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09-19-2022

RE-COVERAGE FORM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) GENERAL PERMIT

GENERAL PERMIT: MSRMS4 0 3 4. This coverage number must be completed for the referenced MS4 or this form will be considered incomplete and will be returned. The coverage number can be found at the bottom left corner of your previous Certificate of Coverage.

INSTRUCTIONS

The submittal of this form is required to receive coverage under the reissued Small Municipal Separate Storm System (MS4) General Permit. This form, with an original signature, must be completed and returned to MDEQ at the address printed at the bottom of this form within 60 days of the date of the Letter of Instruction for Re-Coverage.

Submittals with this Re-Coverage Form must include:

- A Storm Water Management Program (SWMP) as required by ACT 5 of the General Permit
- Copies of current municipal storm water ordinances, or if not a city or county, copies of current regulatory mechanisms that address storm water management
- A location map must be attached, if location boundaries have changed since initial coverage issuance
- Copy of current Storm Water Pollution Prevention Plan (SWPPP) or Plans

Additional submittals may include:

- Appendix A and associated Joint MS4 legal documents, if applicable

NOTE: 3-RING BINDERS WILL NOT BE ACCEPTED DUE TO LIMITED FILING SPACE AT MDEQ.

MS4 APPLICANT INFORMATION

MS4 NAME: City of Bay St. Louis

MS4 MAILING ADDRESS: 688 Highway 90

MS4 CITY: Bay St. Louis

STATE: MS

ZIP: 39520

MS4 COUNTY: Hancock

MS4 IS A: ☒ CITY/TOWN ☐ COUNTY ☐ OTHER: _____

IS THIS A JOINT RE-COVERAGE FORM BEING SUBMITTED?
(If yes, a completed Appendix A must accompany submittal)

☐ YES ☒ NO

MS4 POPULATION: 14,034

PRIMARY LOCAL CONTACT NAME (responsible for storm water program implementation): Ronnie Vanney

CONTACT'S TITLE: Director of Public Works & Utilities

OFFICE PHONE: (228) 467-5505

CELL PHONE: () _____

FAX NUMBER: () _____

E-MAIL ADDRESS (local contact): rvanney@baystlouis-ms.gov

E-MAIL ADDRESS (legally responsible person): mfavre@baystlouis-ms.gov

SECONDARY LOCAL CONTACT NAME (knowledgeable about program, if primary contact is unavailable) N/A

OFFICE PHONE: () _____

CELL PHONE: () _____

LOCATION DESCRIPTION OF MS4 (not required for cities and counties)

PROVIDE A NARRATIVE DESCRIPTION OF THE GEOGRAPHICAL LOCATION OF THE MS4 FOR FACILITIES SUCH AS MILITARY BASES, SPECIAL DISTRICTS AND ASSOCIATIONS, AND LARGE COMPLEXES (education, hospital, prison, etc.). _____

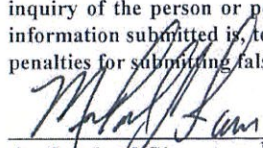
N/A

RECEIVING WATER INFORMATION

IDENTIFY THE MAJOR RECEIVING WATERS (named on a USGS Quad Map) WITHIN THE MS4 BOUNDARIES. IN ADDITION, NOTE THOSE THAT ARE 303(d) LISTED IMPAIRED WATERBODIES WITHIN THE PERMITTED AREA (a complete list of 303(d) listed impaired waters may be found on MDEQ's web site: <http://www.deq.state.ms.us>).

<u>RECEIVING STREAM</u>	<u>CHECK IF 303(d) LISTED</u>	<u>RECEIVING STREAM</u>	<u>CHECK IF 303(d) LISTED</u>
Jourdan River	<input type="checkbox"/>		<input type="checkbox"/>
Edwards Bayou	<input type="checkbox"/>		<input type="checkbox"/>
Joe's Bayou	<input type="checkbox"/>		<input type="checkbox"/>
Watts Bayou	<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>

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


Authorized Signature¹

9-19-22
Date

Michael Favre

Mayor

Printed Name

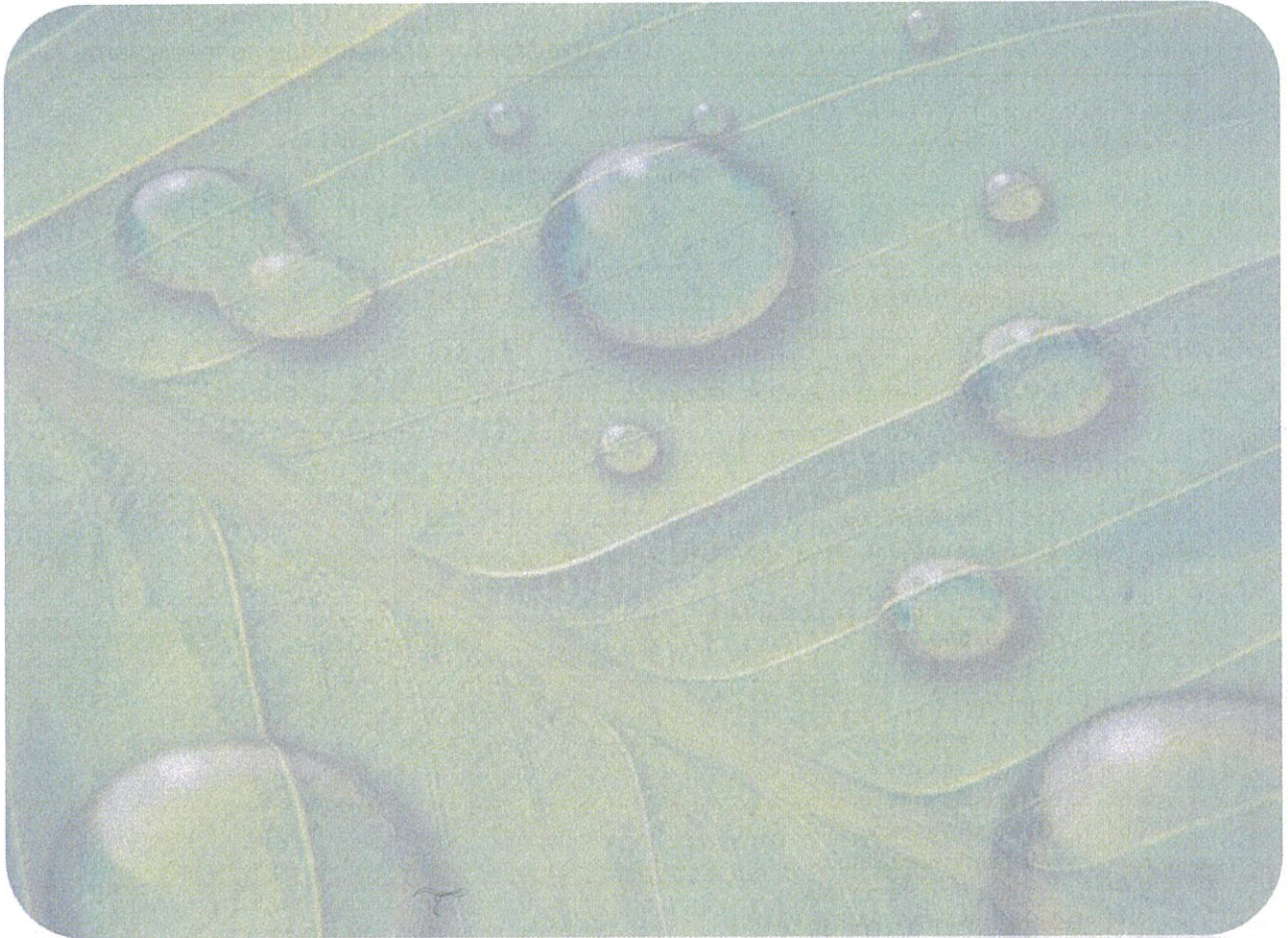
Title

¹This application shall be signed according to the General Permit, ACT10: SIGNATORY REQUIREMENTS as follows:

- For a corporation, by a responsible corporate officer.
- For a partnership, by a general partner.
- For a sole proprietorship, by the proprietor.
- For a municipal, state or other public facility, by either a principal executive officer, the mayor, or ranking elected official.

Please submit this form to:

Chief, Environmental Permits Division
MDEQ, Office of Pollution Control
P.O. Box 2261
Jackson, Mississippi 39225



CITY OF BAY ST. LOUIS, MISSISSIPPI
2022 MS4
STORM WATER MANAGEMENT PROGRAM
(SWMP)

Public Works Department
Bay St. Louis, Mississippi

September 2022

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1.0 Introduction

1.1 Overview

This document presents the City of Bay St. Louis' Storm Water Management Program (SWMP). Preparation and maintenance of this SWMP is required by the Mississippi Department of Environmental Quality (MDEQ) pursuant to 40 CFR 122.32(a)(2) and is being submitted in accordance with the Phase II permit which covers discharges from regulated small municipal separate storm sewer systems (MS4s). Based on criteria outlined in the Phase II Permit, MDEQ considers the City of Bay St. Louis to be an operator of a small MS4, and therefore is required to obtain permit coverage and meet the requirements of the Federal Clean Water Act.

