

Storm Water Management Program Year 6 Annual Report



Submitted To: Texas Commission on Environmental Quality
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And

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Table of Contents

<u>Section</u>	<u>Description</u>	<u>Page</u>
A	Phase II Permit Issuance	1
B	Storm Water Management Program	1
C	Application Approval	2
D	Annual Report Requirements	2
E	Year 6 Implementation of Best Management	2
F	Proposed Changes to the Implementation Schedule	14
G	Certifications	15

Exhibits

Exhibit 1 – BMP - 1.3.1 Municipal Channel Text Based Messages

Exhibit 2 – BMP - 1.3.1 Municipal Channel Flyer

Exhibit 3 – BMP - 1.3.3 Utility Bill Insert

Exhibit 3A – BMP – 2.3.1 Storm Water Best Management Practices

Exhibit 4 – BMP - 3.3.1 Storm Sewer Map

Exhibit 5 – BMP - 3.3.2 City of Pearland Ordinance 181-9

Exhibit 6 – BMP - 3.3.5 Storm Drain Label

Exhibit 7 – BMP - 5.3.1 City of Pearland Ordinance 1059

Exhibit 8 – BMP - 6.3.2 City of Pearland Hazardous Material and Oil Spill Response Plan

A. Phase II Permit Issuance

The Texas Commission on Environmental Quality issued Texas Pollutant Discharge Elimination System General Permit Number TXR040000 on August 13, 2007, pursuant to Section 26.040 of the Texas Water Code and Section 402 of the Clean Water Act. Small Municipal Separate Storm Sewer Systems (MS4) located in the State of Texas may discharge directly to surface water in the state only according to monitoring requirements and other conditions set forth in this general permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the Commission of the TCEQ. As of the date of this submittal, a new permit has not been issued therefore as the direction of Hanne L. Nielson, Stormwater & Pretreatment Team; the City has continued previous BMP action for year 6.

The general permit provides authorization for storm water and certain non-storm water discharges from small MS4s to surface water in the state. Discharge authorization begins when the applicant is notified by the TCEQ that the Notice of Intent (NOI) and SWMP have been administratively and technically reviewed and when the applicant has followed the public participation provisions. All portions of the permitted MS4 are required to meet the conditions of the general permit including those portions that are located within the urbanized area, as well as any portion of the MS4 that is designated. The program has been completely implemented by August 13, 2012.

B. Storm Water Management Program

The City of Pearland Storm Water Management Program (SWMP) has been developed and implemented for storm water discharges that reach waters of the United States. The SWMP was developed to prevent pollution in storm water to the maximum extent practicable and to effectively prohibit illicit discharges to the system using Best Management Practices (BMPs). The BMPs and measurable goals were selected through careful consideration of the overall impacts to receiving waters, expected budgets, proposed maintenance requirements, effective applications of controls, documentation loading, and the simplicity of management. Additional detailed descriptions of the chosen BMPs, the intended implementation schedule, measurable goals, and evaluation criteria are included in the SWMP. The SWMP along with the NOI applications was approved by TCEQ on June 3, 2009. A Notice of Change to our SWMP was approved by TCEQ on February 23, 2011. The City of Pearland formally annexed Brazoria County MUD 4 on December 31, 2012 and the implementation initiatives will be led and administered by the City of Pearland.

City of Pearland MS4
TCEQ Customer Number CN600595052
Regulated Entity Number: RN105552335
Permit Number: TXR040208

C. Application Approval

The City of Pearland has been authorized by TCEQ to discharge to surface waters per Permit No. TXR040208. The City has fully implemented SWMP by August 13, 2012 and will identify, maintain, and implement BMPs in the years to come.

D. Annual Reporting Requirements

The City must submit a concise annual report to the Executive Director by November 11th for each year of the permit term. The report must address the previous permit year. Should different or additional BMPs be needed, the annual report must describe the new goals and changes to the implementation schedules. The City must sign and certify the annual report and submit it to the TCEQ headquarters and regional office.

In accordance with the annual reporting requirements of the general permit, the annual report has been prepared to chronicle the City's storm water quality efforts and achievements for permit Year 6. The annual report has been organized in such a way as to highlight the best management practices and the status of their implementation as of Year 6. As outlined in the SWMP, each year's annual report will include any changes to BMP implementation schedules.

E. Year 6 Implementation of Best Management Practices

The annual report must include the status of compliance with permit conditions as well as give an assessment of the appropriateness of the program's BMPs. It must also report the progress towards achieving the statutory goal of reducing the discharge of pollutants to the maximum extent practical and list the measurable goals for each of the required minimum control measures. Finally, the report must evaluate the success of the implementation of the measureable goals. The Year 6 status of the minimum control measures are listed below, enumerated to match the approved City of Pearland Storm Water Management Plan.

1. PUBLIC EDUCATION AND OUTREACH

BMP - 1.3.1

Municipal Channel Storm Water Quality Messages

Status of Implementation as of Year 6: By the end of Year 5, the following announcement was developed and posted onto the City of Pearland's Municipal Channel:

- 1) Text based messages regarding storm water quality
- 2) A video of key staff and other city officials discussing the importance of storm water quality; and
- 3) Storm Water Quality flyer that flashes up on the municipal channel

We have also created and posted a flyer stressing the importance of not disposing of trash into storm sewer inlet on our municipal channel. A short video discussing the importance of storm water quality has been filmed and broadcasted in the City of Pearland municipal channel followed by text based messages and storm water quality flyer. A list of our six messages and an image of our flyer has been included as **Exhibit 1** and **Exhibit 2** at the end of this report.

BMP - 1.3.2

Anti-Littering/Dumping Brochure

Status of Implementation as of Year 6: The City of Pearland has worked in conjunction with Keep Pearland Beautiful, our local Keep America Beautiful affiliate, to distribute various brochures which educate the public on the harmful effects of litter, the benefits of recycling, and proper procedures for disposing of hazardous material. These brochures have been made available in City of Pearland Community Center, the City of Pearland Stella Roberts Recycle Center, and the Keep Pearland Beautiful office. We have also placed these brochures at other City facilities such as the West Side Events Center and the Recreation Center and Natatorium.

