Plaquemines Parish Government

Stormwater Management Plan

July 8, 2019

AI # 108404

Contents

Acronyms

ATU – AERATION TREATMENT UNIT

BMP – BEST MANAGEMENT PRACTICES

EPA – ENVIRONMENTAL PROTECTION AGENCY

LDEQ – LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

LPDES – LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM

MEP – MAXIMUM EXTENT PRACTICABLE

MS4 – MUNICIPAL SEPARATE STORM SEWER SYSTEMS

NOI – NOTICE OF INTENT

POC – POLLUTANTS OF CONCERN

SSS – STORM SEWER SYSTEM (GENERALLY RELATED TO A MAP)

SWMP – STORMWATER MANAGENT PLAN

SWPPP – STORMWATER POLUTION PREVENTION PLAN

TMDL – TOTAL MAXIMUM DAILY LOAD

WLA – WASTE LOAD ALLOCATION

1 Basic Stormwater Management Plan Information

This stormwater management plan was developed by Plaquemines Parish to describe the activities and measures that will be implemented on a parish wide basis to meet the terms and conditions of the Louisiana Pollutant Discharge Elimination System (LPDES) General Permit for Stormwater Discharges for Small Municipal Separate Storm Sewer Systems (MS4).

The General Permit for small MS4s was reissued on August 17, 2018 with an effective date of September 1, 2018. This SWMP was in development at the time of reissue, so it has been tailored to ensure compliance with the new requirements of the General Permit.

1.1 General Information about the Parish

1.1.1 Size

Plaquemines Parish has a population of ~23,000 people and an area of 845 square miles.

1.1.2 Address of Parish Administration

333 F. Edward Hebert Blvd.
Belle Chasse, LA 70037

Latitude: 29 deg, 53 min, 36 sec
Longitude: 89 deg, 59 min 88 sec

1.1.3 Address of Engineering and Public Works Department

333 F. Edward Hebert Blvd.
Belle Chasse, LA 70037

Latitude: 29 deg, 53 min, 36 sec
Longitude: 89 deg, 59 min 88 sec

1.1.4 Stormwater Management Plan Program Point of Contact

Ken Dugas, PE – Chief Engineer
Engineering and Public Works Department
Office: 504-934-6115
Email: kdugas@ppgov.net

1.2 Plaquemines Parish Government Organizational Structure

1.2.1 Organizational Chart

Plaquemines Parish Government is administered by the elected Parish President. The Parish President appoints directors to manage the three primary branches of government functions: Operations, Public Services and Administration. The organization of the Parish is summarized below.

Parish President

Kirk Lepine

Operations	***Public Services***	***Administration***
Don Beshel	Todd Eppley	Crystal Taylor
Drainage Department	*Water/ Wastewater*	*Health Department*
Danny Spears	Robert Morgan (Inframark)	Raymund Ferrer
Public Works Department	*Solid Waste Department*	
Ken Dugas, PE	North – Scott Rousselle South – Gregory Ingraham	
Permits Department		
Mike Metcalf		

1.2.2 Organizational Narrative

Creation, implementation and management of the SWMP is one of the main responsibilities of the Engineering & Public Works Department. Ken Dugas is the point of contact for communications between Plaquemines Parish and the Louisiana Department of Environmental Quality (LDEQ), and in turn the US Environmental Protection Agency (USEPA).

Each department will have duties and responsibilities for each of the Six Minimum Control Measures as defined by the Notice of Intent (NOI) -form 7011 r04, MS4-G. Inspections will also be carried out by inspectors in all departments with a parishwide culture of "if you see something, say something." All inspection reports and data will be managed by the Engineering & Public Works Department. They will be the general monitor of all Best Management Practices as selected on the NOI and will also track the Measurable Goals set forth for self-assessments and annual reports as required by LDEQ.

1.3 Receiving Waters and Drinking Water Sources

1.3.1 Interconnected MS4s and Other Receiving Waters

Due to the location and geographic nature of Plaquemines Parish, no other MS4s are affected by its discharges. All receiving waters in the Parish– marshes, bayous, canals, and the Mississippi River are within the MS4.

According to the LDEQ Interactive Mapping Application (LIMA), the LDEQ has identified the following subsegments within the areas of Plaquemine Parish's jurisdiction: Intracoastal Waterway- From Bayou Villars to Mississippi River (subsegment 020601) and Bayou Barataria and Barataria Waterway-From ICWW to Bayou Rigolettes (subsegment 020802). Ultimately, the whole of Plaquemines Parish is surrounded by the Gulf of Mexico which functions as the final receiving water.

1.3.2 Impaired Waters

LIMA subsegments 020601 and 020802, listed above, do not have any listed impairments (IRC Category 5) or WLAs attributed to MS4s within the Parish's jurisdiction. The Parish is required to periodically check for any new TMDLs and/or WLAs attributed to MS4s within its jurisdiction.

1.3.3 Drinking Water Sources

The main drinking water source for Plaquemines Parish is a 70-mile length of the Mississippi River.

2 Parish Assets and Maps

This section is still under development by the Parish.

2.1 Assets Monitored under the SWMP

2.1.1 Aeration Treatment Units (Package Plants)

2.1.2 Boat Harbors

2.1.3 Hazardous Material Storage Sites (Chemicals, Diesel, Used Oil)

2.1.4 Pump Stations

2.1.5 Water Treatment Plants

2.1.6 Wastewater Lift Stations / Pump Stations

2.1.7 Wastewater Treatment Plants

2.2 Maps

2.2.1 Storm Sewer System Map

2.2.2 Asset maps

3 Legal Authority and Enforcement

This section is still under development by the Parish.