1.2 Regulatory Background

The National Pollutant Discharge Elimination System (NPDES) permit program is a requirement of the Federal Clean Water Act, which is intended to protect and restore waters for "fishable, swimmable" uses. The Federal Environmental Protection Agency (EPA) has delegated permit authority to state environmental agencies, and these agencies can set permit conditions in accordance with and in addition to the minimum federal requirements. In Mississippi, the NPDES-delegated permit authority is the MDEQ.

Bay St. Louis is one of the municipalities along the Mississippi Gulf Coast which must comply with the Phase II Municipal Storm Water Permit. The Permit allows municipalities to discharge storm water runoff from municipal drainage systems into the state's water bodies (e.g., streams, rivers, lakes, wetlands) provided that the municipalities implement programs to protect water quality by reducing the discharge of "non-point source" pollutants to the "maximum extent practicable" (MEP) through application of Permit-specified "best management practices" (BMPs).

The BMPs specified in the Permit are collectively referred to as the Storm Water Management Program (SWMP) and grouped under the following 6 Minimum Control Measures:

- Public Education and Outreach on Storm Water Impacts
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination
- Construction Site Storm Water Runoff Control Construction Sites
- Post Construction Storm Water Management in New Development and Redevelopment
- Pollution Prevention/Good Housekeeping for Municipal Operations

The City has been operating under the statewide Phase II Municipal Separate Storm Sewer System (MSRMS4) which was reissued by the Permit Board on Environmental Quality on March 18, 2016. This permit expired on February 28, 2021 and has not since been reissued.

The MS4 Phase II General Permit covers the State of Mississippi and authorizes the discharge of storm water runoff into waters of the State from small MS4s, as defined in 40 CFR 122.26(b)(16). The Permit requires the City to report annually (March 31st of each year) on progress in SWMP

implementation for the previous year. The Permit also requires submittal of documentation that describes proposed SWMP activities for the coming year. This document contains the City's proposed activities for the 2022 permit term, which is anticipated to begin in 2022 and end in 2027. Implementation of various permit conditions is staggered throughout this five-year permit term.

1.3 City of Bay St. Louis Regulated Area

The City is responsible for implementing surface water management activities within its boundaries, including the planning, design, construction, operation, and maintenance of the storm water drainage system. The City performs all operation and maintenance on the public drainage system that is designed and constructed to public standards and located within easements or rights-of-way, or real property that has been conveyed or dedicated to the City. The City also maintains open channels throughout the city, many of which are old irrigation canals, and public outfalls to natural sloughs and streams within the City's jurisdiction.

The geographic area covered by this SWMP includes approximately 15.1 square miles inside the Bay St. Louis city limits and an additional 7.3 square miles of urbanizable area (i.e., between the city limits and the urban growth boundary [UGB]). Figure 1 shows the boundaries of the SWMP and adjacent areas outside the UGB which impact, or are impacted by this SWMP, the Storm Water Facility Master Plan, and the NPDES MS4 permit.

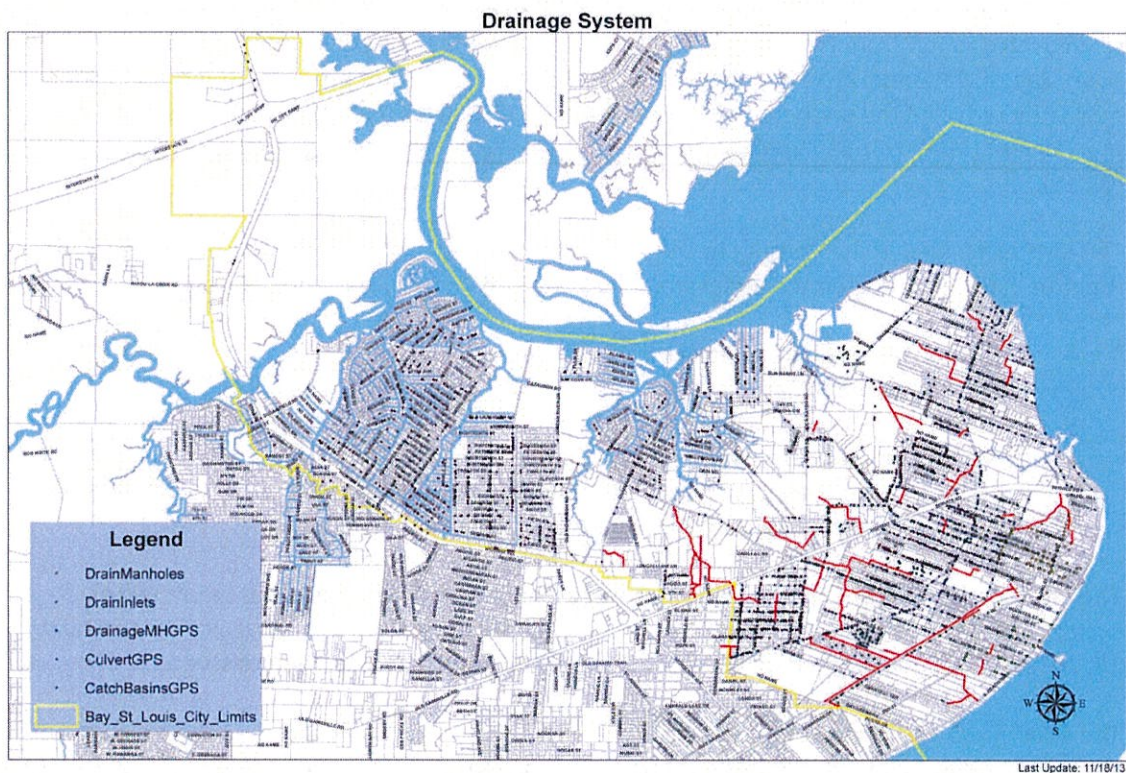


Figure 1 – Map of the Bay St. Louis Drainage System

1.4 Total Maximum Daily Load (TMDL) Compliance

The Federal Clean Water Act requires that MDEQ establish “Total Maximum Daily Loads” (TMDL) for rivers, streams, lakes, and marine waters that don’t meet water quality standards. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards. After the TMDL has been calculated for a given water body, MDEQ determines how much each source must reduce its discharges of the pollutant in order bring the water body back into compliance with the water quality standards.

The Clean Water Act requires that TMDL requirements must be included in the NPDES permits for dischargers into the affected water bodies. Storm water discharges covered under this permit are required to implement actions necessary to achieve the pollutant reductions called for in applicable TMDLs. Applicable TMDLs are those approved by the MDEQ before the issuance date of the Permit or which have been approved by the MDEQ prior to the date the permittee’s application was received by MDEQ. Information on MDEQ’s TMDL program is available on the MDEQ website at <https://www.mdeq.ms.gov/water/surface-water/tmdl/>.

The City of Bay St. Louis discharges to the following water bodies:

- Mississippi Sound
- Jourdan River
- Edwards Bayou
- Joes’ Bayou
- Watts Bayou

None of these bodies of water are listed as impaired on the MDEQ 2022 Section 303(d) List of Impaired Water Bodies. A map of the impaired water bodies is provided in Appendix B. If the MDEQ lists a water body within the permit coverage areas and establishes TMDLs for that water body, the City will include additional requirements to comply with the specified TMDL.

1.5 SWMP Implementation Responsibilities

The Public Works Department will be coordinating the overall administration of efforts to comply with Permit requirements. Each Section provides the lead departments for the associated task. In addition to the Public Works Department, implementation of the 2022 SWMP will include coordination and assistance with the Building Department.

1.6 Document Organization

The contents of this document are based upon permit requirements and MDEQ’s Phase II Municipal Storm Water Permits. The remainder of this SWMP is organized similarly to the permit:

Section 2.0 addresses Permit requirements for administering the City’s Storm Water Management Program for the 2022 term.

Section 3.0 addresses Permit requirements for public education and outreach for the 2022 Permit term.

Section 4.0 addresses Permit requirements for public involvement and participation for the 2022 Permit term.

Section 5.0 addresses Permit requirements for illicit discharge detection and elimination for the 2022 Permit term.

Section 6.0 addresses Permit requirements for controlling runoff from new development, redevelopment, and construction sites for the 2022 Permit term.

Section 7.0 addresses Permit requirements for pollution prevention and operations and maintenance for municipal operations for the 2022 Permit term.

Section 8.0 addresses Permit requirements for the monitoring section of the 2022 Permit term.

2.0 Storm Water Management Program Administration

This section of the SWMP describes MS4 Permit requirements related to overall Storm Water Management Program administration, including descriptions of the City's current and planned compliance activities for the 2022 Permit term.

2.1 Permit Requirements

The MS4 Permit (Act 4) requires the City to:

- Develop and implement a SWMP and prepare written documentation for submittal to MDEQ, and update the SWMP annually thereafter. The purpose of the SWMP is to reduce the discharge of pollutants from the municipal storm water system to the maximum extent practicable and thereby protect water quality.
- Submit annual compliance reports (for the previous calendar year) to MDEQ on March 31, beginning in 2023, that summarize the status of implementation and provide information from assessment and evaluation procedures collected during the reporting period.
- Evaluate program compliance, the appropriateness of their identified best management practices, and progress towards achieving their identified measurable goals. Inspections will be required as part of the monitoring program.
- Coordinate with other permittees on storm water related policies programs, and projects within adjacent or shared areas.