BMP - 1.3.3

Utility Bill Inserts

Status of Implementation as of Year 6: A brochure has been created that addresses the dangers of dumping trash into the storm sewer system and the impacts of not picking up pet waste. This brochure was included in our October utility bills. A copy of the brochure has been included as an **Exhibit 3** to this report.

BMP - 1.3.4

Storm Water Treatment Demonstration Project

Status of Implementation as of Year 6: A storm water treatment and quality control features were installed at Traffic Operations and Maintenance division facility located on

the east side of Hillhouse Road north of intersection of FM 518 and Hillhouse Road in 2012. Water quality features installed in this project included a grass swale, infiltration basin along with combination of bar screen and weir. Future potential Storm Water treatment and quality control project will be identified based on the need of the project and resource (fund) available.

BMP - 1.3.5

Municipal Website Storm Water Information

Status of Implementation as of Year 6: The City has developed storm water management website within the engineering division as a part of City's website. The website has been updated in 2013 to include more outreach material and to make the website more user-friendly. This web page includes a brief description of storm water management and its importance. This web page also provides various links to related websites such as TCEQ, EPA, and Galveston Bay Estuary Program including other informative brochure to help understand and practice best storm water management methods.

2. PUBLIC INVOLVEMENT IN STORM WATER MANAGEMENT PROGRAM DEVELOPMENT

BMP - 2.3.1

Comply with State and Local Public Notice Requirements

Status of Implementation as of Year 6: It is the intent of the City of Pearland to ensure that all public notifications procedures required by the state are adhered to for any and all projects performed by the City to include any projects related to the implementation of the Storm Water Management Plan. Storm water management committee participated in the fall community cleanup program organized by the KPB and distributed brochures related to storm water best management practices. A new brochure was created with the information about storm water pollutant, effects, and best management practices. A copy of brochure has been included as an exhibit 3A.

BMP - 2.3.2

Advisory Committee

Status of Implementation as of Year 6: A Storm Water Quality Advisory Committee has been revised and includes the following members:

- Andrea Broughton, P.E. (City Engineer)
- Rajendra Shrestha, P.E. (Assistant City Engineer)
- Richard Mancilla, P.E. (Assistant City Engineer)
- Sasha Buchheit (Senior Engineering Technician)
- Eric Wilson (Public Works Director)
- Roland Garcia (Management Coordinator, Fire Marshal/Emergency)
- Fay Watson (Keep Pearland Beautiful Director)
- Tom Scarborough (Engineering Designer)

Norbert Gonzalez (Street and Drainage Superintendent)
Jaimi Dino (Construction Inspector)

This committee has agreed to meet quarterly to continue to discuss storm water quality related issues.

BMP - 2.3.3
Public Meetings

Status of Implementation as of Year 6: An environmental fair was organized by Keep Pearland Beautiful, Pearland Independent School District, and Parent Teacher Association in March 2013. The environmental fair included two booths to demonstrate watershed model and a game for pet waste disposal to educate citizen about the importance hydrologic cycle of watershed and proper waste disposal. Pet waste disposal bags and bag holders were distributed at the annual “Paws in the Park” event organized by Pearland Parks and Recreation. Apart from this, pet waste game was organized and waste disposal bags were distributed at Parks and Recreation Trick or Treat Trail Halloween event.

BMP - 2.3.4
Storm Water Quality Volunteer Opportunities

Status of Implementation as of Year 6: The City of Pearland, through Keep Pearland Beautiful (KPB), offers a number of volunteer opportunities for those who are willing to contribute. KPB organized Cigarette Litter Awareness Day in February 2013 helped to clean up three intersections along FM 518. These volunteer opportunities include:

City of Pearland Fall Community Clean-Up

Keep Pearland Beautiful manages a city wide litter and debris clean-up effort for most public areas to include public roadways, municipal parks, and public school campuses. Approximately 32 miles of roadway within the road right-of-way was cleaned up on Fall Community Clean-up program held on September 9, 2013.

Don't Mess With Texas Trash-Off (Spring Community Clean-Up)

Keep Pearland Beautiful manages a city wide litter and debris clean-up effort in cooperation with the state wide annual Don't Mess with Texas Trash-Off campaign. Approximately 45 miles of Pearland Streets were cleaned up on April 6, 2013.

Adopt-a-Spot Program

Organizations may coordinate a group of volunteers with Keep Pearland Beautiful to pick up litter and debris along roadways or other public areas. In recognition for their efforts the organization's name is posted as part of an Adopt-a-Spot street sign.

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION

BMP - 3.3.1

Storm Sewer Mapping

Status of Implementation as of Year 6: At the end of Year 5, the City had all of its storm sewer conveyance systems mapped up to 2012. The city has a policy to map the storm sewer system as soon as the completion of new storm sewer system construction. The current 2013 map has been attached to this report as an **Exhibit 4** and shows a majority percentage of the City's storm sewer systems have been mapped.

BMP - 3.3.2

Illicit Discharge Ordinance

Status of Implementation as of Year 6: On October 26, 2009, the City of Pearland adopted Ordinance No. 181-9 which makes it illegal within the City limits to improperly dispose of hazardous waste, green waste, and construction debris. This ordinance adequately addresses illicit discharge. A copy of this ordinance has been included as an **Exhibit 5** to this report.

BMP - 3.3.3

Program to Detect and Address Illicit Discharges

Status of Implementation as of Year 6: The City of Pearland has several programs in place with the goal to prevent undesirable discharges from entering our drainage system. These programs include:

Fire Marshal/ Emergency Management

The City of Pearland Fire Marshal's office performs periodic inspection of facilities that produce, use or store hazardous materials. The fire marshal department has assigned the fire marshal to serve the Community Emergency Coordinator for Hazmat issues.