3.1 Control Measures

3.1.1 Develop Adequate Legal Authority

Adopt legislation to direct and enforce objectives of the SWMP.

Measurable Goals

Milestones

Timeframe for Implementation

3.1.2 Develop Enforcement SOP

Included in ordinance as part of 1.6.1

Measurable Goals

Milestones

Timeframe for Implementation

4 Minimum Control Measures to Reduce Pollutants

The following section describes Plaquemines Parish's program to reduce pollutants from discharges to the MS4 to the maximum extent practicable. Each section describes all Best Management Practices of a Control Measure along with the reasons they were selected, their required measurable goals such as an implementation schedule, interim milestones and whether the BMP will have a continuing schedule or anticipated deadlines as appropriate.

4.1 Public Education and Outreach

Public education will be a vital part of this plan as community support will be one of the largest factors in the overall success of the program. The fact that Plaquemines has a small population spread out over a large geographical area, along with a very small staff and budget to implement the Storm Water Management Plan means that public understanding and support will be paramount.

The Public Education and Outreach aspect of the Stormwater Management Plan will focus heavily on the value of the natural water systems of Plaquemines Parish and how keeping them clean has a positive effect on the parish's culture, supports their way of life, and the livelihood of so many of the residents. Plaquemines Parish believes the development of an educational campaign on stormwater and the importance of keeping the receiving waters of the MS4 clean will motivate residents to be involved with the program.

The Public Education and Outreach campaign will be managed by the Engineering Department.

4.1.1 Control Measures

BMP PE1 - Educational Displays Including Pamphlets, Posters and Mail-Out Flyers

The Parish will use both digital media and printed educational materials in their educational campaign. This two-pronged approach will be cost effective, easily distributed to a large portion of the population by the small staff and have a lasting impact. Digital platforms will include the Plaquemines Parish website, as well as, social media like Facebook. Printed materials will include pamphlets, flyers, posters and postcards. The distribution method will vary by publication type ranging from bulk mailings of postcards to posters in municipal buildings and public facilities.

Measurable Goals

Milestone 1: Creation of new Educational Campaign materials. These materials will be created before the end of the first quarter of 2019.

Timeframe: Distribution of this material will begin in March 2019. After the initial implementation, information on digital platforms will be updated as required while printed media will be distributed on an annual basis.

Digital Media – Timeframe

Educational Material	Platform	Schedule	Start Date
Stormwater/MS4 Blurb	**Parish Website**	**Continuous Updated as required**	**March 2019**
Flyers/Posters/ Educational Blurbs	**Facebook**	**Continuous Update as required**	**March 2019**

Print Media - Timeframe

Educational Material	Amount	Schedule	Start Date
Postcard Mailers	**12,100**	**Mailed annually**	**March 2019**
11x17 posters	**20**	**Posted by end of every quarter in various municipal buildings/public facilities**	**March 2019**

BMP PE2 - Education on Low-Impact Lawn and Garden Activities

Educating Parish residents on how small changes at their homes can have wide reaching benefits for local surface waters is an important goal for the Parish. With minor effort and little cost they hope to reach a large portion of the parish by posting educational material on the Plaquemines Parish website, including environmentally friendly alternatives to standard pesticides and herbicides.

Measurable Goals

Milestone 1: The Parish will create and post education materials to their website. They will highlight this on the Parish Facebook page and in next year's postcard mailer.

Timeframe: Educational materials will be created and uploaded to the website by the end of the year 2019. These educational materials will also be highlighted on the annual postcard mailer sent out in the first quarter of 2020.

BMP PE3 - Education on Proper Disposal of Campground/Recreational Vehicle/Marina Waste

Plaquemines Parish has the largest land to water ratio in the state of Louisiana and is considered one of the premier fishing destinations in the state. The waters of Plaquemines support local fishermen, oyster farmers, shrimpers and visiting sports fishermen. These factors make it clear that anyone using the waters of Plaquemines – whether it be for making a living or for purely recreational purposes need to know how important these waterways are.

Measurable Goals

Milestone 1: Creation of new educational materials on the proper disposal of marina waste. Materials will be ready for distribution by end of the second quarter. These materials will be posted/distributed at 6 privately owned marinas throughout the Parish.

Timeframe: Materials will be posted/distributed at Marinas by the end of the year.

Milestone 2: The creation of permanent metal signs for all five of the Parish's major boat harbors – Buras, Empire, Empire Shipyard, Pointe a la Hache, and Venice.

Timeframe: Metal signs to be designed and permanently posted at all five sites by end of year and checked annually thereafter.

BMP PE4 - Education on Proper Disposal of Household Hazardous Wastes

This BMP is a two-step process. The first step is educating residents on how household chemicals can be damaging to local waters when disposed of improperly. The second is providing information and access to proper disposal methods. This two-step process is an easily implemented system which can having lasting benefits to local waters. The Parish will use the same approach as with all other educational materials – utilizing both digital and print media. Both platforms will provide initial education and information on Parish sponsored disposal programs/areas as defined under BMP IDDE4.

Measurable Goals

Milestone 1: Creation of new educational materials for the Plaquemines Parish website which compare improper disposal and its dangers with proper disposal.

Timeframe: Materials to be posted/updated twice a year.

Milestone 2: Advertisement of existing Parish facilities that will accept household hazardous wastes. Information will be disseminated by both the website and the Plaquemines newspaper.

Timeframe: Advertisement/information on Parish website March 2019 and updated as required. Newspaper ads will be placed twice a year – in the second and fourth quarters.