2.2 Compliance Activities

The City currently has activities and programs that meet many of the Permit requirements. The current compliance activities associated with the Permit include:

- The City is on track to comply with MDEQ requirements for submittal of SWMP documentation and Permit re-coverage, which is anticipated in 2022. The Public Works Department is currently leading the development of the future planned activities with input and support from several other departments.
- The City is on track to comply with MDEQ requirements for submittal of its Annual Compliance Report.
- The City is beginning the implementation of Cityworks to obtain, track and complete work orders in the City. The first phase includes any required work related to roads and drainage. A second phase will include tracking required water and sewer work. The Cityworks program will assist in the City's tracking of activities required by the SWMP.

3.0 Public Education and Outreach on Storm Water Impacts

This section describes the MS4 Permit requirements related to public education and outreach, including descriptions of the City's current and planned compliance activities for the 2022 Permit term.

3.1 Implementation

The City has developed a program for Public Education and Outreach related to issues impacting storm water. Previous research and meetings with City representatives identified water quality concerns, sources of pollutants, common pollutants and Best Management Practices (BMPs) to implement. The Public Education and Outreach on Storm Water Impacts will outline steps the public can take to protect and/or improve storm water quality.

3.2 Best Management Practices (BMPs)

The goal of the Public Education and Outreach program is to inform the public on impacts on storm water discharge, provide steps to reduce negative impacts to storm water discharge and make available a means to contact personnel with questions or to report illegal dumping. The City will continue to educate the public on adverse storm water impacts utilizing Public Service Announcements (PSA's), education material from various federal, state and local programs, and educational mailings. The City intends to continue to work jointly with Citizen Watch Groups and Community Cleanup events to improve water quality.

The BMPs and measurable goals influencing Public Education and Outreach are detailed in Table 3.1.

Table 3.1 BMPs & Measurable Goals for Public Education and Outreach						
BMP	Measurable Goal	2023	2024	2025	2026	2027
Storm Water Educational Brochures	Develop brochures to educate the public, businesses and industry on storm water protection. Distribute in water bill two (2) times a year.	X	X	X	X	X
Public Education Radio Campaign	Collaborate with local, state and federal individuals to determine most effective PSAs and advertisements to protect and improve storm water quality. Determine priority of impacts that public can take steps to improve.	X		X		X
	Collaborate with media representatives to air a PSA four (4) times a year.	X	X	X	X	X

Table 3.1 BMPs & Measurable Goals for Public Education and Outreach						
BMP	Measurable Goal	2023	2024	2025	2026	2027
Storm water Message with Links on City's Website	Update the City website yearly with community storm water message and links to storm water related information.	X	X	X	X	X
Storm water Public Meetings/Workshops	Organize and/or support one (1) workshop/meeting per year for homeowners, businesses (restaurant, auto, and seafood industry), construction and NEMO personnel on storm water protection awareness and steps that can be taken to protect/improve storm water.	X	X	X	X	X

3.3 Decision Process

The decision to develop a storm water public education and outreach program and its content was a collaboration of city and county personnel that began in 2003. Based on information obtained from previous surveys and research and data from state and federal sources the City determined that public education and outreach program was an important component of the City's SWMP.

3.4 Rational Statement

3.4.1 Inform

The City will educate the public of steps that can be taken to reduce pollution of storm water. The approach utilized to inform the public includes workshops/meetings, mailings, PSAs, clean-ups, and visual reminders (stenciling, bumper stickers, and tributary signage). These methods will include information on how to prevent pollution of storm water, proper disposal of hazardous household waste (HHW), use of lawn and garden pesticides/herbicides/fertilizers, as well as various other practices to improve storm water quality.

3.4.2 Involvement

The City will inform the public of the stenciling program, adopt-a-stream program, monitoring and litter clean-up projects and other ways to be involved in improving water quality. The City will inform the public of these opportunities through advertisements (newspaper, radio, and television), mailings, workshops and postings in libraries and other public buildings about ways to be involved in the process of improving storm water quality.

3.4.3 Target Audience

The target audiences include the entire community, from school age children to adults, volunteers, environmental groups, business owners, individuals in industry and municipal officials. This includes all ethnic and economic groups. Businesses such as paint shops, restaurants, automotive shops, junkyards and salvage yards, marinas and seafood industry personnel are included but not limited to business and industry personnel included in the target audience. The City plans to involve school age children in litter clean-up efforts and to help inform others regarding what they learned at school storm water education programs. Commercial/Business and industrial personnel will be invited to workshops, included in mailings, and will be exposed to advertisements related to storm water pollution and their impacts. For example, a Construction Personnel Workshop will address problems often associated with development, (runoff during/post construction, porous pavement, vegetation, proper disposal of construction material, erosion control, storm drain protection). The target audience for the program is all individuals in the community because it is the belief of the City that all citizens can contribute to the effort to improve storm water quality.

3.5 Target Pollutants

The target pollutants in the SWMP Plan include but are not limited to:

- Sediment/Silt
- Nutrients
- Litter/Debris
- Household Hazardous Waste
- Toxin/Pesticides/Fertilizer
- Bacteria/Virus from Raw Sewage from Failing Septic Tanks and Pet Waste
- Oil and Grease from Restaurants
- Oil and other auto waste
- Paint and related items

3.6 Outreach Strategy

The City expects to reach the public at large through mailings, advertisements (newspaper, radio, and television), web site links, workshops, public meetings and postings in libraries and other public buildings. Various numbers of individuals are expected to be reached through the various methods of outreach. For example, PSA will be aired quarterly and mailings informing the public on how to properly dispose of HHW, pet waste, lawn clippings and trash and to limit pesticide and fertilizer use will be mailed to households.

3.7 BMP Success Evaluated

The success of the BMPs will be based on whether a measurable goal was met and the items on the schedule were implemented. Success will be evaluated via visual observation, community interaction, increased participation in programs such as the stenciling program, adopt-a-stream program and litter clean-up events, measurable reduction in impairment causes for water bodies and measurable reduction in oil/grease and debris. The measurable goals for each BMP were selected based on applicability to the criteria, as well as practicality of the City to complete

the practice. For example, Tributary Signage is considered successful if more of the items are placed where they are designated. An increase in the number of notifications and signs serve as a reminder of storm water impacts. Workshops, PSAs/advertisements, and mailings serve to educate and remind citizens of the impacts to storm water. HHW Collection, Citizen Watch Groups and Litter Clean-up encourage proper disposal, clean an area and create community pride. The website will serve to inform and make contact information available as well as serving as a reminder of impacts to storm water.

3.9 Management Responsibility

The City is open to a citizen representative on the panel for the SWMP. The City will be responsible for the overall management and implementation of the storm water public education and outreach program. The City is the party responsible for the BMPs to be implemented.

4.0 PUBLIC INVOLVEMENT/PARTICIPATION

This section describes the Permit requirements related to public Involvement, including descriptions of the City's current and planned compliance activities for the 2022 Permit term.

4.1 Public Notification

The general public will be notified of the processes utilized to implement a SWMP. The public will be notified of opportunities to participate in the SWMP process by newspaper announcement (once weekly for three weeks prior to an event or meeting/workshop) and postings in the City Hall and at the public libraries.

4.2 Best Management Practices (BMPs)

The BMPs and measurable goals influencing Public Involvement/Participation are detailed in Table 4.1.

Table 4.1 BMPs & Measurable Goals for Public Involvement/Participation						
BMP	Measurable Goal	2023	2024	2025	2026	2027
Storm Drain & Tributary Identification	Stencil 20 storm drains per year. This may include storm drains where previous stenciling has faded.	X	X	X	X	X
	Post identification signs for five (5) tributaries per year.	X	X	X	X	X
Adopt-a-Stream Program	Add two (2) streams to the Adopt-a-Stream program per year.	X	X	X	X	X
Household Hazardous Waste Collection	Hold or support one (1) household hazardous waste collection event per year.	X	X	X	X	X
	Collaborate with waste personnel for proper disposal of items collected	X	X	X	X	X
	Report types and amount of waste collected to assess program effectiveness	X	X	X	X	X
Storm Water Hotline/Cityworks	Maintain hotline link on City's website for citizens to report illicit discharges and dumping.	X	X	X	X	X
	Track all reports of illicit discharges and dumping in Cityworks.	X	X	X	X	X

Table 4.1 BMPs & Measurable Goals for Public Involvement/Participation						
BMP	Measurable Goal	2023	2024	2025	2026	2027
Storm Water Hotline/Cityworks (cont'd)	Investigate all reports of illicit discharges and dumping. Respond as necessary.	X	X	X	X	X
Storm Water Community Events	Organize one (1) community Clean Up event per year.	X	X	X	X	X
	Organize one (1) community event that provides citizens opportunity to participate in the identification of storm drains and tributaries.	X	X	X	X	X
	Support one (1) clean-up event organized by others per year. These events may include Beautification Commissions Cleanup Events, Celebrate the Gulf (Department of Marine Resources and Chevron Coastal Community Clean-up event), Urban Forestry Project and other green projects	X	X	X	X	X
	Develop brochure of with information about Citizen Watch Group and action items for participants. Handout brochures at every storm water community event.	X	X	X	X	X
Storm Water Public Meeting/Workshop	Organize and/or support one (1) public meeting/workshop per year to obtain public input on the SWMP and provide storm water information to homeowners, local businesses, contractors, industries and NEMO officials.	X	X	X	X	X

4.3 Decision Process

The desired goal of the Public Involvement/Participation portion of the Storm Water Management Plan is to have the public involved in the process and to participate in workshops, clean-up events, and HHW collection days.