Code Enforcement Department Investigations

The City of Pearland employs 4 full time code enforcement officers. These officers are responsible for investigating any reported cases of illicit dumping, improper discharges from commercial or residential properties, improper storage, and properties that are not being kept clean or properly maintained. The Code Enforcement Department may be notified of potential violations via citizen complaints or regular patrol of the City by the officers. The City also has a volunteer organization of citizens known as the Eyes of Pearland which regularly patrols the city and reports to the Code Enforcement Department any potential code violations they discover.

Grease Interceptor Maintenance and Inspection

The City of Pearland Code Enforcement Department regularly inspects all grease interceptors throughout the City. The inspector ensures that the grease traps are working properly, that the captured grease is being removed every 90 days, and that no grease is being allowed to escape these facilities and enter into the storm drainage system.

Wastewater Infrastructure Design, Inspection, and Maintenance.

The City of Pearland's wastewater infrastructure has been master planned to ensure that all wastewater facilities are properly sized. This master plan and enforcement of zoning regulations allows the City to control the development related contributions to the wastewater collection system and prevent overflow of sanitary waste into our drainage system. The City continuously monitors the condition of sanitary sewer lines and recommends repair or rehabilitation based on the condition. North Main Sanitary Sewer Pipe Burst, Twin Creek Regional List station and Rehabilitation, Cullen Rd sanitary sewer manhole rehabilitation etc are few examples of ongoing maintenance and rehabilitation projects.

The City of Pearland Public Works Department crews regularly inspect wastewater collection lines, manholes, and lift stations to ensure that each are in good condition and that any necessary repairs are made.

BMP - 3.3.4

Public Education on Illegal Discharge & Improper Disposal

Status of Implementation as of Year 6: The City of Pearland has engaged in numerous education and outreach programs to help educate the public of the importance of storm water quality and the repercussions of illegal discharges and improper disposal of hazardous materials. These programs include:

Keep Pearland Beautiful Environmental Fair

Keep Pearland Beautiful hosts an annual Environmental Fair each April. This fair is comprised of booths and games designed to educate our citizens about our recycling program, proper disposal of hazardous material, the importance of picking up pet waste, and as well as numerous other environmental topics. This fair also gives citizens an opportunity to meet staff from the Fire Marshal's Office and the Code Enforcement Department and learn to whom they can report any environmental code violations that they may witness.

Teacher Outreach Program

Keep Pearland Beautiful hosts a training session at the beginning of each summer to discuss and suggests curriculum for teachers to use to educate their students of environmental issues. KPBB organized waste in place training to the participants in July 18, 2013. Also a program called "litter

value bag” was held at Massey Ranch Elementary School for third grade students.

Cooperation with the Galveston Bay Estuary Program Outreach Efforts

The City of Pearland has worked cooperatively with the Galveston Bay Estuary Program (GBEP) to support their “Back the Bay” advertisement and outreach program within the City of Pearland. The GBEP set up an educational booth at the City of Pearland’s Fourth of July Celebration in 2013. We have also helped to support the Back the Bay program by agreeing to include their logo as part of our Utility Bill insert.

BMP - 3.3.5

Storm Drain Labeling

Status of Implementation as of Year 6: Storm drain labels have been designed and added to all existing storm drains within public right-of-way. The City has included storm drain label in the City’s standard detail with a note requiring contractor to coordinate with Public Works department to install the storm drain label before the completion of the project. An image of these labels has been included as an **Exhibit 6** to this report.

4. CONSTRUCTION SITE STORM WATER CONTROLS

BMP - 4.3.1

Evaluate and Update Regulatory Authority and Procedures

Status of Implementation as of Year 6: Per City of Pearland Ordinance 181-9 all construction debris must be properly disposed of at the expense of the contractor. Additionally the City of Pearland requires that all construction projects within City limits incorporate storm water pollution prevention measures. These measures include:

Silt Fencing

All construction projects must include the installation and maintenance of silt fencing along the perimeter of the construction area until permanent erosion control features have been established. Any project that is adjacent to a roadside ditch or minor conveyance channels must install reinforced silt fencing or an approved equivalent at 100 foot intervals along the ditch along the limits of the construction.

Inlet Protection Barriers

All construction projects are required to install and maintain inlet protection barriers for the duration of the construction for all proposed inlets as well as all existing inlets that are immediately adjacent to the construction area.

Stabilized Construction Entrance/Exit

All construction sites are required to utilize or establish a stabilized construction entrance/exit to prevent vehicles leaving the construction site from tracking mud onto City streets that would eventually wash into the storm sewer system.

Rock Filter Dam at Detention Pond Outfalls

All construction projects which include the construction of a detention pond are required to install a rock filter dam or approved equivalent at the pond outfall until permanent erosion control features have been established.

All proposed subdivision projects that include construction of infrastructure and all commercial construction projects are reviewed by the City of Pearland Engineering staff. As part of this review all construction plans are required to include a Storm Water Pollution Prevention (SWPP) Plan. City building inspectors have been informed of the importance of the SWPP measures and instructed to halt any construction projects that do not install or properly maintain their SWPP measures. Also, an in-house training on SWPPP for Municipal Separate Storm Sewer System (MS4) was organized in April, 2013 by the engineering department to educate engineering, project, and public works staff about good housekeeping, spill response, vehicle fueling and washing and other best management practices.

BMP - 4.3.2

Construction Site Brochure or Flyer

Status of Implementation as of Year 6: Copies of TCEQ's "Construction Permits for Storm Water Discharges" brochure have been printed and placed at the counter of the Permits Office. In addition, a poster which illustrates best managements practices for construction site storm water pollution prevention has been placed at the Permits Office above the permit application kiosk for maximum visibility to all contractors performing work within the City of Pearland.

BMP - 4.3.3

Reporting Hotline

Status of Implementation as of Year 6: The City of Pearland Fire Marshal Office is responsible for investigating any incident of hazardous material/oil spill in the City of Pearland. Any HazMat incident is considered an emergency and Pearland Dispatch needs to be called at 281-997-4316 or Pearland Fire Marshal's Office at 281-652-4660.