4.2 Public Involvement

In the past, Plaquemines has had low resident turn out for various Parish sponsored activities. Because of this, the Parish will focus on improving a few of its existing practices and how they coordinate and monitor data related to these activities. As stated under Minimum Control Measure 4.1 – the success of the SWMP will rely heavily on resident buy-in and support. Plaquemines believes making the involvement both beneficial and simple will increase this support.

4.2.1 Control Measures

BMP PI1 – Citizen Complaint Hotlines

As stated previously, Plaquemines Parish spans over a vast geographical area and has a relatively small staff to manage SWM activities. The number of staff members directly involved with the SWMP is even smaller. Because of this, Plaquemines will benefit greatly by providing a Citizen Hotline which will allow any citizen to become involved, very easily and whenever they want. Plaquemines will establish two

different hotlines – one that is monitored during regular business hours and a second that will allow residents to leave messages/complaints after hours.

Measurable Goals

Milestone 1: The Parish will establish two Citizen Complaint Hotlines. One to be monitored during the day and a second for after-hours complaints.

Timeframe: Both phone numbers are already established as Parish numbers. They will be advertised as Citizen Complain Hotlines for SWMP issues by the end of the first quarter on the Plaquemines Parish website. Number will be included on mail out postcards also.

Milestone 2: Develop specific employee training for understanding stormwater management issues and a complaint form for these employees to use, which is specifically tailored for both the intake of SWMP complaints and tracking follow-up activities.

Timeframe: Training for employees will begin in the second quarter with continued quarterly training. The intake form will be completed at the same time and updated as required to improve intake quality.

Milestone 3: Database for tracking complaints. Creation of the database is highlighted under 4.3 Illicit Discharge Detection and Elimination.

Timeframe: Development of the basic Stormwater Management Database will begin in the second quarter 2019.

BMP PI2 – Stakeholder Meetings

Plaquemines Parish has formed a Stormwater Management Committee comprised of the Department Heads (as shown in ***Table 1.2.1***) under each of the three main branches of Parish Government – Operations, Public Services and Administration. The Committee was developed in November 2018. The Committee handles all aspects of the Stormwater Management Plan and believes public involvement is a key aspect of the plan. They want to provide a forum for open discussion.

Measurable Goals

Milestone 1: Establish members of Committee and begin work on Plaquemines Parish's Stormwater Management Plan.

Timeframe: SWM Committee was formed in November of 2018. SWMP is being authored by consultant, GreenPoint Engineering, with direction by Ken Dugas and input from the Committee. Work began in November of 2018. Rough draft of SWMP was completed January 2019.

Milestone 2: The Committee will establish a quarterly meeting schedule. These meetings will be open to the public and advertised via the Plaquemines Parish website.

Timeframe: Meetings will begin before the end of the first quarter and be held every three months after that.

BMP PI3 – Storm Drain Stenciling

As required in the General Permit Plaquemines Parish is responsible for establishing a Storm Sewer System Map. This is another aspect of the permit that is difficult to accomplish due to the geographic

nature of the Parish, small staff and lack of funding. However, the Parish believes that a good first step in this process is the cataloging and stenciling of storm drains. Storm drains will be stenciled with "NO DUMPING" which will also serve as a mode of public outreach and education. A "Paint and Ping" method will be employed -as storm drains are marked they will also have their GPS coordinates logged. The logged coordinates will be entered into a database and function as one of the first steps of creating the Storm Sewer System Map. The Parish will formulate a rough schedule for stenciling storm drains, as well as, including this step in other inspections – such as related to new and post construction developments.

Measurable Goals

Milestone 1: Begin stenciling of Catch Basins and create coordinate data base.

Timeframe: Parish has begun stenciling of catch basins. They will continue to stencil and catalog catch basins – completing a minimum of 200 basins by the end of year. They will continue to map a minimum of 200 a year until all catch basins throughout the Parish are mapped.

Milestone 2: This BMP ties into the creation of the Storm Sewer System Map.

Timeframe: The Parish plans to complete 20% of the SSS map every year, completing a full system map in five years.

4.3 Illicit Discharge Detection and Elimination

To some degree the Parish already has an Illicit Discharge Detection and Elimination Program in service. The Health Department handles reports of failing septic systems and sanitary sewer overflows and responds to them. However, the existing mode for collecting data on these responses and the follow up procedures are not efficient, well organized, nor documented. The Parish's approach for solving this is to create an umbrella system that all departments of the Parish will use to monitor all aspects of the SWMP. The core of this umbrella system will be a database specifically designed for organizing inspection report data, generating follow up reminders and tracking SWMP impacts.

4.3.1 Control Measures

BMP IDDE1 – Citizen Complaint Hotline for Illegal Dumping / Illicit Discharges

Noted under BMP PI1. The Citizen Complaint Hotline will provide general information, as well as, an avenue for residents to report issues that need to be inspected.

BMP IDDE2 – Inspections, Database and Follow Ups for Failing Septic Systems

The inspection of septic systems is one facet of the database the Parish wants to build and put into service. The database will be managed by the Engineering department. They will handle the input of all inspection reports to verify that data is entered in a uniform manner that can easily generate reports – especially follow up inspection work orders. One way of keeping data uniform is all Parish departments will begin using a uniform SWMP inspection form. The expectation is that the single form will allow the database to easily streamline the Parish's SWMP inspections.

Measurable Goals

Milestone 1: Staff training, creation and implementation of SWMP Inspection form.

Timeframe: Inspection form was put into use January 2, 2019. This marks the beginning of data collection for the new SWMP database. The first quarter will be used as a pilot period to field test the form. It will be reviewed and revised at the next SWM Committee Meeting – near the end of the first quarter.

Milestone 2: Building of SWM Database.

