and supplies		Year 4
		3. Begin rapid bioassessment program; monitor 3 sites annually		Year 5

All activities for this BMP are complete for extended Year 5.

BMP 3.18 Activities Completed

Date: 08/12/2013 **Responsible Party:** Environmental Quality Division

Sampling Events

Gregg Kidd, Senior Environmental Technician, and Echo Rexroad, Senior Environmental Specialist, sampled for benthic macroinvertebrates at Cottonwood Creek, Fish Creek, and Johnson Creek on 9/6/12, 4/22/13, 6/14/13, 7/12/13, and 8/12/13. Benthic samples were shipped to Water Monitoring Solutions for identification. The results are pending.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
3.19 On Site Sewage System Permitting	On site sewage systems are regulated through an ordinance and permitted by the city. Failing septic systems are identified and abated.	<ol style="list-style-type: none"> 1. Maintain the permitting of sewage systems 2. Respond to onsite sewage systems within 10 days of receiving complaint and enforce as necessary 	Environmental Services Department, Environmental Quality Division	<p>Years 1 – 5</p> <p>Years 1 – 5</p>

All activities for this BMP are complete for extended Year 5.

BMP 3.19 Activities Completed

Date: 08/12/2013 ***Responsible Party: Terri Blocker, Senior Environmental Specialist***
Complaints and Enforcement

No complaints were received and no citations were issued in extended Year 5.

Date: 07/11/2013 ***Responsible Party: Terri Blocker, Senior Environmental Specialist***
Permitted OSSF

Only one (1) OSSF was permitted in extended Year 5.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
3.20 Mobile Vehicle Wash Business Policy	The City’s policy on mobile vehicle wash business will be revised to better discourage illicit discharges.	1. Revise and approve the policy	Environmental Services Department, Environmental Quality Division	Year 2

There were no required activities for extended Year 5 for this BMP.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
3.21 Auto Inspection Program	Develop inspection program for auto-related businesses.	1. Develop program and ordinance	Environmental Services Department, Environmental Quality	Years 1 – 5

2. Inspect at least 75% of Division auto-related businesses annually

The City exceeded the goals for this extended Year 5 BMP.

BMP 3.21 Activities Completed

Date: 08/12/2013 ***Responsible Party: Environmental Quality Division***
ARB Inspections

The Environmental Quality Division inspected 100% of the auto-related businesses in Grand Prairie in 2012, during which inspectors ensured ARBs were in compliance with local, state, and federal stormwater regulations. From January 2013 to October 2013, 92% of the ARB inspections were completed.

Date: 08/12/2013 ***Responsible Party: Environmental Quality Division***
ARB Ordinance

The City has an Automotive Related Business Regulations ordinance (Article XX, Sections 13-530 through 13-552) used to regulate the automotive related businesses in Grand Prairie.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
3.22 Sampling Manual	A manual will be created that will define and standardize all storm water sampling and monitoring procedures.	1. Create sampling manual and provide a copy to at least 80% of Environmental Quality Division Staff and technicians	Environmental Services Department, Environmental Quality Division	Year 1

There are no required activities for this BMP for extended Year 5.

MCM 4: Construction Site Storm Water Runoff Control

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
4.1 Review Infrastructure Plans and Designs	Require designers to include design of erosion control measures and approved BMPs in plans and specifications in all projects in compliance with and requiring compliance with the TPDES Construction General Permit and all local and State regulations.	1. Continue to require erosion control plans and BMP details in engineering plan submittals	Planning and Development Department	Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 4.1 Activities Completed

Date: 08/12/2013 **Responsible Party:** Planning and Development Department

Review Infrastructure Plans and Designs

A total of 67 drainage and erosion control plans were approved from August 13, 2012 through August 12, 2013.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
4.2 Inspect Erosion Control Measures	Inspection of the infrastructure and effectiveness of the required erosion control measures used on applicable construction projects.	1. Continue to inspect general erosion control measures during baseline or annual inspections	Planning and Development Department	Years 2 – 3
		2. Document any violations and provide follow-up inspections within 10 days of the notice of violation, ensuring enforcement of permit provisions	Planning and Development Department	Years 3 – 5

All activities for this BMP are complete for extended Year 5.

BMP 4.2 Activities Completed

Date: 08/12/2013 **Responsible Party:** Engineering Division

Inspect Erosion Control Measures

A total of 809 erosion control measure inspections were performed in extended Year 5. A total of 8 violations and erosion control measure follow-up inspections were performed in extended Year 5.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
4.3 Earthwork Permit	Issue permits for site grading, when necessary, to reduce the impact to neighboring properties, downstream flooding, or channel erosion.	1. Continue to issue permits as needed	Planning and Development Department, Engineering Division	Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 4.3 Activities Completed

Date: 08/12/2013 **Responsible Party: Engineering Division**

Review Earthwork Permits

A total of 81 clearing, grubbing, and earthwork permits were approved from August 13, 2012 through August 12, 2013.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
4.4 Storm Water Pollution Prevention Plan during Construction	A Storm Water Pollution Prevention Plan (SWP3) is required on all applicable construction projects in accordance with the regulatory authorities' permit process. A copy of the NOI or Construction Site Notice on all applicable construction projects shall be required.	1. A copy of the NOI from the contracting authority must be provided before a construction permit can be issued	Planning and Development Department	Years 3 – 5

All activities for this BMP are complete for extended Year 5.

BMP 4.4 Activities Completed

Date: 08/12/2013 **Responsible Party: Engineering Division**

Storm Water Pollution Prevention Plan During Construction

A total of 53 permits were copied to the City from August 13, 2012 through August 12, 2013. Of these 53 NOI's, 49 were for non-municipal construction activities. (Table 5)

Table 5: Non-Municipal Construction Activities

<i>Number of Non-Municipal Construction Activities Within Jurisdiction of Permittee</i>
49

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
4.5 Complaint response	Citizen complaints regarding sediment and other development pollutants are investigated.	1. Continue to investigate at least 80% of complaints within 15 working days with priority complaints investigated sooner	Planning and Development Department	Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 4.5 Activities Completed

*Date: 08/12/2013 Responsible Party: Planning and Development Department
Complaint Response*

A total of 27 complaints were received from August 13, 2012 through August 12, 2013 of which all 27 or 100% were investigated within 15 working days from the time the complaint was received.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
4.6 Construction Ordinance	Work with the Environmental Services Department to include in the City of Grand Prairie Storm Water Ordinance (Refer to BMP 3.9) provisions to meet the legal authorities necessary to comply with permit requirements for Construction Site Storm Water Runoff Control. Ordinance will require contractors to implement erosion and sediment control BMPs and to control construction site waste.	1. Assign Staff and obtain information for draft ordinance	Planning and Development Department, Engineering Division	Year 1
		2. Develop a draft ordinance		Year 2
		3. Finalize ordinance		Year 3
		4. Implement ordinance		Year 3

There are no required activities for this BMP for extended Year 5.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
4.7 Site Development Plan Reviews	Enhance review of site development plans to include water quality considerations, including a review of erosion control plans and proposed approved BMPs. Any amendments to the site plan review procedures will conform to the Storm Water Ordinance and post construction requirements.	1. Assign Staff and obtain information for site plan review procedures	Planning and Development Department	Year 1
		2. Revise and adopt the site plan review procedures		Year 2
		3. Amend site plan review procedures as necessary and implement compliance requirements		Year 3

There are no required activities for this BMP for extended Year 5.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
4.8 Recording and Public Complaint Response	Refine the system for recording and responding to calls from the public. This approach will include clarifying responsibilities, procedures, recordkeeping, and follow-up.	1. Assign and train Staff	Planning and Development Department	Year 1
		2. Prepare a memorandum of understanding clarifying responsibilities, procedures, recordkeeping, and follow-up on calls from the public		Year 2
		3. Implement		Year 3

There are no required activities for this BMP for extended Year 5.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
4.9 Redefine the Construction Site Inspection Program	Redefine the construction site inspection program by developing a system to assign inspectors, track training requirements, establish schedules of inspections, establish recordkeeping procedures, and define enforcement procedures. The existing inspection program will be upgraded to reflect the redefined construction site inspection program. Compliance with the Storm Water Ordinance will be insured by the use of non-monetary penalties, fines, bonding requirements, permit denial, stop work orders, and holding of Certificate of Occupancy until full compliance.	1. Redefine the inspection program and complete a memorandum of understanding concerning inspector assignments and enforcement procedures, training requirements, and record keeping processes	Planning and Development Department	Year 3
		2. Complete training of all departmental construction site inspectors. Initiate a program to formally train new inspectors by the end of their first year of their inspection assignment		Year 4
		3. Include in the inspection activities the additional sanctions provided by adoption of the Storm Water Ordinance		Year 5

All activities for this BMP are complete for extended Year 5.