4.4 Rational Statement

4.4.1 Inform

The City will continue to maintain open lines of communication with the public by providing access to decision making personnel via the website. The City welcomes citizen input to SWMP planning and implementation. Workshops conducted by city personnel will be an open forum and the public will be encouraged to ask questions and make suggestions and comments. Participants in community-based programs, such as stenciling, adopt-a-stream and clean-up events, will be encouraged to suggest methods to more effectively reach the goals of each program. Additionally, PSAs will notify the public regarding opportunities to be involved in the decision process for the SWMP. Citizens will be provided information on how to report illicit discharges through the City's storm water hotline.

4.4.2 Involvement

The City plans to involve the public in the implementation of the SWMP. The City will involve the public by asking for volunteers to assist in community programs such as storm drain stenciling, citizen watch groups, monitoring and clean-up events available. The city also plans to encourage public participation in workshops to educate individuals on impacts and steps to increase water quality of storm water.

4.4.3 Target Audience

The target audiences for the Public Involvement and Participation portion of the program includes the entire community, from school age children to adults, volunteers, business owners, individuals in industry and environmental groups. The City hopes to involve school age children in litter clean-up efforts and to help inform others by sharing what they learned at school storm water education programs. Commercial and industrial personnel will be invited to workshops, included in mailings and be exposed to advertisements related to storm water pollution and their impacts. Commercial and construction personnel will be able to have their concerns addressed at the workshops offered and by personnel involved in the implementation of the program. The target audience for the program is all citizens in the community because it is the belief of the City that all citizens can contribute to the effort to improve storm water quality.

4.5 Public Involvement Activities

A wide selection of activities will be made available to the public to participate in the implementation of the SWMP. Programs such as the Storm Drain Stenciling project, Citizen Watch Groups, clean-up events, monitoring events, workshops, individual on-site wastewater treatment systems monitoring, Household Hazardous Waste (HHW) Collection events, planting of vegetation, as well as participation in panel meetings and discussions.

4.6 BMP Success Evaluated

The Public Works Department will evaluate the success of the BMPs for Public Involvement and Participation by an increase in community interaction, increased participation in programs such

as the stenciling program, adopt-a-stream program and litter clean-up events, measurable reduction in impairment causes for water bodies and measurable reduction in oil/grease and debris. An expansion in citizen participation in meetings, decision making, and citizen watch groups would be considered a success by the City. The measurable goals for each BMP were selected based on applicability to the criteria, as well as practicality of the City to complete the practice. For example, the adopt-a-stream program would be considered successful if more streams were adopted and volunteers in clean-up events and monitoring increased. An increase in the number of citizens involved in public hearings, workshops and panels to increase awareness and educate citizens on the need to protect and improve the storm water quality would be considered a success. Increased communication with businesses, industry, homeowners, environmental groups and citizen watch groups would be considered a success by the City.

4.7 Management and Implementation Responsibility

The Public Works Department will be responsible for the overall management and implementation of the storm water Public Involvement and Participation portion of the SWMP. The City is responsible for the BMPs to be implemented.

5.0 Illicit Discharge Detection and Elimination (IDDE)

5.1 Development, Implementation and Enforcement of Illicit Discharge Detection and Elimination

The City has developed a plan for eliminating and enforcing regulations of illicit discharge as defined in 40CFR122.26(b)(2). The program to detect and eliminate illicit discharge includes a mapping of the storm sewer system, visual inspections, hotline reports of illegal dumping or discharge, education of public and municipal personnel, and development of a plan for enforcement.

5.2 Storm Sewer Map

The City will continue the development of an all-inclusive storm sewer map. The map will include outfalls and the name and location of all waters of the United States that receive discharge from the outfalls. To date, the City has mapped all of the storm water outfall pipes to the Mississippi Sound (Figure 2). Storm water outfall pipes also exist in other parts of the City and are being mapped as part of the MS4 Program. The mapping system will allow for ease in labeling and identification of outfall pipes, inspection, determination of areas lacking storm sewers, areas of high use and type of use.

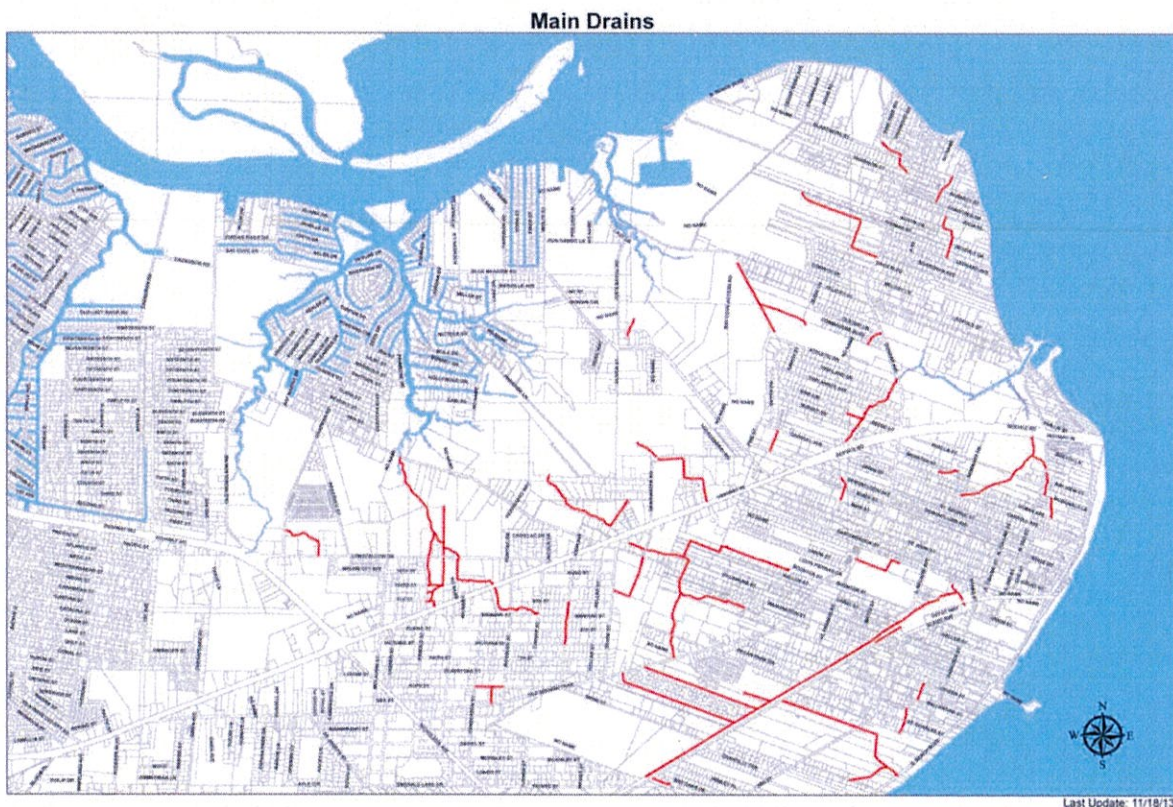


Figure 2 – Bay St. Louis Main Drains

5.3 Prohibit Non-Storm Related Discharge

The City's goal is to reduce non-storm related discharges not allowed by local and state law. Allowed non-storm related discharges are National Pollutant Discharge Elimination System (NPDES) permitted or related to firefighting activities. Ordinances in effect within the City include ordinance for storm water discharge and sediment controls. These ordinances were submitted to the MDEQ after they were adopted January 18, 2005.

5.4 Develop and Implement Plan to Detect and Address Illicit Discharges

The City has developed and implemented a plan to detect and address illicit discharges. Illicit discharges include illegal dumping, dry weather flow, suds, sewage, oil and gas. Detection of illicit discharges is most effectively completed during non-storm events. Dry weather flow inspections will be completed by City personnel on a periodic basis. In addition, visual inspections will allow for monitoring of illegal dumping. The Environmental Protection Agency provides a model ordinance to grant authority the right to inspect properties suspected of discharging contaminants into the storm water sewer system. The model ordinance also addresses enforcement of noncompliant entities. The City has reviewed the model ordinance and has created an ordinance that is applicable to the area. Personnel responsible for monitoring illicit discharge will be trained to ensure proper inspection and reporting. Mapping of the storm water outfalls will enable inspection of outfall areas with priority given to areas of greatest outfall, areas lacking sanitary sewer systems, areas with previous problems and areas with heavy industrial and commercial use.

5.5 Information about the Hazards Associated with Illicit Discharge

The City will educate the public, businesses, industry, and city employees about the hazards associated with illicit discharges. Information will be made available through the website, workshops and mailings regarding the proper disposal of contaminants and how to report suspected illicit discharges. Emphasis will be placed on proper care, maintenance and monitoring of individual waste disposal systems (septic tanks) at the workshops and will be included in the mailings.

5.6 Non-Storm Water Discharges Identified in Act 2, T-4

The MDEQ provides a list of authorized non-storm water discharges (Act 2, T-4 MS4 General Permit) provided they do not negatively impact water quality. The City has reviewed the list and found the list to be complete and at this time has no additional discharges to add.