Timeframe: Work on the database will begin in the second quarter after data has been gathered for a few months. Database will be completed and in full use by the end of the year. It will be regularly maintained and updated as needed based on shortcomings revealed through data gathering.

Milestone 3: Follow Up Inspection System.

Timeframe: This will be an ongoing milestone. Follow up inspections will start as soon as required based on initial inspections. The Parish plans to have the database in service by the end of the year. Follow up inspection work orders will start being generated by the same time, if not earlier.

BMP IDDE3 – Inspections for Sanitary Sewer Overflows

Inspections for sanitary sewer overflows is on par with BMP IDDE2 – Inspections for Failing Septic Systems. Sanitary sewer overflows will follow the same processes, have the same milestones and timeframes as noted under BMP IDDE2.

BMP IDDE4 – Recycling Programs for Hazardous Wastes – Including Used Oil

The Parish currently has several locations for residents to drop off hazardous wastes. The Parish wants to begin a more publicized and organized program though. This program will include more advertising of existing facilities - as noted in BMP PE4 and a monitoring system that will track how much hazardous waste is accepted and disposed of by the Parish.

Milestone 1: Advertisement of existing Parish facilities that will accept household hazardous wastes. Information will be disseminated by both the website and the Plaquemines newspaper.

Timeframe: Advertisement/information on Parish website March 2019 and updated as required. Newspaper ads will be placed twice a year – in the second and fourth quarters.

Milestone 2: Solid waste facilities that accept oil will begin logging and reporting on how much material residents drop off at each facility.

Timeframe: Facilities will begin tracking oil collection at the beginning of the fourth quarter and will turn in reports every quarter after that.

4.3.2 Illicit Discharge Detection Plan

All Parish departments are required to perform routine inspections and document storm water violations and illicit discharges using a standard inspection form, included for reference as **Appendix A**. Priority areas most likely to have illicit discharges are individual sewer treatment package plants in remote locations. These facilities are monitored by the Parish's utility operator, who conduct visual screening of the outfalls during dry weather and document performance on Discharge Monitoring Reports (DMRs) regularly.

Procedures for removing identified sources of discharges are laid out in **Section 4.3.3** below. The Parish has established a Stormwater Management Taskforce comprised of representatives from the Parish's Engineering and Public Works, Drainage, Building Inspection, and Health Departments. The taskforce meets quarterly to evaluate progress and modify the program as needed. In the event of a release, the Parish's outside engineering consultant will review the incident within 14 days and recommend modifications of the stormwater management plan for adoption.

4.3.3 Spill Response Plan

In the case of an illicit, non-storm water discharge, Plaquemine's Parish assesses the spill and determines if it is a result of an illegal dumping and to whom the abatement must be assigned. The following spill response procedures are taken into action for the different types of discharges:

- In the case of a spill consisting of solid waste or litter, PPG Solid Waste Departments remove and dispose of the waste directly.
- In the case of sanitary sewer overflow, Inframark is called to assess the spill. Spills/overflows normally occur when there is a power outage or when a main gravity line blocks. Inframark identifies the spill and investigates the cause of the spill. Spills are usually contained and recovered if possible and poses no potential impact on drinking water, wildlife, etc. A field incident report form is completed when a spill/overflow is discovered or reported. The sanitary sewer overflow is also report through the NETDMR system with DEQ as a spreadsheet attachment.
- In the case of a hazardous discharge, PPG OEP is called to handle the discharge and safely dispose of it.
- If any case has materials that In-House staff cannot address, a relevant abatement contractor is called to come handle the clean-up of the site. As an example, Oil Mop, Inc. (OMI) for oil spills.

There are a number of non-storm water discharges that occasionally occur and are not significant sources of pollutants and will not be addressed as illicit discharges. These discharges include small overflow sewer treatment plants, jobs sites, litter/pollution, charity car washes, non-commercial residential runoff, etc. Any individual non-storm water discharge that is determined by the Parish to be contributing significant amounts of pollutants to the MS4 are prohibited and will be noted and referred to the proper regulatory authorities, including LDEQ. A more extensive provision will be outlined in the General Stormwater Ordinance.

This ordinance is under development and will serve as a comprehensive ordinance dictating practices, procedures and compliance for stormwater discharge addressed in this SWMP. The ordinance will be submitted to the various Parish departments for review, then to the administration's counsel for legal review, followed by discussion and adoption by the Parish Council.

Measurable Goals

Milestone 1: A complete SOP, adopted by all Parish departments.

Timeframe: SOP completed and in practice by 2020.

Milestone 2: Finalize the draft illicit discharge ordinance and put it into effect.

Timeframe: Finalized ordinance in effect by 2020.

4.3.4 Storm Sewer System Map

At this point Plaquemines Parish does not have a Storm Sewer System map. Due to the Parish staff cycling out frequently and poor record keeping there is very little that can be pieced together to create a coherent map. The Parish understands this is an important and required piece of the SWMP. They have begun the process of cataloging their existing GIS Maps to layout the largest branches of their drainage system – working backwards from the Mississippi River down to their largest main canals. They will combine this basic general "outline" with existing as-built drawings to flesh out their SSS map. Any missing information will have to be gathered by Engineering Department staff. This gathering of information will include storm drains stenciled under BMP PI3.

Measurable Goals

Milestone 1: Complete cataloging/compilation of existing drainage maps and create map with the largest named bodies of water on GIS layer.

Timeframe: The Parish plans to have this basic map fully completed by the end of 2019.

Milestone 2: The Parish will be divided into five sections. A GIS layer of the drainage system will be completed as the storm drain stenciling program proceeds – "Paint and Ping" method.