5. POST CONSTRUCTION STORM WATER MANAGEMENT FOR NEW DEVELOPMENT AND REDEVELOPMENT

BMP - 5.3.1

Evaluate and Update Ordinances and Guidance Document

Status of Implementation as of Year 6: Current City of Pearland Ordinances have been reviewed and it has been determined that the provisions of these ordinances are sufficient to allow the City of Pearland to adopt and enforce policies which aid in eliminating contamination from areas of concern associated with development. These policies include:

Commercial Dumpster Requirements

All commercial developments within the City of Pearland are required to have an onsite dumpster. Per the City of Pearland's Unified Development Code all dumpster areas are required to be screened with a masonry wall or wood fence. This screening serves two purposes; a more pleasing aesthetic to the dumpster pad area and preventing loose trash and debris from escaping the dumpster area.

Commercial dumpsters for new restaurants or developments which include commercial cooking are known sources of potential contaminants as dumpster will leak over time and leaky trash is not always placed inside the dumpsters. In accordance with City of Pearland Ordinance 181-9 the City has adopted a policy to prevent this leakage from entering the storm drainage system. These dumpsters are required to be placed on an elevated pad which drains into an isolated inlet with a p-trap which is connected to the sanitary sewer system upstream of the grease trap.

Commercial Pool Runoff

Swimming pools and spas areas contain water which is chemically treated to prevent turbidity and kill algae and other microorganisms. In accordance with City of Pearland Ordinance 181-9 the City has adopted a policy to prevent this chemically treated water from draining to our streams and bayou and potentially harming or killing natural plant and animal life. All commercial pools are required to take one of two measures to prevent pool water from entering the drainage system. Pool designers may either grade the pool decking such that pool water drains back into the pool or grade the decking to drain to small isolated inlets which are connected to the sanitary sewer system.

Detention Pond Inspection Program

On April 22, 2002 the City of Pearland adopted Ordinance No. 1059 which requires all storm sewer detention facilities to be maintained and annually inspected. Inspection of the detention facilities includes ensuring permanent erosion controls are in good condition, the facility is free of contaminants and debris, and any aeration devices are working properly. A copy of Ordinance No. 1059 has been included as an **Exhibit 7** to this report.

The COP has developed a detention pond inspection checklist for consistency of the inspection process. If the detention facilities are not

being properly maintained, the owner is notified immediately to bring the detention facility into compliance with maintenance requirement within 30-days. Code Enforcement/ Health officers are notified if the re-inspection reveals noncompliance with the owner's maintenance responsibility.

One hundred forty three detention ponds were inspected in the year 6. Thirty five detention ponds failed in the first inspection and Code Enforcement official was notified for eleven detention pond owners after failure to bring the detention pond in compliance with required responsibility.

BMP - 5.3.2

Evaluate and Update Plan Review and Inspection Programs

Status of Implementation as of Year 6: Development projects proposed within the City of Pearland can be categorized in three different ways: commercial construction, residential home construction, and public infrastructure. Each of which is thoroughly reviewed by qualified staff, but through differing review processes. Commercial construction plans are submitted to the Building Permits Office and are reviewed by several City departments, including the Engineering Department, to ensure their compliance with City Codes. Once the plans have been reviewed and approved a building permit may be issued. Residential home construction is also submitted to the Building Permits Office to be review and approved for Building Permit issuance, but is typically not reviewed by engineering staff unless the project is located in unmitigated floodplain. Public Infrastructure plans are submitted directly to the Engineering Department to be reviewed and approved. Permit for construction for public infrastructure is granted via the City Engineer signing the cover sheet of the plans.

The engineering department carefully reviews all commercial plans and public infrastructure projects to ensure they are in compliance with Engineering Design Criteria Manual. As part of this review the engineering staff checks for any potential design features that may not be in compliance with the City of Pearland's storm water management and storm water quality policies. No building permit will be issued nor a signature on the plans given until the designer has properly addressed the comments. Once the plans have been approved they are stamped by the city so that the approved plans can be easily identified.

All construction projects in the City of Pearland are required to be overseen by qualified City inspectors to ensure they are built in accordance with the approved plans. If any commercial project does not pass inspection then the project will not be issued a certificate of occupancy and therefore will not be allowed to operate until it is brought into compliance. Any public infrastructure that does not pass inspection will not be accepted by the City. If public infrastructure is not accepted then no building permits may be issued for any project that requires the use of that infrastructure.

These plan review and inspection procedures are adequate to ensure that any proposed construction project will incorporate the storm water management and storm water quality policies required by the City of Pearland.

BMP - 5.3.3

Evaluate Regional Ponds for Storm Water Quality

Status of Implementation as of Year 6: Existing pond projects included in the 6 year Capital Improvements Program have been evaluated, but due to budgetary constraints no structural storm water quality control measures can be incorporated into these projects. The City has recently adopted a Sub-Regional Detention Pond program for future planning of CIP and to help identify areas where developer driven sub-regional facilities may be most effective. The City is currently in the Preliminary Engineering Report (PER) phase for the first two regional detention program; Cullen Sub-Regional Detention and Lower Kirby Sub-Regional Detention pond.

6. POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

BMP - 6.3.1

Evaluate Street Sweeping

Status of Implementation as of Year 6: After review of the reports provided during Year 1 and 2, it has been determined that the current schedule is sufficient. The current schedule includes sweeping of all public streets three times annually. Apart from it, it is the Public Works department's normal practice to send officials to inspect the condition of storm drains, inlets, and other facilities associated with storm water after rainfall events. It has also been recommended that more frequent street sweeping occur adjacent to Capital projects and also as pockets of the City develop to assure that any failure of sediment control is mitigated by the street sweeping program. This will be done at the discretion of the Public Works' Director.

BMP - 6.3.2

Provide Spill Response Kits and Training at Service Center

Status of Implementation as of Year 5: The City of Pearland has adopted a Hazardous Material and Oil Spill Response standard operating procedure as part of our Emergency Management Plan. This response plan is managed by the Fire Marshal's Office and specifies the policies and procedures that the City must operate under when dealing with incidents involving hazardous materials (hazmat). A copy of this response plan has been included as an **Exhibit 8** to this report.