BMP 4.9 Activities Completed

Date: 09/17/2012 ***Responsible Party: Chris Agnew, Drainage Engineer***

Workshops

Chris Agnew attended the following NCTCOG workshops: Downstream Assessment Analysis on 8/21/12 and Maintenance and Inspection of Stormwater Controls on 9/17/12.

Date: 05/28/2013 ***Responsible Party: David McKee, Environmental Investigator***

Workshops

On May 21, 2013, David McKee attended the Texas Floodplain Management Association Conference held in Sugar Land TX. He completed

the Floodplain Management 101 course to become a Certified Floodplain Manager and was issued the certificate on May 28, 2013.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
4.10 Construction Site Storm Water Public Education Program	Coordinate a public education program with Environmental Services Division to provide information to construction site operators regarding the requirements of the Construction General Permit and the MS4 General Permit.	1. Add internet links concerning Construction Site BMPs and Storm Water to the Grand Prairie website	Planning and Development Department	Year 2
		2. Create fact sheets and distribute to developers and homebuilders regarding requirements for permitting and pollution prevention		Year 3

There are no required activities for this BMP for extended Year 5.

MCM 5: Post Construction Storm Water Management in New Development & Redevelopment

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
5.1 Development Review Process	All development plans are reviewed for compliance with floodplain requirements, for adequacy of infrastructure design for drainage, and for use of detention ponds.	1. Continue to review at least 80% of development plans for mitigation of impact	Planning and Development Department, Engineering Division	Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 5.1 Activities Completed

Date: 08/12/2013 **Responsible Party: Engineering Division**

Development Review Process

A total of 165 drainage and erosion control plans were reviewed from August 13, 2012 through August 12, 2013.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
5.2 Stream Buffer Preservation	Encourage the preservation of natural channels and the 100 year floodplain.	1. Continue to encourage the preservation of stream buffers during plan reviews by requiring dedication of drainage or floodplain management easements for the 100-year floodplain	Planning and Development Department	Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 5.2 Activities Completed

Date: 08/12/2013 Responsible Party: Planning and Development Department

Stream Buffer Preservation

Using an integrated approach to deal with storm water quality protection, stream bank protection, and flood control requirements, the City is striving to use the natural drainage system which will mean as little maintenance as possible. By implementing controls after all site design and nonstructural options have been exhausted, the City's purpose is to create structural controls that are multi-purpose and aesthetically integrated into a site's design, while realizing that each site, project, and watershed presents different challenges and opportunities. The City encourages the preservation of natural hydrology and drainage ways and the reduction of impervious cover with associated runoff and pollutants. The goal is to make efficient use of the natural features of the sites to prevent storm water impact at the maximum extent practicable.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
5.3 Storm Water Design Criteria and Methods	Adopt storm water design criteria and methods that integrate considerations for drainage and water quality for post construction BMPs. An internal committee will evaluate the implementation of the manuals by Grand Prairie and propose their adoption with any amendments thereto.	1. Appoint Staff to evaluate and make recommendations	Planning and Development Department	Years 2
		2. Research information through benchmarking and attending NCTCOG meetings and training seminars		Years 2
		3. Adopt the policies and design criteria as needed		Year 3

	4. Affected city departments and divisions will implement the policy and design criteria manuals as adopted	Year 4
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There are no required activities for this BMP for Year 5.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
5.4 Revise Policies and Design Criteria in the Unified Development Code	Revise the Unified Development Code as needed to include requirements and revised standards. An internal committee will evaluate the Unified Development Code and design criteria, propose amendments thereto to support water quality objectives, and update as necessary.	1. Appoint Staff to evaluate and make recommendations	Planning and Development Department	Year 2
		2. Research information through benchmarking and attending NCTCOG meetings and training seminars; head an internal committee		Year 2
		3. Adopt the amendments to the Unified Development Code		Year 3
		4. The affected city departments and divisions will implement the revisions to the Unified Development Code		Year 4

There are no required activities for this BMP for Year 5.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
5.5 Long term operation and maintenance of BMPs	Perform periodic inspections on existing post construction BMPs and work with the owners to provide needed maintenance and repairs. Failure to perform	1. Document all inspections and violations	Planning and Development Department	Year 3

maintenance and repairs directed by the city may result in penalties.	2. 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 and ensuring proper maintenance activities are conducted	Year 3
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All activities for this BMP are complete for extended Year 5.

BMP 5.5 Activities Completed

Date: 05/13/2013 **Responsible Party:** Engineering Division

Maintenance Guidelines and Inspection Processes

New pond maintenance guidelines and inspection processes were developed in extended Year 5. The maintenance guidelines correlate with an outreach program to educate the community on the importance of pond maintenance and help them understand why we are inspecting. The maintenance guidelines were created on 1/22/2013 and the new inspection report was created on 5/13/2013.

In addition, City Council approved funding for 3rd party inspections for Post Construction. Because of this new process development, there were no Post Construction BMP's reported in extended Year 5.

MCM 6: Pollution Prevention & Good Housekeeping for Municipal Operations

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
6.1 Storm Water Management Program Data Tracking	Track all city activities related to the Storm Water Management Program through a data tracking program. Software will be utilized to assist with the tracking.	1. Purchase and utilize software 2. Create annual report	Environmental Services Department, Environmental Quality Division	Year 1 Year 2

All activities for this BMP are complete for extended Year 5.

BMP 6.1 Activities Completed

Date: 8/12/2013 **Responsible Party: Environmental Quality Division**

Data Tracking

The previously purchased Asist software is no longer supported by the company from whom it was purchased. Funding was approved for the purchase of new data tracking software which will be purchased and used to manage the new MS4 permit.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
6.2 Existing SWP3s	Three existing SWP3s are maintained for the Airport, the Landfill, and the Service Center, as required by the general permit TXR05000.	1. Maintain and update SWP3s for the permits at the three existing regulated facilities	Environmental Services Department, Environmental Quality Division	Years 1 – 5
		2. Review the SWP3s annually for any changes required		Years 1 – 5
		3. Inspect all three sites annually		Years 1 – 5
		4. Ensure that required annual SWP3 training is conducted		Years 2 – 5

All activities for this BMP are complete for extended Year 5.

BMP 6.2 Activities Completed

Date: 12/07/2012 **Responsible Party: T Sury, Environmental Specialist**

Annual Inspections

Annual comprehensive compliance inspections were conducted for each MSGP City facility. The Airport was inspected on 12/6/12, the Landfill was inspected on 12/7/12, and the Service Center was inspected on 12/6/12 and 12/7/12.

Date: 07/25/2013 **Responsible Party: T Sury, Environmental Specialist**

Oil water Don't MIX and Spill Prevention, Control & Countermeasure Videos by EXCAL Visual LLP

Training videos were shown to City staff at three MSGP facilities. Nine (9) Service Center Staff members viewed the videos on 7/25/13 (remaining 60 staff members viewed the videos on 9/20/13), twenty (20) Landfill Staff members viewed the videos on 6/27/2013, and five (5) Airport Staff members viewed the videos on 6/11/13.

Date: 08/12/2013 **Responsible Party: T Sury, Environmental Specialist**
SWPPP Updates

There were no updates to the three facilities in extended Year 5. Relocation of the service center outfall 4 and improvements around the outfall are planned for 2014.

Date: 07/14/2013 **Responsible Party: T Sury, Environmental Specialist**
Quarterly Visual Inspections

The three City facilities regulated by the general permit TXR05000 are the Municipal Airport, Landfill, and Service Center. In addition to the inspections performed at these facilities for the purpose of maintaining and updating their corresponding SWPPPs, outfalls at each facility are monitored during qualifying rainfall events on a quarterly basis. The Service Center was monitored on 9/29/12, 12/17/12, 1/9/13, 4/3/13, and 7/14/13. The Airport was monitored on 8/15/12, 12/14/12, 1/9/13, 4/3/13, and 7/15/13. The Landfill was monitored on 8/16/12, 12/18/12, 1/9/13, and 4/4/13 (there was not enough flow to sample in the 2nd quarter).

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
6.3 Storm Sewer and Drainage Maintenance Program	Conduct maintenance along the inlets, ditches, pipes, and channels for structural improvements when noted through citizen complaints and through field observations. Use permanent vegetation to stabilize disturbed soil.	1. Hire a crew of 3 to maintain storm sewer and drainage	Public Works Department, Streets Division	Years 1 – 5
		2. Respond to 100% of citizen complaints		Years 1 – 5
		3. Track storm sewer and drainage maintenance		

All activities for this BMP are complete for extended Year 5.

BMP 6.3 Activities Completed

Date: 08/12/2012 **Responsible Party: Public Works Department**
Tracking Maintenance

Storm sewer and drainage maintenance was tracked for extended year 5. Maintenance included twenty-three (23) different type of activities conducted as a result of citizen complaints, field observations, and regular City storm sewer maintenance.