Timeframe: Complete mapping of one section (20%) of the Parish every year.

Milestone 3: Storm Sewer System Map completed in GIS.

Timeframe: Map to be completed within five years from date of this SWMP.

4.3.5 Develop Outfall Inventory

Plaquemines Parish will be working on their outfall inventory as they catalog all Parish entities for **Section 2 Parish Maps and Assets**. These maps will be in parallel to their SSS map. The Parish has a large outfall list due to its geographic nature. They want to be thorough in documenting and mapping all assets under the SWMP as they have never taken the time to consolidate all existing documents that have been written through the years.

Measurable Goals

Milestone 1: Develop list of all Parish LDEQ permitted locations.

Timeframe: Complete list by end of third quarter. Update annually as required.

Milestone 2: Develop list of standard outfalls that have been regularly tested by Inframark.

Timeframe: Have list of outfalls completed and mapped by end of year. Update annually as required.

4.3.6 Employee Training

Plaquemines has established the Stormwater Management Committee as their first step of organized employee training. The committee is headed by Ken Dugas, Parish Engineer. Three meetings were held through November to December to discuss which BMPs would be selected for the Stormwater

Management Plan. Once a draft of the SWMP is completed, the SWM Committee will review and edit. After the SWMP has been accepted by the Committee, it will then be presented to the Plaquemines Parish Council for endorsement. After this, a standardized training will be implemented for all staff who will be involved in the various aspects of the SWMP.

Measurable Goals

Milestone 1: SWMP draft to be finalized for review by the Committee.

Timeframe: Rough draft of SWMP to be ready for SWM Committee review by end of January 2019.

Milestone 2: SWMP to be presented to Plaquemines Parish Council.

Timeframe: Depending on Council agenda, the SWMP will be presented sometime during the second quarter.

Milestone 3: Employee training program to begin.

Timeframe: Training will begin after the SWMP is endorsed by the Parish Council and be held quarterly as required.

4.3.7 Public Outreach

Public employees, businesses, and the general public will be informed of hazards associated with illegal discharges and improper disposal of waste with educational posters and a website. Educational posters and informative flyers will be posted in the governmental buildings to inform the employees of better practices. Plaquemine's Parish has developed a website to overview the "Protect Our Waters Campaign" and will also highlight practices for the public to practice to diminish hazards.

4.3.8 IDDE Program Indicators – Documenting Success

The Parish is instituting a comprehensive MS4 compliance documentation program. Once implemented, the Parish will be able to demonstrate progress toward protecting receiving streams to the public.

4.4 Construction Site Stormwater Runoff Control

Plaquemines Parish only has one full time construction/building inspector. Most new construction is inspected by third party inspectors. The Parish intends for Contractors to adhere to the requirements as set forth by the Stormwater Management Plan and for third party inspectors to help them track and enforce the requirements, but they understand implementation of this will require time and effort and will potentially be inefficient. The Parish hopes by providing guidelines for simple requirements on construction sites matched with a streamlined inspection process that they will have success and be able to collect data that reflects this. The Parish will begin including a SWM Form with all building permits that are applied for. This form will require Contractors to provide three extra documents: a site stormwater BMP list, an Erosion and Sediment Control Plan, and a Spill Prevention and Control Plan with all building permit applications. Without these documents being provided, the permit will not be approved. The inspectors will then be responsible for verifying these plans are posted and adhered to on site along with the other BMPs set forth here, including: Concrete Washout Areas, Site Waste Management and Storm Drain/Catch Basin Protection.

4.4.1 Control Measures

BMP CONS1 – BMP Inspection and Maintenance

The Parish will provide a general outline of what types of SWMP BMPs are expected, but will rely on Contractors to turn in their own SWMP based on their Construction Plans. Construction inspectors will need to verify that the Contractor's BMPs are posted when they visit the site and that they are being followed to match general compliance of the SWMP.

Measurable Goals

Milestone 1: Forms for permit packages and contractor check lists created.

Timeframe: Forms should be completed and instituted into building permit packages by the end of the second quarter.

Milestone 2: Construction inspectors to begin inspecting for compliance based on these new permit packages and check lists.

Timeframe: Inspections to begin after updated permit packages have been put into circulation. These inspections will be documented for data purposes.

BMP CONS2 – Site Inspection and Enforcement of Control Measures

The Parish's Building Department currently monitors and inspects construction activities in accordance to existing Building Permit and Subdivision Development ordinances. Construction Site Operators are required to keep Stormwater Pollution Prevention Plans (SWPP) on site at all times. However, the Parish is in development of a General Stormwater Ordinance, as stated in **Section 4.3.3** and found in **Appendix B**, that will be applicable to construction site runoff. The ordinance will define non-compliance and will outline procedures for determining which sanctions will apply to infractions.

Measurable Goals

Milestone 1: The General Stormwater Ordinance to be finalized and effectively outline construction runoff procedures.

Timeframe: The General Stormwater Ordinance to be completed by 2020 and updated in the respective annual report.

BMP CONS3 – Building Permits Requiring an Erosion/Sediment Control Plan

As with BMP CONS1, the adopted General Stormwater Ordinance will call for Contractors to provide an Erosion/Sediment Control Plan. Construction inspectors will need to verify this plan is being followed on site.

Measurable Goals

Milestone 1: Forms for permit packages and contractor check lists created.

Timeframe: Forms should be completed and instituted into building permit packages by the end of the second quarter.

Milestone 2: Construction inspectors to begin inspecting for compliance based on these new permit packages and check lists.

Timeframe: Inspections to begin after updated permit packages have been put into circulation. These inspections will be documented for data purposes.