In the event of a hazmat spill the primary duty of the Incident Commander is to assess a threat level and implement any health and safety protocols necessary. Once those protocols have been established the next priority is to contain the spill. If the material is a flowable liquid in an area where it could potentially drain into the storm sewer system,

the Incident Commander will take measures to block any drainage paths in the containment area. These measures include, but are not limited to the use of berms, dikes, trenches, booms and other deployable barriers, and stream diversion.

If an incident occurs in a City facility, such as a fuel center or maintenance center, City staff has been trained to immediately contain the spill. Each of the City's two fuel centers has been equipped with fuel containment kits.

BMP - 6.3.3

Evaluate Drainage at Wash Facility

End of Permit Term Goal: Evaluate the drainage at the vehicle and equipment wash facility and the potential for a roof over the facility.

Status of Implementation as of Year 5: The existing facility was evaluated in Year 2. The wash facility is not covered, but the drainage system has an oil/grease and sand separator that discharges into the sanitary sewer system. At this time there is not a recommendation to cover the existing wash facility.

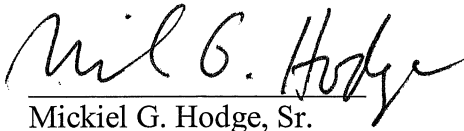
F. Proposed Changes to Implementation Schedule

The City's Storm Water Management Plan has not encountered any significant changes to our approved plan during Year 6.

G. Annual Report 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 gather and evaluate 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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

City of Pearland MS4
TCEQ Customer Number: CN600595052
Regulated Entity Number: RN105552335
Proposed Permit Number: TXR040208



Mickiel G. Hodge, Sr.
City of Pearland
Assistant City Manager

11/4/2013
Date

Exhibits

Exhibit 1
BMP 1.3.1 - Municipal Channel Text Based Messages

 **Stormwater Management**



Please do not dispose of trash, grass clippings, and other yard debris in our storm sewer inlets.

cityofpearland.com/stormwater

 **Stormwater Management**



Please be sure to always dispose of hazardous materials including motor oil and gasoline at approved collection sites.

cityofpearland.com/stormwater

 **Stormwater Management**



Please be sure to always pick up after your pets and properly dispose of their waste.

cityofpearland.com/stormwater

 **Stormwater Management**



Please be careful not to overuse fertilizers and pesticides as these might wash into our storm sewer.

cityofpearland.com/stormwater

 **Stormwater Management**

Use the can!



Please do not let litter and trash wash into our storm sewers as it could contaminate and clog our drainage system.

cityofpearland.com/stormwater

 **Stormwater Management**



Please be sure that all hazardous materials such as chemicals and automotive products are placed in appropriate sealable containers and stored indoors in either a shed or garage.

cityofpearland.com/stormwater

Exhibit 2
BMP – 1.3.1 Municipal Channel Flyer



Stormwater Management

This is Not a Dumpster



**Dumping trash into our storm sewers
may cause high water in streets and
flooding of our homes.**

Exhibit 3

BMP 1.3.3 - Utility Bill Insert

A Guide to the Proper Use of Our Storm Sewer



Our storm sewer system is made up of a series of ditches, culverts, inlets, and underground pipes which collect rain water runoff and transfers it to our streams, bayous, and ultimately to Galveston Bay. By collecting and managing the rainwater runoff, our storm sewer system helps to minimize ponding of water in our streets and flooding of our homes.

Why is it important to keep the storm sewer clean?

Trash and debris that is dumped into our storm sewer system will collect and ultimately cause the pipes to clog, preventing rainwater from draining properly. This will lead to high water in our streets and flooding of our homes. Even natural debris can accumulate in the storm sewer system and cause them to clog. Yard waste is also a main contributor to the silt that fills our ditches, culverts, streams and bayous that prevents them from draining as much rainwater as they once did.

How harmful is it to dump hazardous products down the storm drain?

Chemicals dumped into our storm sewer system can kill the wildlife that lives in the streams, bayous and Galveston Bay and animals that may come in contact with the contaminated water. These chemicals can also leach into our aquifer and potentially make our drinking water unsafe. Hazardous products can be safely disposed of at the Stella Roberts Recycling Center. For more information on Storm Water Quality, visit cityofpearland.com/stormwater



A Guide to the Proper Use of Our Storm Sewer

City of Pearland Ordinance No. 181-9



Section 1-2. Littering

It shall be unlawful for any person to throw, drop, cast, or deposit on any street, alley, sidewalk, or any yard or premises whether public or private any waste material of any kind including without limitation

cigarette butts, cans, paper, paper containers, bottles, or any other form of waste matter whether solid, hazardous, or special waste.

An offense under this section shall be punishable by a fine of not less than \$100 and not more than \$500 for each violation.

Section 1-3. Dumping

It shall be unlawful for any person, by his own action or that of his agent, employee, or any person under his control, to cause any garbage, trash, refuse, or other waste matter to be dumped, deposited, or otherwise discharged or disposed of on any street, lot, park, public place, or other area whether publicly or privately owned, except at legally established dumping areas. Waste matter includes, but is not limited to: tires, household furnishings, mattresses, appliances, household hazardous waste, vehicle parts, construction debris, solid waste, special waste, green waste, or any other organic or inorganic waste materials.

An offense under this section shall be punishable by a fine of not less than \$500 and not more than \$2,000 for each violation.

Section 1-6. Green Waste

Landscape waste and lawn clippings may be accumulated and placed in clear plastic bags for collection and recycling. Tree trimmings, brush, and shrubs placed for collection shall be secured in bundles not to exceed four feet in length, eighteen inches in diameter, or fifty pounds in weight.

Violation of (this) provision shall be punishable by a fine not to exceed \$2,000. Each day that a specific violation continues shall be deemed a separate offense.