Date: 08/12/2012 **Responsible Party: Public Works Department**
Complaint Response

The Public Works Department responded to 100% of citizens' complaints in extended year 5. Response included cleaning, clearing, seeding, and overall maintenance of the storm sewer systems. Thirty-four (34) issues were resolved in extended year 5 in response to complaints and field observations.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
6.4 Disposal of Waste Removed from the MS4	Develop a standard operating procedure for the disposal of waste removed from the MS4, including any dredged soil, accumulated sediments, and floatables.	1. Develop an SOP for waste disposal	Environmental Services, Environmental Quality Division	Year 2

There are no activities listed for this BMP for extended Year 5.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
6.5 Storm Water Pollution Prevention Guidelines for all City Activities	Develop pollution prevention guidelines for selected city activities not covered by a specific TPDES permit. Training materials will be developed from NCTCOG Storm Water training materials, as indicated by BMP 3.8.	1. Identify target audience and activities for the pollution prevention plan	Environmental Services Department, Environmental Quality Division	Year 2
		2. Review Phase 1 city SWP3s as well as suggested EPA and TCEQ BMPs		Year 2
		3. Design the SWPP materials for selected city employees		Years 3 – 4
		4. Begin developing, purchasing and disseminating SWPP materials to selected city employees annually		Years 5

All activities for this BMP are complete for extended Year 5.

BMP 6.5 Activities Completed

Date: 06/09/2013 ***Responsible Party: Environmental Quality Division***

TPDES Industrial Permit Requirements Workshop

Echo Rexroad, Gregg Kidd, Andrew Krentz, and Bharati Maskey, all with the Environmental Quality Division, attended the TPDES Industrial Permit workshop held by the City of Dallas.

Date: 07/17/2013 **Responsible Party: Environmental Quality Division**

TPDES Construction Permit Requirements Workshop

Echo Rexroad, Gregg Kidd, Andrew Krentz, and Brent Redd, all with the Environmental Quality Division, attended the TPDES Construction Permit workshop held by the City of Dallas.

Date: 07/25/2013 **Responsible Party: Environmental Quality Division**

New Employee Orientation

Presented "Preventing Storm Water Pollution: What We Can Do" video to seventeen (17) new City employees during New Employee Orientation (See also BMP 3.8).

Date: 07/25/2013 **Responsible Party: T Sury, Environmental Specialist**

Oil water Don't MIX and Spill Prevention, Control & Countermeasure Videos by EXCAL Visual LLP

Training videos were shown to City staff at three MSGP facilities. Six (6) Service Center Staff members viewed the videos on 7/25/13 (remaining 60 staff members viewed the videos on 9/20/13), twenty (20) Landfill Staff members viewed the videos on 6/27/2013, and five (5) Airport Staff members viewed the videos on 6/11/13.

Date: 08/12/2013 **Responsible Party: Environmental Quality Division**

Environmental Quality Division Staff Meeting Presentations

The Environmental Quality Division holds monthly Staff meetings to discuss environmental issues and/or events. Several stormwater related presentations were given in extended Year 5 by Staff members.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
6.6 Promotion of Native or Adaptive Vegetation Along Floodplain Easements	Promote good storm water filtration and natural uptake of possible nutrient pollutants by native and/or adaptive vegetation.	1. Identify at least 2 areas to promote native vegetation	Environmental Services Department, Environmental Quality Division and Public Works Department,	Year 2
		2. Choose location and design for signage and formalize sign budget	Streets Division	Year 3
		3. Install at least 1 sign for each area and define management area		Year 4 – 5
		4. Identify future areas suitable for promotion of vegetation as the city continues to develop		Year 5

There are no activities listed for this BMP for extended Year 5

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
6.7 Mosquito Management Program	Maintain mosquito management methods that will not result in illicit discharges to the MS4.	1. Maintain integrated mosquito management methods when handling and applying pesticides	Environmental Services Department, Environmental Quality Division	Years 1 – 5
		2. Use low toxicity bio-controls for larvae control		Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 6.7 Activities Completed

Date: 08/12/2013 **Responsible Party: Environmental Quality Division**

Bio-controls

The City used Altosid, Gambusia affinis fish, and BTi Briquettes for managing the mosquito population during extended Year 5. Altosid XR ((S)-Methoprene), EPA registration No. 2724-375, is a larviciding agent that interferes with the ability of mosquito larvae to become adults, but does not kill them. Altosid has a toxicity category of “Caution”.

Gambusia affinis fish were used in bodies of water with mosquito breeding problems. This biological control provides an abatement program directed primarily toward the prevention, elimination, or control of mosquitoes capable of disease transmission.

BTi Briquettes (mosquito dunks) were also used. BTi Briquettes are biological larvicides containing Bacillus thuringiensis israelensis, which kills only mosquito larvae (EPA registration No. 6218-47) and has a toxicity category of “Caution”.

Date: 08/12/2013 **Responsible Party: Environmental Quality Division**

Integrated Mosquito Management

The Environmental Quality Division's mosquito control plan is based on comprehensive Integrated Pest Management which includes, but is not limited to, mosquito and disease surveillance, source reduction, complaint investigations, public education, biological control (mosquito fish production), larval and adult mosquito control, and insecticide resistance management.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
6.8 Street Sweeping	Remove solid pollutants from the streets to avoid contamination of the storm sewer system.	1. Sweep major thoroughfares on an annual basis and more often on high traffic roads	Environmental Services Department, Solid Waste Division	Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 6.8 Activities Completed

Date: 08/12/2013 **Responsible Party:** Solid Waste Division
Street Sweeping

The City has a contract with Flagship Sweeping Services, Inc. for all street sweeping activities. Flagship Sweeping Services, Inc. cleans curbs, gutters, median curbs, road shoulders, gore points and turning lanes located throughout the City. Cleaning operations include sweeping, panning, dumping and trash pickup operations. Depending on area, streets are cleaned on a weekly, semiannual, and annual basis. In extended Year 5, 233.86 TN were collected.

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
6.9 Inspect City Facilities	Inspect city facilities for Best Management Practices.	1. Inspect 25% of city facilities annually	Environmental Services Department, Environmental Quality Division	Years 2 – 5

All activities for this BMP are complete for extended Year 5.

BMP 6.9 Activities Completed

Date: 07/23/2013 **Responsible Party:** T Sury, Environmental Specialist
City Facility Inspections

The City inspected 25% of the 28 City facilities selected for this program. The facilities inspected in extended Year 5 were Lone Star Park, Airhogs Ball Park, Main Library, Bowles Library, Betty Womack Library, Auto Pound, and the Water Utilities Fueling Service

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
6.10 Storm Sewer and Drainage Maintenance Program for the Dallas County Flood Control District #1 (excluding the City of Grand Prairie – see MCM 6.3)	Conduct maintenance and improvements for the drainage components owned by the Dallas County Flood Control District #1 when noted through written complaints and through field observations.	1. Respond to written complaints within the District	Dallas County Flood Control District #1	Years 1 – 5
		2. Perform annual maintenance reviews and prepare report		Years 1 – 5

3. Make necessary repairs to District facilities

Years 1 – 5

All activities for this BMP are complete for extended Year 5.

BMP 6.10 Activities Completed

Date: 1/18/2013 **Responsible Party:** Dallas County Flood Control District #1
Complaints, Reviews, and Repairs

No written complaints were filed in extended Year 5. The annual maintenance review was conducted in January 2013, and the report was prepared in June 2013. No repairs were necessary in extended Year 5.

<i>BMP</i>	<i>BMP Description</i>	<i>Measurable Goals</i>	<i>Responsibility</i>	<i>Target Date</i>
6.11 Disposal of Waste Removed from the MS4 for the Dallas County Flood Control District #1 (excluding the City of Grand Prairie – see MCM 6.4)	Develop a standard operating procedure for the disposal of waste removed from the Dallas County Flood Control District #1's storm water system.	1. Develop a SOP for waste disposal	Dallas County Flood Control District #1	Year 2

No activities are listed for this BMP for extended Year 5.

Part VI. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I further certify that I am authorized under 30 Texas Administrative Code 305.128 to sign and submit this document, and can provide documentation in proof of such authorization upon request.

City of Grand Prairie

Signature: _____

Printed Name: _____

Title: _____

Date: _____

Dallas County Flood Control District #1

Signature: _____

Printed Name: _____

Title: _____

Date: _____

APPENDIX A: Interlocal Agreement

STATE OF TEXAS)
COUNTY OF DALLAS)

INTERLOCAL AGREEMENT BETWEEN CITY OF GRAND PRAIRIE
AND THE DALLAS COUNTY FLOOD CONTROL DISTRICT #1
CONCERNING JOINT SUBMISSION OF THE STORM WATER MANAGEMENT
PROGRAM

This agreement is between the City of Grand Prairie, by and through its duly authorized City Manager, and the Dallas County Flood Control District #1, by and through its President. It is an Interlocal Agreement between two political subdivisions within the State of Texas, authorized in Chapter 791 of the Texas Government Code, and concerning an item of mutual interest and importance. This Interlocal Agreement for the joint submission of a Storm Water Management Program to satisfy the requirements of the permit application to the Texas Commission on Environmental Quality (TCEQ) for compliance with Texas Pollutant Discharge Elimination System (TPDES) General Permit No. TXR040000 relating to storm water discharges associated with small municipal separate storm sewer systems is made and entered into by and between the City of Grand Prairie, Texas (hereafter referred to as the "**CITY**"), and the Dallas County Flood Control District #1 (hereafter referred to as the "**DISTRICT**").