5.7 Best Management Practices (BMPs)

The BMPs for the Illicit Discharge Detection and Elimination include Storm Water System Mapping, Community Hotline, Education and an Illicit Discharge Ordinance. The storm water system map provides accurate locations of all storm water conduits and outfall pipes, and the bodies of water where they discharge. The City's website provides contact information and a Community Hotline that allows citizens to report suspected illicit discharge. Workshops and/or meetings provide homeowners, construction personnel and NEMO personnel information on illicit discharges and steps that can be taken to eliminate these discharges. Brochures educate

and/or remind citizens of the impacts illicit discharges have on water quality. The percent of citizen households, businesses and industry reached in the mailings and workshops will measure the success of the BMP on Education.

The BMPs and measurable goals for the Illicit Discharge Detection and Elimination program are detailed in Table 5.1.

Table 5.1 BMPs & Measurable Goals for Illicit Discharge Detection and Elimination (IDDE)						
BMP	Measurable Goal	2023	2024	2025	2026	2027
Storm Water Mapping	Update storm water map as needed, or at a minimum of one (1) time per year.	X	X	X	X	X
	Incorporate database into map that tracks which storm drains and tributaries have been identified.	X				
	Update database annually.		X	X	X	X
Public Workshop	Organize and/or support a workshop providing information to public on illicit discharge detection and elimination and obtain input from community.	X	X	X	X	X
Individual Septic System Program	Identify property owners with septic systems.	X				
	Distribute brochure annually to educate public on individual septic system inspections. Brochure to include guidance from MS Department of Health.	X	X	X	X	X
	Educate public on individual septic system inspections in public workshops mentioned above.	X	X	X	X	X
	Contact five (5) citizens with an individual septic systems per year to review self-inspections.	X	X	X	X	X
Storm Water Hotline/Cityworks	Maintain hotline link on City's website for citizens to report illicit discharges and dumping.	X	X	X	X	X
	Track all reports of illicit discharges and dumping in Cityworks.	X	X	X	X	X
	Investigate all reports of illicit discharges and dumping within 48 hours.	X	X	X	X	X

Table 5.1 BMPs & Measurable Goals for Illicit Discharge Detection and Elimination (IDDE)						
BMP	Measurable Goal	2023	2024	2025	2026	2027
Dry Weather Screening	Perform dry weather screening at 10 outfalls per year.	X	X	X	X	X
	Incorporate database into storm water map that tracks the dry weather screening. Update database annually.	X	X	X	X	X
	Provide annual training to City personnel on performing dry weather screening.	X	X	X	X	X
Storm Water Ordinance	Review storm water ordinance to identify if any updates are required. If necessary, make updates and send to MDEQ.	X				
	Provide copy of storm water ordinance at annual training (mentioned above) to inform City personnel of requirements	X	X	X	X	X
	Enforce ordinance for all illicit discharges where the source can be identified. This may include notifications, fines, restitution and publishing of violators.	X	X	X	X	X

5.8 Decision Process

The decision process involved for the illicit discharge detection elimination portion included review of present controls in place, a previous survey of city and county personnel, research of EPA and MDEQ storm water material and input from city personnel managing the storm water system. The personnel responsible for implementing the illicit discharge detection and elimination plan are personnel from the Public Works Department at the City.

5.8.1 Plan to Detect and Address Illicit Discharge and Illegal Dumping

The plan to detect and address illicit discharge and illegal dumping includes visual observations during routine inspection of the storm water sewer system. Detection of odors, stains, and floatable matter will be observed, visual observations of outfall pipes during dry weather, monitoring of the hotline, prioritization of focus areas (areas with previous illicit discharge, high volume, land uses that are more likely to have illicit discharge, areas with older sewage lines, areas of complaints), education and reviewing the ordinance.

- Areas with prior illicit discharge and illegal dumping, as well as areas with older or problematic sewer lines, will be a priority in the monitoring process. Regions with a likelihood of older septic systems will also be areas of focus.
- The City will use various methods to trace and locate areas of illicit discharge and illegal dumping. These methods include investigating hotline reports within 48 hours,

obtaining input from citizen action groups, the MDEQ complaint tracking system, manhole observations (trace an illicit discharge “up” a sewer system until no discharge is detected-illicit discharge is between the last observed and the “no” observed discharge), available technology used in detection of illicit discharge (sandbags at storm drain outlets during dry periods, water quality sampling of discharge during dry period, video inspection, smoke or dye testing). For illegal dumping, a record will be maintained of the dumping location, time of day, and time of week that the dumping occurs most often. The dumped material will be observed for clues to trace source of material. The City will coordinate with the MS Department of Health to encourage inspection of individual septic systems.

- Illicit discharges will be handled on an individual basis; however, procedures may include compliance assistance, notices of violation, direct offender to correct the problem, cleanup (including transportation and disposal of material). Hazardous material teams and/or the fire department will respond to spills of gas, oil and chemicals. Containment equipment, including containment booms, absorbent material, and other disposal equipment, may be required to remove the illicit discharge.
- The illicit discharge and illegal dumping success will be evaluated and assessed on whether measurable goals are met and if the schedule of implementation is upheld.

5.8.2 Plans to Inform Public

Public employees, businesses and the general public will be informed of hazards associated with illicit discharges and illegal dumping by storm drain stenciling, tributary signs, clean-up events, workshops, educational mailings, the City’s website and public inclusion in meetings related to storm water quality.

5.8.3 BMP Success Evaluated

The City will evaluate the success of the illicit discharge and illegal dumping portion of the SWMP by whether the measurable goals are met and if the schedule to implement the BMPs is maintained. The measurable goals of the BMPs were selected based on research of EPA and MDEQ water quality material, meetings and survey results.

5.9 Management and Implementation

The City and/or any consultant, if hired, will be responsible for the management and implementation of the illicit discharge and illegal dumping portion of the program.

6.0 Construction Site Storm Water Runoff Control

6.1 Development, Implementation and Enforcement of Program to Reduce Runoff Pollutants at Construction Sites

The City has developed a plan for implementing and enforcing a program to reduce runoff pollutants at construction sites. Development of the plan to reduce pollutants in runoff includes information researched from local, state and federal sources. The plan will be a collaboration of local officials and individuals in the field of construction. The plan includes BMPs to reduce sedimentation, erosion, sanitary waste disposal at the site and good housekeeping tips (litter control, disposal of building materials, wash out from concrete trucks). Implementation will be based on local, state and federal information that has proved effective in reducing pollution in storm water runoff from construction sites. The enforcement will be within an ordinance to protect storm water quality. Inspections of sites will take place to ensure proper storm water runoff control measures are being taken.

6.1.1 Erosion and Sediment Control

The City will review the storm water ordinance to identify if any updates related to construction sites are required. A goal of the ordinance is to ensure erosion and sediment controls are implemented at construction sites of one acre or more (or part of a larger common plan that disturbs one acre or more). The ordinance specifies the steps taken if a site is not in compliance, including notification of violation, time period permitted to make the site compliant, monetary fines if not compliant within the period of time given, sanctions that will be taken if compliance not met. Any updates to the ordinance will be within the extent of the local and state law. Edits to the ordinances, if required, will be send to MDEQ for review prior to adopting the changes.

6.1.2 Plans and Permits Requirements for Construction Sites

The City will require construction site operators to submit all required plans and permits prior to construction. Plans and permits may include, but are not limited to, Storm Water Pollution Prevention Plan, proof of MDEQ approvals/permits, general permit (small construction general permit for between one (1) and five (5) acres, or less than one if part of a larger common plan of development; large construction general permit if five (5) acres or larger) and registration form for residential lot coverage.

6.1.3 Army Corp of Engineer Permits

The City will require a copy of any permits required by the Army Corp of Engineers. In general, Army Corp of Engineer permits are required if waters of the United States are being filled, rerouted or dammed.

6.1.4 Implementation of Erosion and Sediment Control

Construction sites will be required to implement appropriate erosion and sediment control BMPs. The BMPs include temporary and permanent solutions. Methods to reduce erosion and control sedimentation can include, mulching, hydro-seeding, soil binders, land grading, permanent vegetation and mulch, geotextiles (plastic covers, blankets, and mats), rip rap,

gabion, water diversions, sediment ponds, sediment barriers, temporary check dams, storm drain inlet protectors, dust control and stabilization of construction entrance. Construction site operators will need to demonstrate knowledge of proper use of the control method/s utilized.

6.1.5 Waste Control

The City will inspect construction sites and ensure that required measures are in place to control discarding of building material, concrete truck washout, chemicals, litter and sanitary waste. Reports of inspection dates and findings will be kept.

6.1.6 Site Plan Review

Pre-Construction site plans will be reviewed to determine potential water quality impacts. During the review of pre-construction plans, erosion and sediment control measures should be documented. Adequate BMPs must be planned before issuance of a permit.

6.1.7 Receipt and Consideration

Public input on impacts to storm water quality will be welcomed during workshop sessions or through contacting city personnel. Workshops are open to the public and the public will be encouraged to submit comments. Additionally, comments, suggestions and questions can be submitted to city personnel via the website, by phone or in person.

6.1.8 Site Inspection and Enforcement

Procedures for site inspection and enforcement will be developed by city and county officials. Site inspections will be conducted periodically by personnel from the City Building Department and/or personnel from the City Public Works Department. Construction sites that will be given higher priority may include those with a greater potential for negative impacts to water quality, a large volume of runoff, close proximity to sensitive lands, sloped land, close proximity to waterways and a history of violations. Site inspections will ensure BMPs are being implemented to maintain water quality. Citations and penalties may be issued if violations are not resolved within the time frame given.