For more information on Storm Water Quality, visit cityofpearland.com/stormwater



Exhibit 3A
BMP 2.3.1 – Storm Water Best Management Practices

STORMWATER MANAGEMENT PROGRAM CITY OF PEARLAND









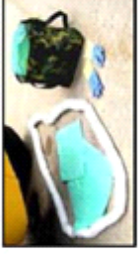





<p>Stormwater Pollutant</p> <p>Sediments - Suspended Solids, Dissolved Solids, Turbidity</p>	<p>Effects</p> <p>Reduces amount of light in the water, Recreation/ aesthetic loss, Suffocate Waterborne organisms</p> 	<p>BMPs</p> <p>Application of SWPPP, Use of sedimentation basins, Biofilter, Swales etc</p> 	<p>Stormwater Pollutant</p> <p>Organic Matter - Vegetation, Sewage, Other Oxygen Demanding Materials</p>	<p>Effects</p> <p>DO Depletion, Odors, Fish Kills</p> 	<p>BMPs</p> <p>Avoid sewage disposal into streams, Maintain Stormwater Detention Ponds, Biofilter Swales</p> 
<p>Stormwater Pollutant</p> <p>Nutrients - Nitrate, Nitrite, Ammonia, Organic Nitrogen, Phosphate, Total Phosphorus</p>	<p>Effects</p> <p>Algae blooms, Eutrophications, DO depletion, Ammonia and nitrate toxicity, Recreation/ aesthetic loss</p> 	<p>BMPs</p> <p>Limit the use of fertilizers, Eliminate Septic Condition, Avoid sewage disposal into storm drain etc.</p> 	<p>Stormwater Pollutant</p> <p>Toxic Pollutants - Heavy Metals (cadmium, copper, lead, zinc), Organics, hydrocarbons, Pesticides/ Herbicides</p> 	<p>Effects</p> <p>Human & aquatic toxicity, Bioaccumulation in the food chain</p>	<p>BMPs</p> <p>Limit the use of pesticides, Clean vehicles at wash station or in the grass, Do not drain toxic pollutants including oils in the storm drain</p> 
<p>Stormwater Pollutant</p> <p>Pathogens - Total and Fecal Coliforms, Fecal Streptococcus, Viruses, E. Coli</p>	<p>Effects</p> <p>Ear/ Intestinal infections, Shelfish bed closure, Recreation/ aesthetic loss</p> 	<p>BMPs</p> <p>Avoid sewage disposal into storm drain, pick up after the pet, properly maintain private septic system.</p> 	<p>Stormwater Pollutant</p> <p>Trash and debris</p> 	<p>Effects</p> <p>Recreation and aesthetic loss</p> 	<p>BMPs</p> <p>Do not through trash into storm drain, properly dispose of trash</p> 

Exhibit 5
BMP 3.3.2 – City of Pearland Ordinance 181-9

ORDINANCE NO. 181-9

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF PEARLAND, TEXAS, AMENDING CHAPTER 12, *SOLID WASTE*, OF THE CITY OF PEARLAND CODE OF ORDINANCES, PROVIDING A PENALTY FOR VIOLATION; HAVING A SAVINGS CLAUSE, A SEVERABILITY CLAUSE, AND A REPEALER CLAUSE; PROVIDING FOR CODIFICATION AND AN EFFECTIVE DATE.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PEARLAND, TEXAS:

Section 1. That Chapter 12, *SOLID WASTE*, of the City of Pearland Code of Ordinances, is hereby amended to read as follows:

“Chapter 12

SOLID WASTE

Subchapter 1. In General.

Section 1-1. Definitions.

The following words, terms and phrases, when used in this ordinance, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning.

- (a) *Commercial customer* means a person, business, corporation, institution or other entity which accumulates or holds solid waste for collection at a location other than single family residences, duplexes, triplexes or quadplexes.
- (b) *Construction debris* means refuse items such as dirt, concrete, rocks, boards, metal or other hard dry substances and other such items not defined as solid waste.
- (c) *Green waste* means such items as grass clippings, weeds, leaves, tree limbs and branches, shrubs, and any other plant waste matter.
- (d) *Household hazardous waste* means any solid waste identified or listed as a solid waste by the administrator of the U. S. Environmental Protection Agency pursuant to federal law. Hazardous waste includes but is not limited to pool chemicals, corrosive solvents, oil, batteries, and paint.
- (e) *Recyclable materials* means discarded materials which have been separated from other solid waste materials and placed at a designated location for the purpose of collection and recycling. These materials include but are not limited to newspapers,

magazines, aluminum and steel cans, glass containers, polyethylene plastics and such other items as may be designated recyclable by the City of Pearland.

- (f) *Residential customer* means an owner, occupant, tenant, lessee or resident, that receives solid waste collection service at single family residences, duplexes, triplexes or quadplexes.
- (g) *Solid waste* means any and all garbage, trash, refuse and other discarded materials held or accumulated in containers, including without limitation, animal and waste materials resulting from the preparation, processing or consumption of food; combustible waste materials such as paper, rags, cartons, boxes, plastics; noncombustible materials such as glass, crockery and metal cans. Solid waste shall not include hazardous or special waste.
- (h) *Special waste* means any substance identified or listed as special waste from healthcare related facilities in the Texas Administrative Code. Special waste includes, but is not limited to, health care facility waste, human body parts, human body fluids, hypodermic syringes/needles and other such items that may be a threat to public health.

Section 1-2. Littering.

- (a) It shall be unlawful for any person to throw, drop, cast or deposit on any street, alley, sidewalk or any yard or premises, whether public or private, any waste material of any kind, including without limitation cigarette butts, cans, paper, paper containers, bottles or any other form of waste matter, whether solid, hazardous, or special.
- (b) An offense under this section shall be punishable by a fine of not less than \$100.00 and not more than \$500.00 for each violation.

Section 1-3. Dumping.

- (a) It shall be unlawful for any person, by his own action or that of his agent, employee or any person under his control, to cause any garbage, trash, refuse or other waste matter to be dumped, deposited or otherwise discharged or disposed of on any street, lot, park, public place or other area whether publicly or privately owned, except at legally established dumping areas. Waste matter includes, but is not limited to, tires, household furnishings, mattresses, appliances, household hazardous waste, vehicle parts, construction debris, solid waste, special waste, green waste or any other organic or inorganic waste materials.
- (b) An offense under this section shall be punishable by a fine of not less than \$500.00 and not more than \$2000.00 for each violation.