WHEREAS, the **CITY** and the **DISTRICT** mutually desire to enter into an **AGREEMENT** to partner with each other in the joint submission of a Storm Water Management Program to the TCEQ for compliance with Phase II requirements; and

WHEREAS, the parties recognize the joint benefits in the joint submission of a Storm Water Management Program; and

NOW, THEREFORE, FOR AND IN CONSIDERATION OF THE MUTUAL COVENANTS SET OUT HEREIN, the City of Grand Prairie and the Dallas County Flood Control District #1 agree as follows:

1. The **CITY** and the **DISTRICT** agree to a joint submission of a Storm Water Management Program to the TCEQ in compliance with Phase II requirements.
2. The **CITY** and the **DISTRICT** agree that services related to the inspection and maintenance of **DISTRICT** owned storm water systems within the **DISTRICT** boundaries, as noted in Attachment 1, will continue to be the financial responsibility of the **DISTRICT**.
3. The **CITY** and the **DISTRICT** agree that the **CITY** will perform all of the required portions of the Storm Water Management Program in regards to: the minimum control measures within the City of Grand Prairie including within the limits of the **DISTRICT**, with the exception of MCM 6.3 and MCM 6.4, as denoted in the Storm Water

Management Program. The **DISTRICT**'s specific responsibilities are defined in MCM 6.10 and MCM 6.11, as shown in Attachment 2, relating to the maintenance of drainage components and disposal of waste removed from the MS4, as denoted in the Storm Water Management Program.

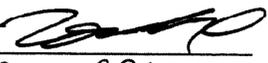
4. The **CITY** and the **DISTRICT** agree that the **DISTRICT** will provide detailed information on **DISTRICT** activities within the **DISTRICT** boundaries in the City of Grand Prairie to the **CITY** by October 1 of each year for the next five (5) years, in an electronic format so that the **CITY** may complete its annual report to the TCEQ.

5. The parties represent by the execution of this document that they have authority to act, and that the appropriate body has taken action to approve this contract.

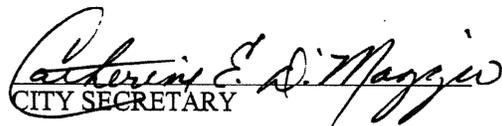
6. Neither party intends by entry into this agreement to waive any immunity that it might have in the performance of its governmental duties.

Executed on this 5th day of February, 2008.

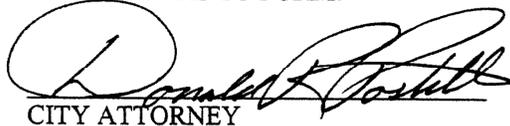
CITY OF GRAND PRAIRIE

by: 
Printed Name: TOM COX
Title: Deputy City Manager

ATTEST:


CITY SECRETARY

APPROVED AS TO FORM:


CITY ATTORNEY

DALLAS COUNTY FLOOD CONTROL DISTRICT #1

by: 
Printed Name: ROBERT M. NELSON
Title: PRESIDENT

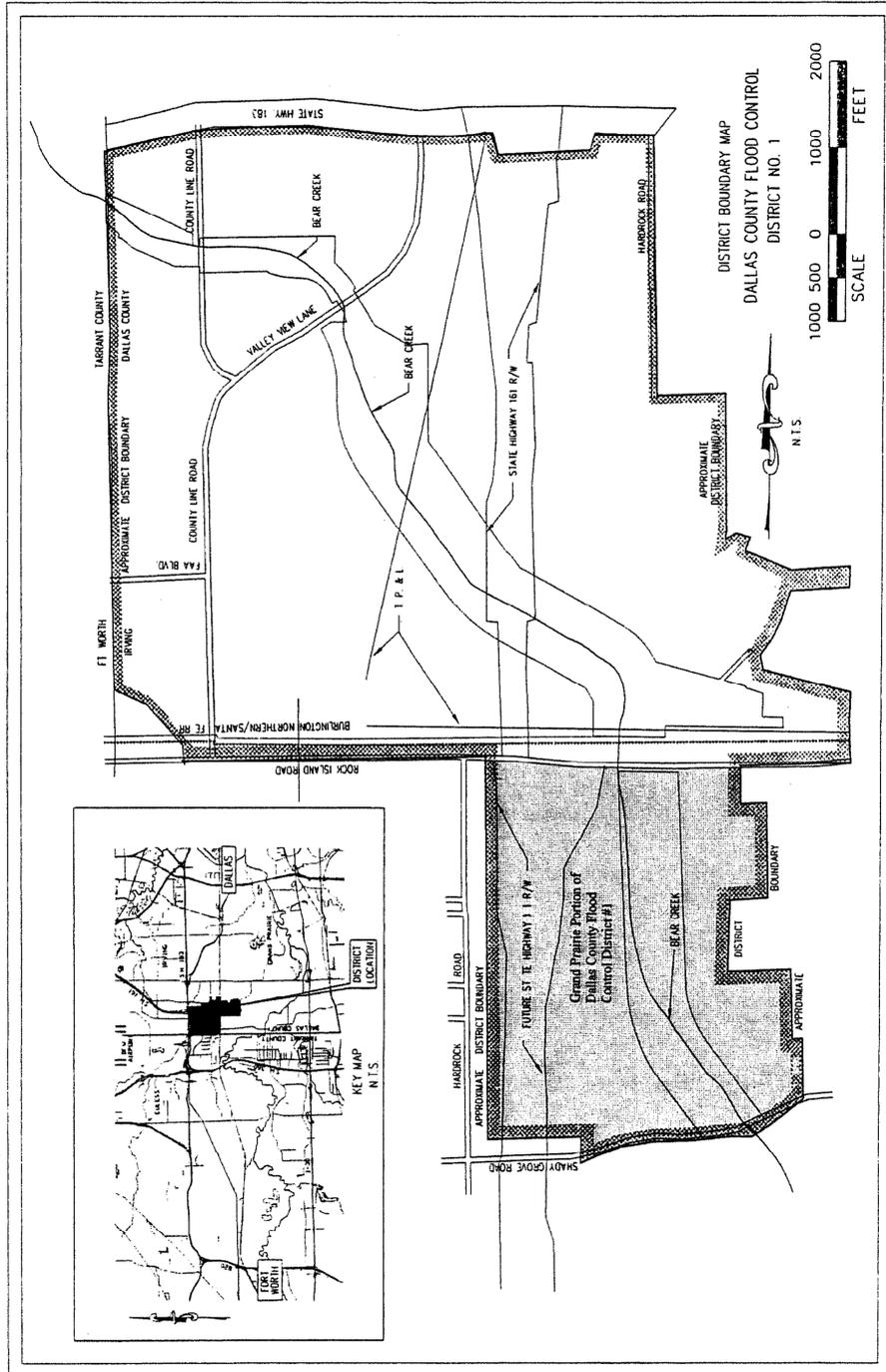
ATTEST:

by: Cassie Huchinson

APPROVED AS TO FORM:

Joe Petran
ATTORNEY FOR THE DALLAS COUNTY FLOOD CONTROL DISTRICT #1

ATTACHMENT 1



ATTACHMENT 2

MCM 6. Pollution Prevention/Good Housekeeping for Municipal Operations

40 CFR 122.34 (b) (6) –Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

Selected BMPs for Pollution Prevention/Good Housekeeping for Municipal Operations

BMP	BMP Description	Measurable Goals	Responsibility	Target Date
6.1 Storm Water Management Program Data Tracking	Track all city activities related to the Storm Water Management Program through a data tracking program. Software will be utilized to assist with the tracking.	1. Purchase and utilize software	Environmental Services Department, Environmental Quality Division	Year 1
		2. Create annual report		Year 2
6.2 Existing SWP3s	Three existing SWP3s are maintained for the Airport, the Landfill, and the Service Center, as required by the general permit TXR05000.	1. Maintain and update SWP3s for the permits at the three existing regulated facilities	Environmental Services Department, Environmental Quality Division	Years 1 – 5
		2. Review the SWP3s annually for any changes required		Years 1 – 5
		3. Inspect all three sites annually		Years 1 – 5
		4. Ensure that required annual SWP3 training is conducted		Years 2 – 5