BMP CONS4 – Spill Prevention and Control Plan

Similar to BMP CONS1, the Parish will provide a general outline of what they expect from a Spill Prevention and Control Plan in the General Stormwater Ordinance. They will rely on the Contractor to furnish a full detailed plan with their permit application. As with the first two Construction Site BMPs, the inspector will need to verify they plans are posted on site and they are being followed.

Measurable Goals

Milestone 1: Forms for permit packages and contractor check lists created.

Timeframe: Forms should be completed and instituted into building permit packages by the end of the second quarter.

Milestone 2: Construction inspectors to begin inspecting for compliance based on these new permit packages and check lists.

Timeframe: Inspections to begin after updated permit packages have been put into circulation. These inspections will be documented for data purposes.

BMP CONS5 – Concrete Wash-Out Areas

This is the first of three, simple "physical" on-site requirements that the Parish will begin enforcing on Contractors. These three "physical" requirements have been chosen as they are easy to inspect for and will be easy for the contractor to install and maintain throughout the life cycle of a project. In all construction permit packages, the Parish will provide a drawing with the minimum dimensional guidelines for a concrete washout area. These wash-out areas must be maintained at all times.

Measurable Goals

Milestone 1: Dimensional drawings/requirement form created for permit packages.

Timeframe: Drawings/forms should be completed and instituted into building permit packages by the end of the second quarter.

Milestone 2: Construction inspectors to begin inspecting for compliance based on these new permit packages and check lists.

Timeframe: Inspections to begin after updated permit packages have been put into circulation. These inspections will be documented for data purposes.

BMP CONS6 – General Construction Site Waste Management

The second physical requirement chosen by the Parish as a BMP was selected as all construction sites use a dumpster. It is an easy step for inspectors to verify a dumpster is on site and that the area around the dumpster is clean and doesn't pose a run-off threat to nearby catch basins or ditches.

Measurable Goals

Milestone 1: Contractor check list is created for permit packages. This outlines the various responsibilities of keeping a dumpster on site as it pertains to the SWMP.

Timeframe: Forms should be completed and instituted into building permit packages by the end of the second quarter.

Milestone 2: Construction inspectors to begin inspecting for compliance based on these new permit packages and check lists.

Timeframe: Inspections to begin after updated permit packages have been put into circulation. These inspections will be documented for data purposes.

BMP CONS7 – Storm Drain / Catch Basin Protection and Cleaning

The third and final physical requirement selected by the Parish. This BMP was an easy selection as it is already common practice and it just makes sense! As with the other physical requirements for construction sites, this can be easily maintained by contractors and easily inspected for. Contractors will also be held accountable for cleaning out any catch basins which gathered debris from their jobs. These basins will be inspected, approved and marked under the "Paint and Ping" program.

Measurable Goals

Milestone 1: Creation of basic guidelines for storm drain/catch basin protection that will be provided in permit packages.

Timeframe: Guidelines should be completed and instituted into building permit packages by the end of the second quarter.

Milestone 2: Construction inspectors to begin inspecting for compliance based on these new permit packages and check lists.

Timeframe: Inspections to begin after updated permit packages have been put into circulation. These inspections will be documented for data purposes.

4.5 Post-construction Stormwater Management in New Development and Redevelopment

4.5.1 Control Measures

BMP POST1 – Non-structural BMPs

The Parish currently lacks a general stormwater ordinance that addresses standards that direct growth, or to explicitly protect sensitive areas and increase open space, provide buffers along sensitive water bodies, minimize impervious surfaces and minimize disturbances of soils and vegetation. A goal of the General Stormwater Ordinance currently in development is to address these non-structural BMPs. As the Parish lacks any urban areas, the ordinance will not address infill development unless and until necessary.

Developers, along with the public, will be educated about practices that minimize water quality impacts through informational brochures provided on the Parish's website. The educational materials directed to developers and the public will reflect the policies and requirements adopted in the final General

Stormwater Ordinance. The developers will have additional guidance on ways to mitigate water quality impacts through the outlined restrictions/suggestions outlined in the Stormwater Ordinance.

Measurable Goals

Milestones: Establish non-structural requirements in the draft General Stormwater Ordinance.

Timeframe: These requirements will be established upon adoption of the General Stormwater Ordinance.

BMP POST2 – Structural BMPs

Currently Plaquemines Parish does not have a stormwater ordinance that explicitly mandates storage, filtration nor infiltration. The General Stormwater Ordinance currently in development will propose new requirements that will encourage developers to incorporate these practices. The ordinance will also dictate how future operation and maintenance responsibilities are to be formalized between developers, land owners and Plaquemines Parish Government.

Measurable Goals

Milestones: Establish structural requirements in the draft General Stormwater Ordinance.

Timeframe: These requirements will be established upon adoption of the General Stormwater Ordinance.

BMP POST3 – Maintaining Predevelopment Runoff

Currently Plaquemines Parish does not have a stormwater ordinance that mandates the maintenance of pre-development runoff and water quality. The General Stormwater Ordinance currently in development will propose new requirements that will limit post-construction to pre-development conditions. The ordinance will promote practices that decrease stormwater runoff volume and contamination, such as Low Impact Development (LID) designs. For those development and redevelopment projects that impact one-acre or more, or smaller projects the are part of a larger development plan, the requirements will establish broader compliance goals that reflect the greater potential impact. The intention of this section of the draft ordinance will be to promote management techniques such as infiltration and pollution prevention to protect surface waterbodies and help maintain pre-development runoff after construction. The ordinance will also mandate that development follow measures to minimize impervious areas and source control measures.

Measurable Goals

Milestone 1: Establish pre-development runoff requirements in the draft General Stormwater Ordinance.