Section 1-4. Special waste.

Special waste shall be disposed of pursuant to state law and shall not be placed in any collection container or concealed by any means for collection.

Section 1-5. Household hazardous waste.

Household hazardous waste shall not be placed in any collection container or concealed by any means for collection.

Section 1-6. Green waste.

Landscape waste and lawn clippings may be accumulated and placed in clear plastic bags for collection and recycling. Tree trimmings, brush and shrubs placed for collection shall be secured in bundles not to exceed four feet in length, eighteen inches in diameter, or fifty pounds in weight.

Section 1-7. Dead animals.

Dead animals exceeding five pounds in weight shall not be placed in solid waste containers. Upon request the City will pick up and dispose of dead animals weighing from five pounds to one hundred pounds. The city will not be responsible for the disposal of any dead animal weighing over one hundred pounds.

Section 1-8. Construction debris.

The City will not be responsible for the collection of debris from new construction, whether from commercial or residential construction, or trees, brush and other debris from the clearing of land or construction cleanup.

Section 1-9. Penalty.

Violation of a provision of this chapter for which a penalty is not provided shall be punishable by a fine not to exceed two thousand dollars (\$2000.00). Each day that a specific violation continues shall be deemed a separate offense.

Section 1-10. Culpable mental state.

It is the express intention of the City Council of the City of Pearland to dispense with the requirement of proof of a culpable mental state in the prosecution for the violation of any section in this chapter, unless said section expressly requires a culpable mental state.

Subchapter 2. Residential Collection.

Section 2-1. Waste collection.

The City of Pearland shall provide collection service for residential solid waste twice a week, and for green waste meant for recycling and recyclable materials once a week, except when a collection day falls on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, or Christmas Day, when there will be no collection. Placement of waste for collection shall be at the edge of that portion of the right-of-way that abuts the residential property. A residential customer shall not place waste for collection before 5:00 p.m. on the day prior to collection day, nor shall the customer allow the waste to remain at the edge of the right-of-way after collection day. Storage of all waste shall be behind the building line.

Section 2-2. Waste containers.

Solid waste placed at curbside for collection shall be contained in plastic bags or other sealed disposable containers. No containers intended to be emptied and returned for reuse, such as trash cans, shall be allowed.

Section 2-3. Preparation for collection.

All solid waste containing water or other liquid shall be drained before being placed for collection. All animal matter subject to decomposition shall be securely wrapped before being placed for collection. No single container of trash or bundle of waste materials shall exceed fifty pounds in weight.

Section 2-4. Recycling.

The City of Pearland shall make recycling containers available to each residential customer for the purpose of separating and storing recyclable materials for collection. Recyclable materials will be collected on one of the two trash collection days of each week as long as they are placed on the curbside in a recycling container. The residential customer shall return the recycling container to a storage area behind the building line on the same day. All recyclable materials placed on the curbside for collection become the property of the City of Pearland when so placed.

Subchapter 3. Commercial Collection.

Section 3-1. Containers.

All commercial customers shall utilize dumpsters to store solid waste for collection unless other containers are specifically allowed by the City. A commercial customer authorized to use alternate containers shall not place such containers for collection before 6:00 p.m. on the day prior to collection day, nor shall the customer allow the containers to remain at the edge of the right-of-way after collection day. Alternate containers shall be stored at a location on the premises of the commercial customer that is screened such that said containers are not visible from any roadway.

Section 3-2. Industrial waste owner's responsibility.

Industrial wastes resulting from manufacturing or commercial processing operations, such as produce houses, poultry establishments, and meat processing and packing plants, will not be collected by the city. The owner or occupant of the building, business or premises from which the wastes originate is responsible for proper disposal in accordance with all applicable federal, state and local regulations.

Section 3-3. Owner diligence.

The owner or occupant of any business, commercial establishment or institution within the City shall exercise reasonable diligence to keep the premises clear of solid waste in any form deposited by patrons and other persons using the premises. Accessible receptacles shall be placed in view on the premises for disposal of solid waste.

Subchapter 4. Rates, Fees, and License.

Section 4-1. Residential rates.

The rates for the collection and disposal of solid waste from residential customers shall be determined from time to time by the City Council and charged on the monthly water bill. Said rate schedules shall be maintained in the City Secretary's office.

Section 4-2. Commercial rates.

The rates for collection and disposal of solid waste from commercial customers shall be determined from time to time by the City Council and charged on the monthly water bill or directly to the commercial customer. Said rate schedules shall be maintained in the City Secretary's office.

Section 4-3. License and insurance required.

Private haulers of solid waste for hire using the public streets, alleys and easements of the

City must obtain a franchise from the City.

(a) Application for a franchise shall include:

- (1) the applicant's name and physical business address,
- (2) proof of liability insurance or bonding with coverage of at least \$1,000,000.00 per accident and \$300,000.00 per person, and
- (3) a non-refundable application fee of \$50.00.

(b) The failure of a licensed solid waste hauler to maintain insurance or bonding in the above amounts shall result in suspension of the license by the city manager. A licensee has the right to appeal said suspension to the City Council.”

Section 2. Savings. All rights and remedies which have accrued in favor of the City under this Ordinance and amendments thereto shall be and are preserved for the benefit of the City.

Section 3. Severability. If any section, subsection, sentence, clause, phrase or portion of this Ordinance is for any reason held invalid, unconstitutional or otherwise unenforceable by any court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision and such holding shall not affect the validity of the remaining portions thereof.


Section 4. Repealer. All ordinances and parts of ordinances in conflict herewith are hereby repealed but only to the extent of such conflict.

Section 5. Codification. It is the intent of the City Council of the City of Pearland, Texas, that the provisions of this Ordinance shall be codified in the City's official Code of Ordinances as provided hereinabove.