6.3 Storm Sewer and Drainage Maintenance Program	Conduct maintenance along the inlets, ditches, pipes, and channels for structural improvements when noted through citizen complaints and through field observations. Use permanent vegetation to stabilize disturbed soil.	1. Hire a crew of 3 to maintain storm sewer and drainage 2. Respond to 100% of citizen complaints 3. Track storm sewer and drainage maintenance	Public Works Department, Streets Division	Years 1 – 5
				Years 1 – 5
6.4 Disposal of Waste Removed from the MS4	Develop a standard operating procedure for the disposal of waste removed from the MS4, including any dredged soil, accumulated sediments, and floatables.	1. Develop an SOP for waste disposal	Environmental Services, Environmental Quality Division	Year 2
6.5 Storm Water Pollution Prevention Guidelines for all City Activities	Develop pollution prevention guidelines for selected city activities not covered by a specific TPDES permit. Training materials will be developed from NCTCOG Storm Water training materials, as indicated by BMP 3.8.	1. Identify target audience and activities for the pollution prevention plan	Environmental Services Department, Environmental Quality Division	Year 2
		2. Review Phase 1 city SWP3s as well as suggested EPA and TCEQ BMPs		Year 2
		3. Design the SWPP materials for selected city employees		Years 3 – 4
		4. Begin developing, purchasing and disseminating SWPP materials to selected city employees annually		Years 5
6.6 Promotion of Native or Adaptive Vegetation Along Floodplain Easements	Promote good storm water filtration and natural uptake of possible nutrient pollutants by native and/or adaptive vegetation.	1. Identify at least 2 areas to promote native vegetation	Environmental Services Department, Environmental Quality Division and Public Works Department, Streets Division	Year 2
		2. Choose location and design for signage and formalize sign budget		Year 3

			3. Install at least 1 sign for each area and define management area		Year 4 – 5
			4. Identify future areas suitable for promotion of vegetation as the city continues to develop		Year 5
6.7 Mosquito Management Program	Maintain mosquito management methods that will not result in illicit discharges to the MS4.		1. Maintain integrated mosquito management methods when handling and applying pesticides 2. Use low toxicity bio-controls for larvae control	Environmental Services Department, Environmental Quality Division	Years 1 – 5
6.8 Street Sweeping	Remove solid pollutants from the streets to avoid contamination of the storm sewer system.		1. Sweep major thorough fares on an annual basis and more often on high traffic roads	Environmental Services Department, Solid Waste Division	Years 1 – 5
6.9 Inspect City Facilities	Inspect city facilities for Best Management Practices.		1. Inspect 25% of city facilities annually	Environmental Services Department, Environmental Quality Division	Years 2 – 5
6.10 Storm Sewer and Drainage Maintenance Program for the Dallas County Flood Control District #1 (excluding the City of Grand Prairie – see MCM 6.3)	Conduct maintenance and improvements for the drainage components owned by the Dallas County Flood Control District #1 when noted through written complaints and through field observations.		1. Respond to written complaints within the District 2. Perform annual maintenance reviews and prepare report 3. Make necessary repairs to District facilities	Dallas County Flood Control District #1	Years 1 – 5
6.11 Disposal of Waste Removed from the MS4 for the Dallas County Flood Control District #1 (excluding the City of Grand Prairie – see MCM 6.4)	Develop a standard operating procedure for the disposal of waste removed from the Dallas County Flood Control District #1's storm water system.		1. Develop a SOP for waste disposal	Dallas County Flood Control District #1	Years 1 – 5
					Year 2

APPENDIX B: TCEQ Correspondence

Addendum sent to the TCEQ via e-mail on August, 13, 2008



Addendum

August 13, 2008

This addendum modifies and supplements the City of Grand Prairie's Storm Water Management Program developed in response to the TPDES Phase II MS4 General Permit (TXR040000).

- BMP 1.1, Environmental Education Specialist

Current: Years 2-5, Employ an Environmental Education Specialist who will actively seek to broaden educational opportunities within the school district and the city. Conduct 2 storm water outreach activities annually.

Revision: Remove entire BMP

Justification: BMP is not a required element for the SWMP. With current economic conditions, it is unlikely the City will be able to fill this position within the next few years.

- BMP 1.11, Funding for Elementary School Curriculum on Storm Water Quality

Current: Purchase Major Rivers© or similar curriculum for additional fifth grade Grand Prairie ISD classrooms

Revision: Purchase Major Rivers© or similar curriculum **as needed** for additional fifth grade Grand Prairie ISD classrooms

Justification: Adel Quintana, the Science Program Coordinator for Grand Prairie Independent School District, informed the City that GPISD did not need additional copies of Major Rivers this year. By adding "as needed" to the measurable goal, the City will not be required to purchase additional curriculum unnecessarily.

- BMP 2.1, Public Notice in Development of SWMP

Current: 1) Participate in a 15 minute Grand Prairie cable show that highlights the SWMP and invites the public to make comments and 2) Provide a copy of the document for comment to at least one of the environmental compliance workshops

Revision: Remove these two measurable goals from this BMP. This will leave the following goals: 1) Continue to make the document available for comments on the city website and at the Environmental Services Department office and 2) Make presentations to applicable city council committees

Justification: While we may have accomplished these goals, we have no supporting documentation.

- BMP 2.2, Texas Watch Volunteer Stream Monitoring Program

Current: **Years 1-5**, Hold at least 1 Texas Watch training session for volunteers or corporations annually

Revision: **Years 2-5**, Hold at least 1 **Texas Stream Team** training session for volunteers or corporations annually

Justification: Under the assumption we can use previous years' accomplishments, we have technically accomplished this goal for Year 1. In addition, two City employees were trained in Year 1 and are set to train students at Reagan Middle School in August or September of 2008. However, unforeseen circumstances (i.e. transfer of responsibility to new employee, training of new employee, availability of volunteers during school months, etc.) hindered expected training events.

Texas Watch is now called Texas Stream Team.

- BMP 2.3, Master Composter Program

Current: 1) **Years 1-5**, Conduct 2 Master Composter classes per year and 2) Years 1-5, Distribute yard care educational materials to at least 20 Master Composter participants annually

Revision: 1) **Year 1**, Conduct 2 Master Composter classes per year and 2) Years 1-5, Distribute yard care educational materials to at least 20 Master Composter participants annually

Justification: The City of Grand Prairie has hosted a Master Composter class annually for over 10 years and has trained approximately 700 people during that time. Recent trends have demonstrated less interest in this class, and as a result, it has become increasingly difficult to find individuals willing to participate. Due to the lack of interest, the Solid Waste Division has determined that hosting two classes per year is not financially realistic.

- BMP 2.4, Storm Drain Markers

Current: Years 2-5: Purchase and have installed through volunteer help **200** of the city's unmarked storm drain curb inlets annually

Revision: Years 2-5: Purchase and have installed through volunteer help **100** of the city's unmarked storm drain curb inlets annually

Justification: This Years 2-5 activity may prove to be more difficult than originally thought. While we provided 310 markers for placement, only 71 markers were actually placed this year. The reason for this was said to be the great number of extracurricular activities the volunteers were participating in this year. 100 markers may be a more reasonable goal. If the goal of 100 is not met, remaining markers may be placed by City personnel.

- BMP 4.2, Inspect Erosion Control Measures

Current: **Years 1-2**, Continue to inspect general erosion control measures during baseline or annual inspections

Revision: **Years 2-3**, Continue to inspect general erosion control measures during baseline or annual inspections

Justification: The Planning and Development Department includes the City's Engineering Division and Building

Inspections Division. While both of these Divisions have continued to inspect general erosion control measures during baseline or annual inspections, only the Building Inspections Division has a current method of documenting this activity through a computer system that they use for their Building Inspections work. The Engineering Division has been working with the City's Information Technology staff to develop a computer database specific to taking care of engineering needs and to document BMP activities. This database is in the final stages of modifications and will be implemented for reporting and providing documentation by the end of Year 2.

E-mail sent to TCEQ on August 13, 2008 with above addendum attached

From: Echo Rexroad
Sent: Wednesday, August 13, 2008 3:26 PM
To: 'SWGPA@tceq.state.tx.us'
Cc: Echo Rexroad
Subject: City of Grand Prairie SWMP Addendum

Attachments: SWMPAddendum.doc

To Whom It May Concern:

Please find the attached addendum to the City of Grand Prairie's Storm Water Management Program.

If possible, please send a response to this email confirming receipt of this addendum.

Best regards,

Echo Rexroad
Senior Environmental Specialist
City of Grand Prairie
972.237.8082

E-mail from TCEQ confirming receipt of August 13, 2008 Addendum

From: Kim Wilson [KWILSON@tceq.state.tx.us]
Sent: Thursday, August 14, 2008 10:00 AM
To: Echo Rexroad
Subject: Re: City of Grand Prairie SWMP Addendum
Mr. Rexroad-

I am the reviewer assigned to Grand Prairie and am in receipt of this addendum.

>>> "Echo Rexroad" <erexroad@GPTX.org> 8/13/2008 3:25 PM >>>
To Whom It May Concern:

Please find the attached addendum to the City of Grand Prairie's Storm Water Management Program.