6.1.9 Required Post-Construction Controls

The City will ensure that periodic inspections of permanent BMPs are conducted post-construction. Post-construction inspections will include inspection of erosion and sediment control and control of waste at the site. BMPs will include permanent soil stabilization and good housekeeping measures. Success will be evaluated based on if the goals and schedule are met.

6.2 Best Management Practices (BMPs)

Construction BMPs focus on soil stabilization, minimal disturbance to a site, storm drain protection, slope and channel protection, minimize vegetation disturbance, good housekeeping practices and containment of materials and waste. BMP measures will be considered a success if the goals are met and on schedule.

The BMPs and measurable goals for the Construction Site Storm Water Runoff Control program are detailed in Table 6.1.

Table 6.1 BMPs & Measurable Goals for Construction Site Storm Water Runoff Control						
BMP	Measurable Goal	2023	2024	2025	2026	2027
Public Education	Distribute flyer/poster annually with information regarding construction erosion and sediment control BMPs.	X	X	X	X	X
	Organize an annual workshop to educate contractors, developers and engineers of construction storm water runoff control BMPs, inspection and enforcement.	X	X	X	X	X
Site Plan Review	Review all site plans submitted to the City for approval. Assure that sediment and erosion control measures are to be implemented and that all required permits have been obtained.	X	X	X	X	X
Construction Site Inspection	Maintain log of construction sites within the City. Update log monthly, noting if the site should be a higher priority site.	X	X	X	X	X
	Perform a minimum of one (1) inspection at each construction site. Perform follow up inspection(s) at sites where violations are noted. Include a summary of inspection(s) in the construction site log.	X	X	X	X	X
Storm Water Hotline/Cityworks	Maintain hotline link on City's website for citizens to report concerns related to storm water at construction sites.	X	X	X	X	X
	Track all reports related to construction site storm water in Cityworks.	X	X	X	X	X
	Investigate all reports related to construction site storm water within 48 hours.	X	X	X	X	X
Storm Water Ordinance	Review storm water ordinance to identify if any updates are required. If necessary, make updates and send to MDEQ.	X				

Table 6.1 BMPs & Measurable Goals for Construction Site Storm Water Runoff Control						
BMP	Measurable Goal	2023	2024	2025	2026	2027
Storm Water Ordinance (cont'd)	Enforce ordinance for all reported/noted storm water violations at construction sites. This may include notifications, fines, and stop work orders.	X	X	X	X	X

6.3 Decision Process for Construction Storm Water Control

Construction BMPs and measurable goals were selected based on research of federal, state and local material, as well as based on a survey conducted. The BMPs for construction storm water control include soil stabilization (temporary and permanent), material and waste management, runoff diversions, velocity reduction of runoff and sediment traps and filters.

The developer or contractor will be responsible for the implementation of the storm water control program at construction sites.

6.3.1 Site Plan Review Procedure

The procedure for site plan review and pre-construction review will include a time frame by which all site plans will be reviewed. The procedure will include periodic inspections and reports on the findings of those inspections. During the review process, inspectors will determine if the proposed BMPs will be sufficient to protect water quality both during and post construction.

6.3.2 Receipt and Consideration of Information Submitted by the Public

Public input on construction and post-construction impacts to storm water quality is welcomed during workshop sessions and by contacting city personnel. Workshops are open to the public and the public will be encouraged to submit comments and suggestions. Additionally, comments, suggestions and questions can be submitted to city personnel via the website, by phone or in person.

6.3.3 Site Inspection and Enforcement of Control Measures

The City will develop a site inspection plan and a code for enforcement. The site inspection plan will address review of the site plan, inspection schedule, how to prioritize site inspections and reporting. Site prioritization will be based on history of violation, proximity of site to body of water, sites with potential for high volume of storm water discharge, soil type, sloped sites and proximity to sensitive lands. Enforcement of control measures will be determined based on federal, state and local information. Enforcement of control measures may include notice of violation, fines based on class of civil infraction and a stop work order.

6.3.4 Educational Training

The City will develop and hold educational workshops for contractors, developers, engineers and other related professionals. The workshops will be held every year. The contractors and other potentially interested parties will be notified of the workshop via mailings, newspaper notices and word of mouth. The workshops will focus on BMPs to employ to ensure storm water quality is maintained. The workshops will also cover site inspections and enforcement.

6.3.5 Success of Construction Site Storm Water Runoff Control

The City will determine the success of the construction site storm water runoff control program based on if measurable goals and the schedule are implemented. The goals of each BMP were selected based on research of federal, state and local information as well as knowledge gained from a previous survey.

6.3.6 Responsible Entity

The City and/or a consultant, if hired, will be the responsible party for the overall management of the construction site storm water runoff control program.

7.0 Post-Construction Storm Water Management In New Development And Redevelopment

7.1 Development, Implementation and Enforcement of Post-Construction Program to Manage Storm Water in New Development and Redevelopment

The City has developed a plan for post-construction storm water management in new development and redevelopment. This plan was prepared using information researched from local, state and federal sources and from a collaboration of local officials and individuals in the field of construction.

7.2 Development and Implementation of Strategies for BMPs that are Structural and Non-Structural

The City will develop a brochure and poster for contractors/developers that lists recommended BMPs for post-construction. The brochure and poster will include information about structural and non-structural strategies from local, state and federal sources. The brochure and poster will include strategies for structural BMPs such as retention pond/sediment basin, infiltration (basins/trenches/porous pavement), filtration (bio-retention) and vegetative practices (storm water wetland, grass swales, grass filter strip). Non-Structural BMP strategies will include site plans (limit curbs and gutters), street sweeping, training, inspection, urban forestry, material/chemical/waste handling practices and ordinances. The structural and non-structural strategies for BMPs for post-construction will be implemented according to the ordinance for post-construction.

7.3 Post-Construction Ordinance

The City will review the storm water ordinance to identify if any updates related to post-construction sites are required. The ordinance will include steps taken if a site is not in compliance. Steps shall include notification of violation, time period permitted to make the site compliant, monetary fines if not compliant within the period of time given, sanctions that will be taken if compliance not met. Any updates to the ordinance will be within the extent of the local and state law. Edits to the ordinances, if required, will be send to MDEQ for review prior to adopting the changes.

7.4 Long Term Operation and Maintenance of Post-Construction BMPs

The City will develop/review a maintenance agreement for contractors/developers. The maintenance agreement will include long term operations and maintenance of post-construction BMPs, notice that post-construction inspections will occur, signature of contractor/developer/responsible party.

7.4.1 Signature of Responsible Party

The maintenance agreement will include the developer's signature accepting responsibility for maintenance until the maintenance responsibility is transferred to another entity.

7.4.2 Assuming Responsibility for Maintenance

The developer will be informed via letter that it is the responsibility of the developer to ensure that the sale or lease agreement include a requirement of the recipient to assume responsibility for maintenance.

7.4.3 Residential Properties Responsibility for Maintenance

Residential property developers will be informed via letter that it is the responsibility of the developer to ensure written conditions in the project, covenants and/or restrictions to assign maintenance responsibilities to a homeowner's association or other group for maintenance of structural and treatment control management practices.

7.4.4 Other Responsibility for Maintenance

The developer will assume responsibility for maintenance of structural or treatment control management practices until any other legally enforceable agreement assigns permanent responsibility for these management practices.

7.5 Best Management Practices (BMPs)

The BMPs for post construction storm water management include both structural and non-structural control measures. The structural BMPs measures include retention pond/sediment basin, infiltration (basins/trenches/porous pavement), filtration (bio-retention) and vegetative practices (storm water wetland, grass swales, grass filter strip). Non-Structural BMP strategies include site plans (limit curbs and gutters), street sweeping, training, inspection, urban forestry, material/chemical/waste handling practices and ordinances. The measurable goals for structural and non-structural strategies for BMPs for post-construction are met if the BMP is implemented and is on schedule.

The BMPs and measurable goals for the Post-Construction Site Storm Water Runoff Control program are detailed in Table 7.1.

Table 7.1 BMPs & Measurable Goals for Post-Construction Site Storm Water Management						
BMP	Measurable Goal	2023	2024	2025	2026	2027
Developer Checklist	Obtain completed checklist from all developers post-construction to ensure all permanent BMPs have been implemented and that the responsible party for post-construction maintenance is specified.	X	X	X	X	X

Table 7.1 BMPs & Measurable Goals for Post-Construction Site Storm Water Management						
BMP	Measurable Goal	2023	2024	2025	2026	2027
Post-Construction Site Inspection	Perform a post-construction site inspection at all construction sites in the City to verify that all permanent BMPs have been implemented. Report inspection findings in construction site log (mentioned in Section 6.0). Perform follow up inspection, if BMPs are not adequate.	X	X	X	X	X
Operations & Maintenance Agreement	Develop a standard Operations & Maintenance Agreement the long-term operation and maintenance of post-construction BMPs.	X				
	Ensure that an Operations & Maintenance Agreement is signed for each development in the City.	X	X	X	X	X
Storm Water Ordinance	Review storm water ordinance to identify if any updates are required. If necessary, make updates and send to MDEQ.	X				
	Enforce ordinance for all reported/noted post-construction storm water violations. This may include notifications and fines.	X	X	X	X	X
Public Education	Distribute flyer/poster annually with information regarding post-construction erosion and sediment control BMPs.	X	X	X	X	X
	Organize annual workshop to educate contractors, developers and engineers of post-construction storm water management, BMPs, responsible party, inspection, ordinance and enforcement.	X	X	X	X	X

7.6 Decision Process

Post-Construction BMPs and measurable goals were selected based on research of federal, state and local material, as well as based on a survey of city and county officials. The BMPs for post-construction storm water control include structural and non-structural BMP measures. The developer will be responsible for the implementation of the storm water control program at post-construction sites until responsibility is officially transferred to another party.