Timeframe: These requirements will be established upon adoption of the General Stormwater Ordinance.

BMP POST4 – Storm Drain / Catch Basin Cleaning, Stenciling and Mapping

As new developments come online, the Parish will require a final inspection of all new catch basins. This inspection will require that catch basins have a final cleaning, if required, and they will also be mapped

under the "Paint and Ping" program. The milestones and timeframe for this are the same as BMP CONS6.

Measurable Goals

Milestone 1: Creation of basic requirements for cleaning, stenciling and mapping of catch basins in new developments.

Timeframe: Requirements should be completed into permit / zoning packages by the end of the second quarter.

BMP POST5 – Infrastructure Planning

Perhaps the most ambitious BMP selected by the SWM Committee is the idea of including stormwater management measures into the design phase of new developments. This will require a Parish wide reimagining of how projects are designed, constructed and maintained. Potentially, the Parish could require design criteria such as alternative pavers, extra catch basins, grassed swales, green parking, and retention ponds to be part of future development plans. However, it is unknown at this time how viable this BMP truly is for the Parish. The Stormwater Management Committee knows these requirements could have a large, lasting impact, but they will need to be developed and accepted by the Parish Council before becoming design/development requirements.

Measurable Goals

Milestone 1: The SWM Committee will research and propose a plan for including stormwater measures in future developments to the Parish Council. This will require input from various design and planning experts.

Timeframe: A plan will be proposed to Parish Council by the end of 2020.

4.6 Pollution Prevention and Good Housekeeping for Municipal Operations

The Parish has numerous facilities of all natures, ranging from boat harbors and drainage pump stations, to the government office complex and solid waste transfer stations. They understand that a uniform program aimed at keeping their own properties clean, safe and compliant is very important. The Parish is compiling a comprehensive list of all of their assets, which will then be mapped and included in **Section 2 Parish Maps and Assets.** This list and the associated maps will be the foundation on which they build their Pollution Prevention and Good Housekeeping Measures.

4.6.1 Control Measures

The Parish is responsible for the LPDES Multi-Sector General Permit (MSGP) and individual LPDES permits that discharge into its MS4. The annual reports and SWMP revisions will include a current list of permits.

BMP PP1 – Hazardous Materials Storage

A Parish Safety Engineer has been tasked with inspecting Parish facilities and developing a comprehensive list of what hazardous chemicals are stored at which facilities. The Parish is working to catalog everything from diesel fuel to pesticide storage. While the storage sites are being mapped, they

are working on developing warning signage and a protocols list that details how chemicals should be stored and what to do in case of a spill.

Measurable Goals

Milestone 1: Development of permanent signage and protocols to be installed at facilities with hazardous chemicals.

Timeframe: Creation of materials will be completed by end of second quarter.

Milestone 2: Finish inventory list of facilities and create map.

Timeframe: List and map to be completed by end of third quarter.

Milestone 3: Permanent signage and protocols to be installed at all parish assets where hazardous chemicals are stored.

Timeframe: Installation will begin in the fourth quarter (after list and map are completed). Installation will be completed by end of second quarter 2020.

BMP PP2 – Illegal Dumping Control

Illegal dumping is a serious issue throughout the Parish. The Parish has been using several means to try and curb the situation, but they have no tracking system or data to understand what has been effective. Reducing this problem on a parish-wide level is one goal of the Citizen Complaint Hotline developed under **BMP PI1** and **BMP IDDE1**. For controlling this issue at their own facilities, the Parish will institute a standardized cleaning/trash pick-up schedule.

Measurable Goals

Milestone 1: Develop a standard schedule and response program for cleaning up Parish facilities. A log-book for tracking cleaning will also be instituted. All data will be entered into the new SWM Database.

Timeframe: Implemented by the end of the year. Monitoring will be ongoing.

BMP PP3 – Parking Lot and Street Cleaning

The Parish already performs street sweeping their own facilities. They do not have a standardized schedule or system for tracking their cleaning dates though.

Measurable Goals

Milestone 1: Develop a schedule for cleaning Parish parking facilities and track this schedule in the SWM Database.

Timeframe: Implemented by the end of the year. Monitoring will be ongoing.

4.6.2 BMP PP4 – Storm Drain System Cleaning

The Parish will highlight this as a response service to the Citizen Complaint Hotline.

Measurable Goals

Milestone 1: Citizen Complaint Hotline to be established and advertised on a Parish wide medium – Parish website and postcard mailers.

Timeframe: Hotline active by end of first quarter.

Milestone 2: Begin tracking hotline responses and problematic sections of storm drain system – including catch basins and ditches based on complaints or standard inspections. These will be tracked in the database and scheduled for regular cleanings.

Timeframe: Begin entering data on cleaning requests and schedule when the database is completed.

BMP PP5 – Training Programs for Grounds Maintenance and Landscaping Crews

As noted under **4.3.5 Employee Training**, the Parish will implement quarterly training for all staff. The training for grounds and landscaping crews will be more specialized because they have a direct hand in limiting the amounts and types of chemicals which can potentially contaminate surface waters. The training program will be comprehensive, covering a wide variety of aspects about pest control, basic maintenance techniques and lawn care.

Plaquemines Parish has initiated an employee training program that leverages recorded webinars and training, produced by EPA, to prevent and reduce storm water pollution from municipal operations. These training materials explain the regulatory framework and technical considerations of the MS4 program. The NPDES stormwater webcasts and training materials can be located at:

www.epa.gov/npdes/npdes-stormwater-webcasts

These training programs will provide government employees the knowledge to extend the public outreach programs developed for the public information minimum measure and the illicit discharge minimum control measure. By using the training programs, Parish staff will draw on proven methods for informing and engaging the public.