If possible, please send a response to this email confirming receipt of this addendum.

Best regards,

Echo Rexroad
Senior Environmental Specialist
City of Grand Prairie
972.237.8082

E-mail from Gordon Cooper, with the TCEQ, requesting revisions to MCM 4 and 5

From: Gordon Cooper [mailto:GCooper@tceq.state.tx.us]
Sent: Monday, September 08, 2008 9:38 AM
To: Cindy Mendez
Subject: MS4 SWMP Review for the City of Grand Prairie

Ms. Mendez,

My name is Gordon Cooper and I am the permit writer who is reviewing the SWMP for the City of Grand Priarie MS4 permit application.

Upon reviewing the SWMP I have found that there is some additional information that will be required to complete this review process.

MCM 4 –

Required Elements and/or BMPs:

- Please provide additional information of how the program that will be developed to comply with the required elements for this MCM (4) will address storm water runoff from construction activities of one acre and greater including activities at sites that are part of a larger common plan of development.

MCM 5 –

Required Elements and/or BMPs:

- Please provide additional information how the program will address storm water runoff from new development / redevelopment activities of one acre and greater including the larger common plan of development.

Please update your SWMP with this information and send a response to this information request back to me via e-mail within 2 weeks of the date of this e-mail. If there is a specific reason why this information is not needed and not included in the SWMP, please indicate why for each MCM addressed by this request in an e-mail response.

If you need any additional information please feel free to contact me at: Gordon Cooper, TCEQ Water Quality Division, 512-239-1963.

Thank you very much,

Gordon Cooper
Environmental Permit Specialist I
TCEQ Water Quality Division
Storm Water &
Pretreatment Team (MC 148)
P.O Box 13087
Austin, TX 78711-3087
Phone: 512-239-4671
Fax: 512-239-4430

Email sent to Gordon Cooper, with the TCEQ, with revisions to MCM 4 and 5

From: Echo Rexroad
Sent: Tuesday, September 16, 2008 5:09 PM
To: 'Gordon Cooper'
Cc: Cindy Mendez
Subject: RE: MCM 4 and 5 and Fact Sheet

Attachments: SWMP to TCEQ Final.pdf; SWMPAddendum.doc; Re City of Grand Prairie SWMP Addendum.htm

Hello Mr. Cooper,

Please find the attached revised City of Grand Prairie SWMP, addendum, and email from Kim Wilson stating she is in receipt of the addendum.

In addition to the changes described in the attached addendum, we have also revised the SWMP to include the following statements for MCM 4 (page 25) and MCM 5 (page 29):

MCM 4:

The following selected BMPs for Construction Site Storm Water Runoff Control apply to 1) construction activities of one acre and greater and 2) construction activities at sites that are part of a larger common plan of development (where the total disturbed area is equal to one acre or greater).

MCM 5:

The following selected BMPs for Post-Construction Management in New Development and Redevelopment apply to 1) new development / redevelopment activities of one acre and greater and 2) new development / redevelopment activities at sites that are part of a larger common plan of development (where the total disturbed area is equal to one acre or greater).

We have also reviewed the Notice of Application you provided. In the first sentence, where the application states “City of Grand Prairie, 201 **North West** 2nd Street...”, it should say “City of Grand Prairie, 201 **Northwest** 2nd Street...” Other than that one minor change, no other revisions are needed.

Thank you for your time. We look forward to hearing from you again.

Sincerely,

Echo Rexroad
Senior Environmental Specialist
City of Grand Prairie
972.237.8082

APPENDIX C: Monthly Stream Summary

Site Number	Date	Air Temperature	Water Temperature	pH	Turbidity	Dissolved Oxygen	Ammonia	E coli
8	07/26/2012	29	28	7.2	3.78	5.32	0.22	77
27	08/28/2012	27	25.5	7.59	2.7	6	0.07	115
22	08/28/2012	33	27.3	7.99	6.2	7.22	0.17	1454
20	08/28/2012	28	27.5	7.31	5	2.8	0.26	6
25	08/28/2012	26	26.1	7.45	6.7	5.18	0.16	387
26	08/28/2012	27	25.4	7.9	2.6	7.54		237
17	08/28/2012	32	27.2	7.57	14	6.33	0.1	90
15	08/28/2012	32	27.8	7.53	18	5.35	0.12	821
12	08/28/2012	32	28.6	7.51	4.5	5.77	0.11	134
9	08/28/2012	26	25.9	7.57	7.4	5.87	0.21	1454
29	08/28/2012	29	28.1	7.51	12	7.32	0.06	67
28	08/28/2012	28	26.4	7.62	6.6	6.73	0.1	238
11	08/28/2012	33	27.9	7.74	7.3	5.38	0.14	216
3	08/29/2012	29	26.1	7.39	11.4	6.79	0.05	143
24	08/29/2012	26	25.3	7.12	5.35	4.53	0.09	472
19	08/29/2012	32	27.7	7.42	36.1	6.26	1.89	1034
18	08/29/2012	31	27.9	7.6	129	6.1	0.09	15
8	08/29/2012	31	26.6	7.01	4.44	5.53	0.07	99
5	08/29/2012	26	25.7	7.66	9.55	5.83	0.11	68
6	08/29/2012	27	26.8	7.53	25.6	7	0.26	78
23	08/29/2012	29	27.3	7.42	14.6	6.37	0.06	288
18	09/25/2012	33	27.5	7.9	124	6.51	0.05	29
29	09/25/2012	27	26.2	7.53	6	4.2	0.02	40
28	09/25/2012	24	23.8	7.67	7.37	5.14	0.06	267

Site Number	Date	Air Temperature	Water Temperature	pH	Turbidity	Dissolved Oxygen	Ammonia	E coli
25	09/25/2012	23	24.1	7.32	5.57	4.29	0.14	24
22	09/25/2012	33	25.6	7.52	6.62	4.23	0.03	321
19	09/25/2012	34	27.2	7.73	45.1	5.54	1.69	271
17	09/25/2012	28	24.5	7.36	5.83	4.18	0.03	35
12	09/25/2012	29	26.6	7.07	13	3.15	0.26	523
11	09/25/2012	33	25.6	7.27	7.34	6.26	0.21	34
9	09/25/2012	29	26.1	7.5	8.27	5.57	0.05	69
8	09/25/2012	33	26.6	7	7.1	3.87	0.07	24
15	09/25/2012	29	26.6	7.23	22.4	3.93	0.2	60
20	09/25/2012	27	24.7	7.19	4.65	3.01	0.08	8
3	09/26/2012	26	26.8	7.7	41.5	5.15	0	29
6	09/26/2012	25	25.3	7.28	27.1	5.78	0.12	56
23	09/26/2012	27	24.2	7.36	12.5	4.18	0	13
24	09/26/2012	25	23.2	7.18	3.66	6.49	0.08	54
5	09/26/2012	25	23.2	7.55	16.5	5.65	0.06	60
19	10/23/2012	29	24.3	7.42	32	3.44	1.63	3106
20	10/23/2012	24	20.8	7.55	3.6	4.75	0.13	17
17	10/23/2012	26	21.4	7.69	16	4.4	0.13	109
25	10/23/2012	22	21.2	7.46	3	4.05	0.06	236
29	10/23/2012	23	21.9	7.72	3.4	4.3	0.04	154
26	10/23/2012	23	20.4	7.66	4	4.15	0.06	52
27	10/23/2012	23	21.1	7.47	4.2	3.59	0.11	104
22	10/23/2012	28	23.8	7.4	8.8	5.73	0.03	571
28	10/23/2012	23	21.3	7.6	3.4	3.78	0.07	215

Site Number	Date	Air Temperature	Water Temperature	pH	Turbidity	Dissolved Oxygen	Ammonia	E coli
15	10/23/2012	27	22.1	7.3	15	3.93	0.11	221
12	10/23/2012	28	23.1	7.19	3.6	4.96	0.06	288
11	10/23/2012	29	24.2	7.33	3.3	4.48	0.2	120
9	10/23/2012	22	20.3	7.4	4.6	3.26	0.05	76
3	10/24/2012	23	21.3	7.7	15	7.17	0.21	87
5	10/24/2012	22	21.4	7.79	6.7	5.62	0.02	90
6	10/24/2012	22	23.2	7.58	18	6.31	0.09	150
7	10/24/2012	22	20.8	7.58	15	6.76	0.02	731
8	10/24/2012	23	21.9	7.52	23	6.11	0.25	13
18	10/24/2012	23	21.5	7.96	100	5.99	0.04	35
24	10/24/2012	22	20.8	7.42	4.2	6.26	0.12	58
23	10/24/2012	23	21.2	7.84	16	6.69	0.01	334
26	11/13/2012	11	11.9	7.67	2.4	8.55	0.03	13
17	11/13/2012	16.2	16.2	7.99	29	7.21	0.03	13
19	11/13/2012	16	16.2	7.43	25	3.85	2.33	977
20	11/13/2012	12	13.8	7.65	5.6	6.77	0.06	8
20	11/13/2012	12	13.8	7.65	5.6	6.77	0.06	0
29	11/13/2012	13	12.1	7.91	13	8.87	0.05	51
27	11/13/2012	11	10.5	7.81	4	8.02	0.06	79
25	11/13/2012	8	13.6	7.57	4.9	5.38	0.02	32
15	11/13/2012	14	16.1	7.6	18	4.94	0.25	49
9	11/13/2012	7	15.1	7.33	6.9	4.08	0.05	8
28	11/13/2012	12	12	7.77	3.3	7.49	0.09	93
22	11/13/2012	7	14.1	7.26	14	5.12	0.35	17