7.6.1 Program to Address Storm Water Runoff in New and Re-Development

The City will address storm water runoff from new development and redevelopment projects through workshops for contractors/developers, brochures, and ordinances. Priority areas for the program will be post-construction sites with a greater potential for negative impacts to water quality, sites with large volume of runoff, close proximity to sensitive lands, sloped land, close proximity to waterways and sites with a history of violations.

7.6.2 Program Tailoring

Workshops, brochures and an ordinance tailored to the area will ensure developers attempt to maintain pre-development runoff conditions.

7.6.3 Non-Structural BMPs

- **Policy or Ordinance with Requirements and Standards to Direct Growth**

The City will create a policy or ordinance that sets standards for growth and directs growth in the area. The policy and/or ordinance will provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and or increase open space (including a dedicated funding source for open space acquisition), provide buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation and encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure.

- **Educational program**

The City will hold workshops for contractors/developers and the public to inform about project designs that minimize post-construction storm water quality impacts. The brochure/poster will serve to inform developers of BMPs to protect storm water post-construction.

- **Impervious Surfaces**

The City will hold workshops, develop brochures and enforce ordinances that encourage use of porous surfaces. Developers/contractors will be informed to minimize impervious surfaces, minimize directly connected impervious surfaces and inform about alternatives to impervious surfaces.

7.6.4 Structural BMP

- **Storage Practices**

Workshops, brochures, and ordinances will cover storage practices for developers relating to post-construction control measures. Storage practices will include detention ponds, catch basins and extended detention outlet structures.

- **Filtration Practices**

The City will conduct a workshop, create brochures and ordinances to address filtration practices. Filtration practices such as bio-retention areas, grass/vegetative swales, sand filters, organic filters and storm water wetlands will be addressed.

- **Infiltration Practices**

Infiltration practices will be discussed in the City workshops, brochures and ordinances. Infiltration practices such as, infiltration basins and trenches and pervious surfaces will be addressed and encouraged.

7.6.5 Appropriate Implementation of BMPs

Multiple measures will be in place to ensure appropriate implementation of BMPs. A post-construction checklist will be completed to identify BMPs and the party responsible for maintenance of the BMP.

- **Pre-Construction BMP design**

A review of the pre-construction site plans and identification of BMPs prior to construction will assist in appropriate implementation of the post-construction BMPs.

- **Inspections**

The City will ensure that periodic inspections will be conducted during and post-construction.

- **Penalty Provisions**

An ordinance that protects storm water post-construction will ensure appropriate measures are implemented for the BMPs. A violation of the ordinance will involve a written notice of violation, a time frame to bring the violation into compliance and potential monetary penalties for not being in compliance.

7.7 Evaluation of Success

Success will be determined based on if the measurable goals and schedule of implementation is met. The measurable goals for the BMPs were determined based on research of local, state and federal information as well as a survey of city and county officials.

7.8 Responsible Entity

The City and/or a consultant, if hired, will be the responsible party for the overall management of the post-construction site storm water runoff control program.

8.0 Pollution Prevention/Good Housekeeping for Municipal Operations

8.1 Develop and Implement a Program to Prevent and Reduce Pollutant Runoff at Municipal Sites

The City has developed a plan for preventing and reducing pollutant runoff at municipal sites. This plan includes information researched from local, state and federal sources, as well as information collected during the city and county survey. The plan is a collaboration of local officials and individuals in the field. The plan includes BMPs to prevent and reduce pollution, training, sanitary waste disposal and good housekeeping tips (litter control, disposal of materials, wash out from fleet). Implementation will be based on local, state and federal information that has proved effective in reducing pollution in storm water runoff from municipal sites. The enforcement will be within an ordinance to protect storm water quality. Inspections of sites will take place to ensure proper storm water runoff control measures are being taken.

8.2 Employee Training

The City has developed a training program for employees, which was developed using information from federal, state and local sources. Training includes a workshop and on the job training, with the primary focus being to protect storm water quality. Trainings include guidance and discussion regarding storm water protection at park and open space maintenance, fleet and building maintenance, new construction, land disturbances and storm water system maintenance.

8.3 Best Management Practices (BMPs)

The focus of the municipal BMPs is broad and include above and underground storage tank leak and spill controls, building and grounds maintenance, construction and repair/remodel, catch basin cleaning, detention pond maintenance, employee training, hazardous waste management, housekeeping practices, litter and illegal dumping control, illicit discharge controls, land use planning, sanitary sewer system control, storm drain protection, public education/participation, road/bridge/parking maintenance, vehicle maintenance, storm drain stenciling, storm drain cleaning/inspection, street cleaning, sand/vegetative filters, bio filters, mulch, storm water wetlands, skimmers, oil/water separators and rip-rap. Measurable goals would decrease the volume of storm water effluent into the water bodies in the area including the Mississippi Sound and increase storm water quality.

The BMPs and measurable goals for the Pollution Prevention/Good Housekeeping for Municipal Operations program are detailed in Table 8.1.

Table 8.1 BMPs & Measurable Goals for Pollution Prevention/Good Housekeeping for Municipal Operations						
BMP	Measurable Goal	2023	2024	2025	2026	2027
Employee Training	Organize annual training session to educate employees of pollution prevention/good housekeeping BMPs, inspection and enforcement.	X	X	X	X	X
	Maintain log of employee training to ensure all employees are getting the adequate training. Update log two (2) times per year.	X	X	X	X	X
Storm Water Inspection at Municipal Operations	Develop form to record inspections of Municipal Facilities.	X				
	Perform annual storm water inspection at all City facilities. Maintain record of inspections. Address all issues/violations noted during the inspection.	X	X	X	X	X
Street Sweeping Operations	Perform street sweeping monthly in downtown area.	X	X	X	X	X
	Perform street sweeping every other month in other areas of the City.	X	X	X	X	X
Storm Drain, Drainage Ditch & Outfall Inspection/Cleanup	Inspect 20 storm drains, drainage ditches, and/or outfalls each year for floatables and other debris and pollutants.	X	X	X	X	X
	Remove and properly dispose of all debris found in storm drains, drainage ditches and outfalls.	X	X	X	X	X
	Track all cleaning of storm drains, drainage ditches and outfalls in Cityworks.	X	X	X	X	X

8.4 Decision Process

Municipal BMPs and measurable goals were selected based on research of federal, state and local material, as well as based on a survey of city and county officials. The BMPs for municipal storm water control are implemented to decrease the volume of storm water effluent and to increase the quality of storm water. The City will be responsible for the implementation of the Pollution Prevention/Good Housekeeping Municipal Operations storm water control program.

8.4.1 List Municipal Operations Impacted by Prevention/Good Housekeeping Program

Municipal operations for the City impacted by the prevention/good housekeeping program are road maintenance, storm drain maintenance, sanitary sewer system maintenance, equipment and vehicle maintenance facilities and fleets as well as the athletic fields. Industrial facilities include all sewage treatment plants. Sewage Treatment within Bay St. Louis is owned and operated by the Hancock County Utility.

8.4.2 Employee Training Program

The employee training program will be developed utilizing available material from federal, state and local information. The training program for employees will educate about installation, inspection, operation and maintenance of storm water management practices. The training program will focus on prevention and reduction of storm water pollution, especially from park and open space maintenance, fleet and building maintenance, new construction, land disturbance and storm water system maintenance. A workshop will be held for municipal employees, and training programs will be conducted as needed for new employees and periodically for existing employees.

8.4.3 Program Details

The pollution prevention/good housekeeping program for municipal operations will address maintenance activities and schedules to reduce floatables and pollutants, inspections, impermeable surface discharge, waste transfer stations, fleet shops and storage, waste disposal and flood management.

- **Floatables and Other Pollutants**

Maintenance activities and schedules will be developed to inspect storm drains and effluent pipes for floatables and other pollutants. Drains and effluent pipes will be inspected for froth, oil, floating solids and other pollutants. The drains and effluent pipes will be inspected during both dry events and after a rain event.

- **Additional pollution controls**

Controls to reduce and eliminate discharge of pollutants from impermeable surfaces (roads, streets, highways, parking lots) have been addressed during construction controls and the street sweeping program. Roadway and parking lot construction is completed with storm water quality issues addressed. Controls in roadway and parking lot construction will include structures to reduce runoff rates and increase absorption of storm water prior to discharge. The present street sweeping program is in effect and will be maintained. Regulations and inspection of maintenance and storage yards, waste transfer stations, fleet and maintenance shops and sand storage areas help eliminate possible pollutants in storm waters.

- **Disposal and Removal**

The City has controls in place for the proper disposal of waste removed from the storm water system. The waste (floatable material, sediment and debris) to be removed is identified and then properly disposed of based on the content of the waste. Under the Clean Water Act of 1976, dredging activities generally require a dredge permit from the

U.S. Army Corps of Engineers. Any dredge activities within the City will be directed through the proper channels and permitted as needed. Dredge spoils will be disposed of as stated in the permit.