Measurable Goals

Milestone 1: Develop specific training materials that highlight minimizing pesticide/herbicide application, proper application and integrated pest management techniques.

Timeframe: Specialized training materials to be developed by end of second quarter. Trainings will be held every quarter afterwards.

4.6.3 BMP PP6 – Operation and Maintenance (O&M) Program

The O&M program for Plaquemines Parish is designed to prevent or reduce pollutant runoff from the municipal operations as outlined in a permit that the Parish currently follows.

To reduce floatable and other pollutants to the MS4, the drainage pump stations in the parish are equipped with solids removal screens. The screens are cleaned/replaced routinely in accordance with the drainage department SOPs. In the event of reported pollutant discharges, the Parish may deploy drainage booms and abatement equipment to prevent discharge to the receiving streams.

The Parish has standard controls put in place to reduce/eliminate discharge of pollutants from municipal parking lots, maintenance and storage areas, waste transfer stations, maintenance shops with outdoor storage areas, and other applicable municipal facilities that can contribute to pollution. Aside from the

regular maintenance schedule followed by all employees at municipal facilities, the staff are directed to document observed violations and report them for inclusion in the database. The waste that is removed from the MS4 and municipal operations (e.g., dredged soil, accumulated sediments, floatables, other debris) are disposed of according to their classification. The solid waste stream into the MS4 is largely made of debris removed from the drainage system and screenings collected from the drainage pump stations. Most of the solid waste and floatables are handled by PPG's Solid Waste Department directly. The Parish pumps out used oil and recycles it. Any waste that cannot be handled by PPG's Solid Waste Department will be contracted out to an appropriate collection agency for disposal.

To ensure that flood management projects are assessed for impacts on water quality and existing projects are assessed for incorporation of additional water quality protection devices and practices, the General Stormwater Ordinance currently in development will mandate a regular review and assessment of standard operating procedures relevant to stormwater management.

Measurable Goals

Milestone 1: Incorporating flood management assessment requirements in the General Stormwater Ordinance.

Timeframe: These requirements will be established upon adoption of the General Stormwater Ordinance.

Appendix A – Field Inspection Form

Plaquemines Parish Government
MS4 Compliance Program Field Inspection Form

Date: _____ Street Address: _____ Town: _____

AI #: _____ Vicinity/Cross Streets: _____

Inspecting Department

Operations ☐Drainage ☐Public Works ☐Permits

Public Service ☐Water ☐Wastewater ☐Solid Waste

Administration ☐Health ☐Other Dept: _____

Third Party ☐ Inspection Co:_____

Inspector Name: _____

Inspection Type

☐Complaint ☐Routine ☐Follow Up

Other – Prompted by: Due:_____

☐Visual ☐Odor ☐Other Date:_____

Notes:_____

_____

Photos:_____

Facility Type

☐Municipal Bldg. ☐Parish Asset ☐New Construction ☐Post-Construction ☐Private Residence ☐Commercial

Municipal/Parish Facilities - Site Inventory Best Management Practices

Site Inspected for:

☐ **Hazardous Chemicals:** On Site: **Y / N** Kept Dry: **Y / N** Away from Storm Drains: **Y / N** MSD Sheets Available: **Y / N**

☐ **Spill Response/Prevention:** Plan is Posted: **Y / N** Clean-Up Kit on Site: **Y / N**

☐ **Used Oil Recycling:** On Site: **Y / N** Tank/Tank Area is Clean: **Y / N** Containment Curb/Berm: **Y / N**

☐ **Illegal Dumping Controls:** Facility is Regularly Monitored: **Y / N** Dumpster for Public Use: **Y / N**

☐ **Storm Drain Sys. Cleaning:** Street Sweeping Done Regularly: **Y / N** Catch Basins Protected/Cleaned: **Y / N**

☐ **SWPPP on Site:** Facility has AI Number: **Y / N** If Facility has an AI Number, is SWPPP available on site: **Y / N**

Minimum Control Measure Observations - Best Management Practices Checklist

Illicit Discharge Detection and Elimination

Septic System Leaks: **Y / N** Illicit Connections: **Y / N** Sanitary Sewer Overflow: **Y / N** Illegal Dumping: **Y / N**
Wastewater Connections to Storm Drain System: **Y / N**
PHOTOS:_____

Construction Site Runoff Control N/A ☐

BMP Poster/Flyer On Site: **Y / N** Spill Prevention/SWPPP Posted: **Y / N** Waste Management (Dumpster): **Y / N**
Area by Dumpster Free of Debris: **Y / N** Concrete Washout Area Provided: **Y / N** Catch Basins Protected: **Y / N**
Erosion Prevention in Place per Erosion Plan in Permit: **Y / N**
Other BMPs Noted: **Y / N**
If yes, list:_____
PHOTOS:_____

Post-Construction Storm Water Management N/A ☐

BMP Poster/Flyer On Site: **Y / N** Catch Basins Free of Debris: **Y / N** Catch Basins: Tagged☐ GPS☐ No☐
Grassed Swales/Ditches: **Y / N**
Other BMPs Noted: **Y / N**
If yes, list:_____
PHOTOS:_____

Pollution Prevention / Good Housekeeping N/A ☐

Hazardous Materials Storage☐ Illegal Dumping Control☐ Materials Management☐
Spill Response and Prevention☐ Storm Drain System Cleaning☐ Used Oil Recycling☐

Appendix B – General Stormwater Ordinance

Blank page(s) reserved for ordinance once adopted by Plaquemines Parish Council.