Section 6. Effective Date. The City Secretary shall cause this Ordinance, or its caption, to be published in the official newspaper of the City of Pearland, upon passage of

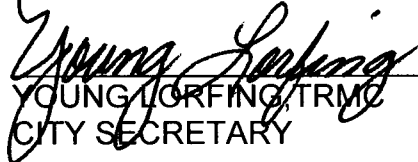
such Ordinance. The Ordinance shall then become effective ten (10) days from and after its publication, or the publication of its caption, in the official City newspaper.

PASSED and APPROVED ON FIRST READING this the 12th day of October, A. D., 2009.



TOM REID
MAYOR


ATTEST:



YOUNG LORFING, TRMC
CITY SECRETARY

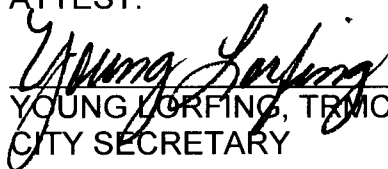


PASSED and APPROVED ON SECOND AND FINAL READING this the 26th day of October, A. D., 2009.



TOM REID
MAYOR

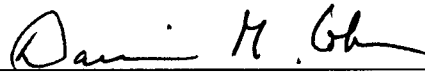
ATTEST:



YOUNG LORFING, TRMC
CITY SECRETARY



APPROVED AS TO FORM:



DARRIN M. COKER
CITY ATTORNEY

Exhibit 6
BMP 3.3.5 – Storm Drain Label



Exhibit 7
BMP 5.3.1 – City of Pearland Ordinance 1059

ORDINANCE NO. 1059

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF PEARLAND, TEXAS, AMENDING CHAPTER 13, HEALTH AND SANITATION, OF THE CITY OF PEARLAND CODE OF ORDINANCES, AS IT MAY HAVE BEEN, FROM TIME TO TIME, AMENDED, FOR THE PURPOSE OF REGULATING THE MAINTENANCE OF STORMWATER STORAGE FACILITIES; PROVIDING A PENALTY FOR VIOLATION; CONTAINING A SAVINGS CLAUSE, A SEVERABILITY CLAUSE, AND REPEALER CLAUSE; PROVIDING FOR CODIFICATION AND AN EFFECTIVE DATE.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PEARLAND, TEXAS:

Section 1. That Chapter 13, Health and Sanitation of the City of Pearland Code of Ordinances is amended to add section 13-23, Maintenance of Stormwater Storage Facilities to read as follows:

Section 13-23: Maintenance of Stormwater Storage Facilities

- A. *Responsibility.* The property owner shall be responsible for continuous maintenance of all existing and new detention facilities. Maintenance shall include, but not be limited to the following: repair of any concrete drainage structures, repair of side and bottom slopes to maintain engineered topography, repair of nonoperational pumps, flap gates, pipes and associated hardware, reestablishment of lost vegetation, continuous removal of trash and debris, regular mowing of grass (in accordance with section 13-17 of this article), removal of trees and shrubs, extermination of rodent and mosquito populations, and repair of all aeration devices.
- B. *Noncompliance.* Each Stormwater Facility shall be subject to an annual maintenance inspection. Any facility found not to be in compliance with these regulations shall be subject to the penal provisions contained in this code. Notice of such noncompliance shall be served to the property owner at the address listed in the most recently approved certified tax roll as provided by the Brazoria, Fort Bend or Harris County Appraisal

ORDINANCE NO. 1059

Districts.

Section 2. Penalty. Any person who shall violate the provisions of this section shall be deemed guilty of a misdemeanor and shall, upon conviction by a court of competent jurisdiction, be punished by a fine in any sum not exceeding Two Thousand Dollars (\$2000.00).

Section 3. Savings. All rights and remedies which have accrued in favor of the City under this Chapter and amendments thereto shall be and are preserved for the benefit of the City.

Section 4. Severability. If any section, subsection, sentence, clause, phrase or portion of this Ordinance is for any reason held invalid, unconstitutional or otherwise unenforceable by any court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision and such holding shall not affect the validity of the remaining portions thereof.


Section 5. Repealer. All ordinances and parts of ordinances in conflict herewith are hereby repealed but only to the extent of such conflict.

Section 6. Codification. It is the intent of the City Council of the City of Pearland, Texas, that the provisions of this Ordinance shall be codified in the City's official Code of Ordinances as provided hereinabove.

Section 7. Publication and Effective Date. The City Secretary shall cause this Ordinance, or its caption and penalty, to be published in the official newspaper of the City of Pearland, upon passage of such Ordinance. The Ordinance shall then become effective ten (10) days from and after its publication, or the publication of its caption and penalty, in the official City newspaper.

ORDINANCE NO. 1059

PASSED and APPROVED ON FIRST READING this the 8 day of April, A. D.,
2002.




TOM REID
MAYOR

ATTEST:



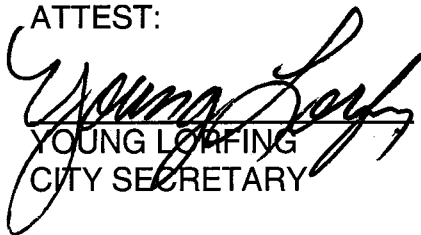
YOUNG LORFING
CITY SECRETARY

PASSED and APPROVED ON SECOND AND FINAL READING this the 22 day
of April, A. D., 2002.




TOM REID
MAYOR

ATTEST:



YOUNG LORFING
CITY SECRETARY

APPROVED AS TO FORM



DARRIN M. COKER
CITY ATTORNEY

VOTING RECORD SECOND AND FINAL READING
APRIL 22, 2002

Voting "Aye" - Councilmembers Tetens, Owens,
Marcott, Wilkins, and Seeger.

Voting "No" - None.

Motion passes 5 to 0.

PUBLICATION DATE: April 24, 2002

EFFECTIVE DATE: May 4, 2002

PUBLISHED AS REQUIRED BY SECTION 3.10 OF
THE CHARTER OF THE CITY OF PEARLAND, TEXAS

Exhibit 8
**BMP 6.3.2 – City of Pearland Hazardous Material and Oil Spill
Response Plan**