Site Number	Date	Air Temperature	Water Temperature	pH	Turbidity	Dissolved Oxygen	Ammonia	E coli
11	11/13/2012	15	15	7.56	40	3.33	0.21	22
12	11/13/2012	14.9	14.9	7.34	6.9	4.63	0.15	55
8	11/14/2012	13	18	7.5	10.75	4.96	0.13	26
18	11/14/2012	14	15.2	8.11	48	5.75	0.08	13
23	11/14/2012	13	13.7	7.88	8.16	6.48	0.1	125
8	11/14/2012	13	18	7.5	10.75	4.96	0.13	13
24	11/14/2012	9	14.5	7.49	2.25	8.35	0.08	27
3	11/14/2012	12	16.2	7.76	6.86	5.43	0.12	2
5	11/14/2012	8	13.9	8.01	2.87	6.28	0.05	22
7	11/14/2012	8	11.8	7.42	14	7.2	0.02	1373
6	11/14/2012	12	17.6	7.55	17.3	5.35	0.11	40
28	12/11/2012	3	7.6	7.85	4.12	10.23	0.12	821
25	12/11/2012	2	11.4	7.49	5.11	6.69	0.21	2
26	12/11/2012	2	8.2	7.61	0.89	9.81	0.06	51
27	12/11/2012	3	8.3	7.71	10.6	10.49	0.04	255
22	12/11/2012	-1	10.8	7.18	7.4	5.21	0.85	6
19	12/11/2012	10	13.3	7.51	25.4	6.46	2.7	4839
18	12/11/2012	9	12.3	8.26	30.9	9.87	0.04	2
17	12/11/2012	6	12.6	7.9	19.5	8.2	0.12	24
15	12/11/2012	7	13.7	7.68	20.8	6.68	0.08	32
12	12/11/2012	7	10	7.51	4.72	7.79	0.13	1540
11	12/11/2012	8	13.4	7.8	3.37	8.23	0.43	20
9	12/11/2012	1	12.7	7.51	7.82	5.44	0.17	22
8	12/11/2012	8	15.4	7.78	7.31	8.99	0.3	17

Site Number	Date	Air Temperature	Water Temperature	pH	Turbidity	Dissolved Oxygen	Ammonia	E coli
20	12/11/2012	5	10.1	7.81	2.66	7.91	0.13	24
29	12/11/2012	5	15.5	7.86	7.74	9.52	0.28	56
6	12/12/2012	3	0.45	7.43	13.7	8.98	0.45	42
3	12/12/2012	4	10.2	7.67	5.9	10.31	0.13	2
5	12/12/2012	-2	8.1	7.85	1.33	11.74	0.05	22
24	12/12/2012	1	9	7.48	2.05	11.01	0.25	68
23	12/12/2012	7	8.9	7.8	8.13	11.31	0.15	84
18	01/22/2013	17	13.8	8.4	22.3	13.47	0.02	8
27	01/22/2013	7	7.6	7.73	2.12	11.43	0.07	126
28	01/22/2013	8	8.8	7.82	2.22	11.18	0.03	143
26	01/22/2013	6	8.7	7.72	4.67	11.69		1540
25	01/22/2013	6	9.8	7.96	4.21	9.62	0.1	31
22	01/22/2013	16	13.2	7.7	10.53	10.07	0.04	242
20	01/22/2013	8	10.2	8.07	16.4	10.23	0.02	4
19	01/22/2013	17	15.9	7.46	35.8	6.94	1.65	4839
30	01/22/2013	9	8.7	7.99	14	11.94	0.09	56
15	01/22/2013	14	11.7	7.54	19.1	8.18	0.11	44
12	01/22/2013	14	12.1	7.39	3.61	9.06	0.22	39
11	01/22/2013	16	13.1	7.8	3.36	9.8	0.2	13
9	01/22/2013	6	9.6	7.62	4.63	10.22	0.07	234
17	01/22/2013	17	13.8	8.4	22.3	13.47	0.02	49
29	01/22/2013	12	12.4	7.99	6.59	10.71	0.15	2
8	01/22/2013	17	15.7	7.87	0.94	10.14	0.36	2
5	01/23/2013	12	11.4	8	3.03	9.94	0.06	6

Site Number	Date	Air Temperature	Water Temperature	pH	Turbidity	Dissolved Oxygen	Ammonia	E coli
3	01/23/2013	14	11.4	7.67	9.87	9.56	0.24	2
6	01/23/2013	12	10.2	7.63	2.94	10.06	0.05	29
24	01/23/2013	12	11.5	7.52	5.83	9.15	0.29	472
23	01/23/2013	14	12.9	7.81	8.47	9.81	0.25	17
20	02/19/2013	12	14.7	7.83	10.87	9.52	0.09	8
20	02/19/2013	12	14.7	7.83	10.87	9.52	0.09	6
29	02/19/2013	12	15.7	7.95	2.14	11.23	0.14	8
28	02/19/2013	11	12.8	7.89	2.7	10.74	0.06	252
27	02/19/2013	8	10.2	7.9	5.32	11.06	0.05	65
26	02/19/2013	8	11.5	7.66	4.16	11.28	0.04	73
22	02/19/2013	16	16.6	7.65	5.47	11.27	0.15	615
30	02/19/2013	12	12.3	7.83	0.12	9.73	0.12	8
17	02/19/2013	14	16.5	8.07	36.6	9.45	0.02	15
15	02/19/2013	16	17.6	7.38	68.7	6.15	0.09	240
12	02/19/2013	15	16.1	7.58	4.69	9.21	0.16	106
11	02/19/2013	16	15.1	7.66	18.2	9.19	0.18	104
9	02/19/2013	7	11	7.75	4.59	10.04	0.03	476
8	02/19/2013	16	17.9	8.01	0.9	9.42	0.25	2
25	02/19/2013	8	12	7.67	5.67	9.8	0.06	143
18	02/19/2013	17	16.2	8.54	26.8	11.61	0.09	29
6	02/20/2013	7	17.6	7.42	23.4	8.58	0.2	523
23	02/20/2013	7	13.8	7.65	25.5	9.48	0.1	83
24	02/20/2013	7	14.1	7.35	31.8	9.21	0.22	1373
24	02/20/2013	7	14.1	7.35	31.8	9.21	0.22	2240

Site Number	Date	Air Temperature	Water Temperature	pH	Turbidity	Dissolved Oxygen	Ammonia	E coli
7	02/20/2013	8	11.8	7.55	43	9.76	0.49	4839
5	02/20/2013	8	12.4	7.47	6.26	8.97	0.23	977
3	02/20/2013	7	14.3	7.67	32.4	8.98	0.04	93
19	02/20/2013	8	14.7	7.42	30	7.72	0.5	4839
28	03/19/2013	11	14.1	7.46	9.59	9.03	0.2	4839
19	03/19/2013	18	19.6	7.31	33.9	5.6	1.7	4839
27	03/19/2013	12	13.1	7.4	2.6	8.68	0.02	34
26	03/19/2013	12	14	7.61	1.17	10.01	0.08	35
25	03/19/2013	11	16.3	7.44	3.89	10.79	0.1	10
22	03/19/2013	18	18.1	7.53	3.19	11.53	0.05	17
29	03/19/2013	13	14.7	7.68	3.82	9.96	0.13	27
20	03/19/2013	13	16	7.49	24.2	6.52	0.12	226
17	03/19/2013	13	17.9	8	22.1	8.85	0.1	79
15	03/19/2013	16	18.1	7.42	31.1	6.08	0.1	131
12	03/19/2013	16	16.8	7.29	3.4	7.54	0.1	197
11	03/19/2013	18	18.1	7.64	6.65	8.92	0.14	109
9	03/19/2013	16	18.1	7.77	13.3	8.84	0.02	271
8	03/19/2013	18	19.1	7.46	10.15	4.89	0.21	4839
20	03/19/2013	13	16	7.49	24.2	6.52	0.12	216
18	03/19/2013	19	19.2	8.03	82.2	8.77	0.1	182
6	03/20/2013	12	16.6	7.44	23.1	8.17	0.18	84
24	03/20/2013	11	15	7.33	4.38	9.75	0.22	34
24	03/20/2013	11	15	7.33	4.38	9.75	0.22	40
7	03/20/2013	9	12.8	7.33	3.51	8.98	0.24	1298

Site Number	Date	Air Temperature	Water Temperature	pH	Turbidity	Dissolved Oxygen	Ammonia	E coli
5	03/20/2013	11	15.2	7.82	3.96	9.4	0.11	90
3	03/20/2013	12	15	7.73	27.9	8.93	0.22	64
23	03/20/2013	13	16.4	7.84	6.03	8.98	0.1	26
9	04/23/2013	18	18.7	7.89	2.71	8.73	0.1	37
22	04/23/2013	18	18.5	7.74	3.97	6.56	0.13	496
31	04/23/2013	12	17.8	8.05	13.5	8.61	0.03	297
30	04/23/2013	13	17.5	7.75	18	8.33	0.05	82
29	04/23/2013	12	17.5	7.94	6.67	8.78	0.25	91
28	04/23/2013	18	17.9	7.74	2.7	7.98	0.04	149
27	04/23/2013	19	18.5	7.78	1.32	8.57	0.05	113
26	04/23/2013	18	18.6	7.96	4.8	9.18	0.07	60
25	04/23/2013	18	18.6	7.82	5.34	8.6	0.1	45
25	04/23/2013	18	18.6	7.82	5.34	8.6	0.1	56
20	04/23/2013	12	19	7.8	15.5	7.45	0.21	13
19	04/23/2013	9	17.2	7.61	19.6	6.08	1.09	2240
18	04/23/2013	9	18.2	8.34	23.2	9.5	0.09	24
17	04/23/2013	11	18	8.18	24.2	8.55	0.02	59
15	04/23/2013	11	17.4	7.48	37.2	5.43	0.36	372
11	04/23/2013	10	17.3	7.61	8.47	7.09	0.22	113
8	04/23/2013	9	16.2	8.61	7.4	8.38	0.02	456
12	04/23/2013	10	16.3	7.53	3.76	6.56	0.24	151
23	04/24/2013	8	12.9	7.95	6.23	10.09	0.02	95
5	04/24/2013	6	11.2	7.89	4.33	8.45	0.05	775
24	04/24/2013	6	13.1	7.25	5.05	7.25	0.16	313

Site Number	Date	Air Temperature	Water Temperature	pH	Turbidity	Dissolved Oxygen	Ammonia	E coli
24	04/24/2013	6	13.1	7.47	5.05	7.25	0.16	283
6	04/24/2013	7	15.9	7.72	16.1	8.43	0.12	99
3	04/24/2013	7	12.1	7.89	12.3	10.07	0.06	107
7	04/24/2013	6	10.4	7.86	10.77	10.91	0.22	2827
20	05/22/2013	21	23.6	7.68	12.7	4.55	0.14	4
9	05/22/2013	18	20.3	8.03	86.4	8.07	0.08	4839
11	05/22/2013	28	24.7	7.88	34.6	7.53	0.2	3106
28	05/22/2013	19	21.4	7.61	23.6	7.5	0.31	3973
29	05/22/2013	22	22.8	7.93	5.27	8.72	0.13	50
30	05/22/2013	21	21.5	7.75	71.5	7.32	0.12	4839
27	05/22/2013	19	20.7	7.69	7.97	7.18	0.19	4839
9	05/22/2013	18	20.3	8.03	86.4	8.07	0.08	4839
25	05/22/2013	17	20.3	7.55	33.1	5.88	0.33	4839
12	05/22/2013	27	23.9	7.46	10.22	6.55	0.27	4839
19	05/22/2013	29	26.4	7.73	53	6.61	0.33	4839
19	05/22/2013							0
17	05/22/2013	23	26.2	8.26	34.5	7.9	0.05	20
15	05/22/2013	26	24.2	7.56	85.3	4.86	0.06	4839
26	05/22/2013	19	19.7	7.25	37.2	7.81	0.18	4839
18	05/23/2013							0
3	05/23/2013	26	23.8	7.58	15	7.64	0.2	240
5	05/23/2013	26	23.9	7.47	5.7	5.44	0.22	731
6	05/23/2013	26	24.2	7.46	20.9	6.99	0.46	345
7	05/23/2013	25	23.2	7.66	20.2	7.43	0.08	3973

Site Number	Date	Air Temperature	Water Temperature	pH	Turbidity	Dissolved Oxygen	Ammonia	E coli
8	05/23/2013	28	25.1	7.48	9.57	7.43	0.13	242
3	05/23/2013	26	23.8	7.58	15	7.64	0.2	240
24	05/23/2013	26	23.4	7.14	3.8	5.56	0.27	381
18	05/23/2013	28	25.2	7.8	19.1	7.98	0.07	32
22	05/23/2013	24	22.6	7.19	7.7	6.18	0.1	1373
23	05/23/2013	27	23.6	7.54	18.8	7.3	0.23	472
8	05/23/2013	28	25.1	7.48	9.57	7.43	0.13	157
12	06/12/2013	34	30.2	7.58	4.39	6.33	0.24	163
17	06/12/2013	33	32.2	8.04	20.1	7.33	0.12	17
29	06/12/2013	31	27.5	8.15	3.06	9.15	0.16	6
28	06/12/2013	28	27.6	7.73	4.56	7.31	0.1	198
27	06/12/2013	27	26.4	7.78	3.66	7.12	0.25	95
9	06/12/2013	27	26.5	7.71	8.25	6.37	0.22	293
25	06/12/2013	27	28.3	7.72	5.13	5.28	0.09	168
20	06/12/2013	31	30.9	7.73	10.69	3.71	0.19	10
15	06/12/2013	33	33	7.73	24.8	5.37	0.26	403
9	06/12/2013	27	26.5	7.71	8.25	6.37	0.22	271
24	06/13/2013	30	27.5	7.6	4.3	4.66	0.48	129
5	06/13/2013	31	28.1	8.3	7.2	5.01	0.59	210
6	06/13/2013	32	28.6	7.9	26.3	7.83	0.26	115
7	06/13/2013	29	26	7.71	2.36	6.44	0.31	247
3	06/13/2013	33	28	7.97	16.5	7.51	0.31	187
26	06/13/2013	27	23.7	8.12	2.04	7.75	0.11	152
23	06/13/2013	30	29	8.03	16.1	7.17	0.2	214

Site Number	Date	Air Temperature	Water Temperature	pH	Turbidity	Dissolved Oxygen	Ammonia	E coli
22	06/13/2013	28	24.4	7.83	5.81	5.74	0.24	582
19	06/13/2013	34	31.7	7.82	20.2	6.51	0.84	870
18	06/13/2013	34	30.7	8.09	26.7	7.39	0.12	19
11	06/13/2013	28	26.4	7.7	5.14	4.78	0.39	775
3	06/13/2013	33	28	7.97	0.31	7.51	0.31	215
8	06/13/2013	33	30.6	7.87	7.61	8.67		84
27	07/30/2013	28	26.5	7.53	1.47	5.9	0.35	118
9	07/30/2013	27	26.5	7.67	7.68	5.59	0.45	160
15	07/30/2013	34	30.2	7.56	17	4.78	0.35	275
17	07/30/2013	33	31.2	7.98	4.5	6.92	0.31	4
20	07/30/2013	30	28.5	7.73	6.53	4.75	0.38	2
26	07/30/2013	27	25.9	7.82	1.78	7	0.31	59
28	07/30/2013	28	26.3	8.23	59	7.51	0.33	2092
29	07/30/2013	29	26.6	8.19	41.8	7.78	0.34	114
30	07/30/2013	30	26.3	7.84	17.6	6.7	0.31	51
11	07/30/2013	34	29.3	7.68	7.2	5.63	0.42	138
25	07/30/2013	27	26.5	7.67	7.68	5.59	0.45	70
19	07/31/2013	32	29.3	7.5	25	5.72	1.22	167
3	07/31/2013	28	28.1	7.79	14.8	6.93	0.33	19
6	07/31/2013	28	28.7	7.53	22	6.85	0.4	58
5	07/31/2013	28	27.1	8.34	13.5	6.61	0.28	24
24	07/31/2013	28	27.9	7.44	3.78	5.94	0.36	187
12	07/31/2013	28	27.5	7.3	5.62	4.49	0.43	141
22	07/31/2013	29	26.3	7.52	3.35	4.99	0.32	358

Site Number	Date	Air Temperature	Water Temperature	pH	Turbidity	Dissolved Oxygen	Ammonia	E coli
23	07/31/2013	31	28.5	7.76	8.5	6.91	0.3	99
18	07/31/2013	32	29.4	7.89	41.1	6.63	0.33	2
8	07/31/2013	32	28.3	7.6	4.52	6.55	0.41	420

APPENDIX D: Dry Weather Screening

Years 1-5, IDDE
August 2007 to August 2012