- **Flood Management**

New flood management projects will be reviewed to assess the impacts to storm water quality. Existing flood management projects will also be reviewed to assess impacts to storm water quality and to determine if new storm water protection devices or practices are required and feasible.

8.5 Program Success

The City will determine the success of the pollution prevention/good housekeeping for municipal operations program based on if the controls are implemented and the goals and schedule are met. The goals of each BMP were selected based on research of federal, state and local information as well as knowledge gained from a previous survey.

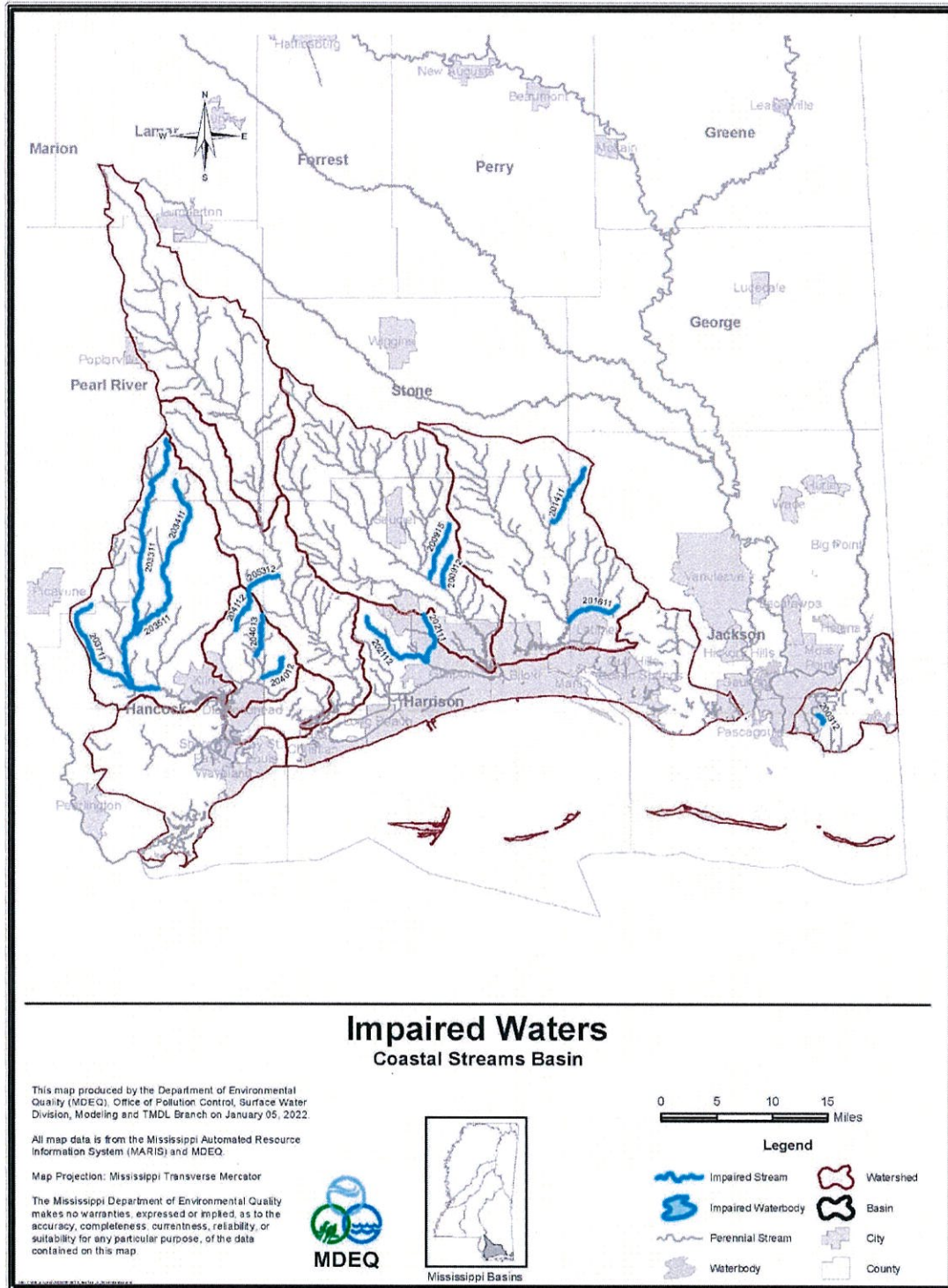
8.6 Responsibility

The City will be the responsible party for the overall management of the pollution prevention/good housekeeping for municipal operations program.

Appendix A

Impaired Waterbodies Information

Note: Based on a review of the MDEQ Section 303(d) List of Impaired Waters for 2022, the City has determined there are no impaired waterbodies within the permitted area.



Appendix B

Municipal Storm Water Ordinances

ARTICLE II. STORMWATER MANAGEMENT

Sec. 22-32. General provisions.

- (a) *Findings of fact.* It is hereby determined that:
- (1) Land development projects and associated increases in impervious cover alter the hydrologic response of local watersheds and increase stormwater runoff rates and volumes, flooding, stream channel erosion, and sediment transport and deposition; and this stormwater runoff contributes to increased quantities of water-borne pollutants. Stormwater runoff, soil erosion and nonpoint source pollution can be controlled and minimized through the regulation of stormwater runoff from development sites.
 - (2) Therefore, the city establishes this set of water quality and quantity policies applicable to all surface waters to provide reasonable guidance for the regulation of stormwater runoff for the purpose of protecting local water resources from degradation. It is determined that the regulation of stormwater runoff discharges from land development projects and other construction activities in order to control and minimize increases in stormwater runoff rates and volumes, soil erosion, stream channel erosion, and nonpoint source pollution is in the public interest and will prevent threats to public health, safety and welfare.
- (b) *Purpose.* The purpose of this article is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing in watersheds within this jurisdiction. This article seeks to meet that purpose through the following objectives:
- (1) Minimize increase in stormwater runoff from any development in order to reduce flooding, siltation, increases in stream temperature, and stream bank erosion and maintain the integrity of stream channels;
 - (2) Minimize increase in nonpoint source pollution caused by stormwater runoff from development which would otherwise degrade local water quality;
 - (3) Minimize the annual volume of surface water runoff, which flows from any specific site during and following development to not exceed the pre-development hydrologic regime to the maximum extent practicable;
 - (4) Reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management controls and to ensure that these management controls are properly maintained and pose no threat to public safety.
- (c) *Applicability.* All development or redevelopment projects must provide a stormwater control plan as part of their site plan review process and prior to disturbance of the site.
- (1) Single-family and all multi-family units under four units, must submit a standard erosion control plan and drainage plan on a worksheet provided by the city building office prior to any disturbance of a site.
 - (2) Projects larger than one acre must provide a copy of their completed stormwater plan, which is required by MDEQ as part of their NPDES Phase I or Phase II permit, with the site plan review documents.
- (d) *Exceptions to applicability.*

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- (1) To prevent the adverse impacts of stormwater runoff, performance criteria must be met at new development sites. These standards apply to any construction activity disturbing land. The following activities may be exempt from these stormwater criteria:
 - a. Any logging and agricultural activity which is consistent with approved soil conservation plan or timber management plan or Forestry Best Management Practices Handbook published by the state forestry commission, as applicable.
 - b. Additions or modifications to existing single-family structures.
 - c. Developments that are part of larger redevelopment or development common plan provided that a stormwater management plan has been completed and approved by MDEQ.
 - (2) The city council shall have the power to authorize variances from the provisions or requirements of this article as will not be contrary to the public interest, provided that the applicant for an exception follows the rules and procedures required by the city planning commission as defined within section 1005 of the Zoning Ordinance. No variance from the strict application of any provision shall be granted unless it is found that:
 - a. Literal interpretation of the provisions of this article would deprive the owner of reasonable use of his land; and
 - b. Granting the variance would be in harmony with the general purpose and intent of this article and will not be injurious to the neighborhood or otherwise detrimental to the public welfare.
 - (e) *Repeal of conflicting ordinances.* All ordinances or parts of an ordinance, in conflict with this article, or inconsistent with the provisions of this article, are hereby repealed to the extent necessary to give this article full force and effect.
 - (f) *Stormwater design manual.* The stormwater design manual identified in this article will be the planning and design manual for the control of erosion, sediment, and stormwater written by the state department of environmental quality, the state soil and water conservation commission and the USDA Soil Conservation Service.

(Ord. No. 442, § 1, 1-4-2005)

Sec. 22-33. Definitions.

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

Applicant means a property owner or agent who has filed an application for a stormwater management permit.

Building means any structure built for the support, shelter, or enclosure of persons, animals, chattels, or moveable property of any kind and which is permanently affixed to the land.

Building official means any city employee or elected or appointed official charged with enforcement of this article.

Certificate of occupancy means a permit issued by the zoning officer indicating that the use of the building or land in question is in conformity with the zoning ordinance or that there has been a legal variance there from, as provided by ordinance.

Channel means a natural or artificial watercourse with a definite bed and banks that conducts continuously or periodically flowing water.

Dedication means the deliberate appropriation of property by its owner for general public use.

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(Supp. No. 3)

Detention means the temporary storage of stormwater runoff in a stormwater management practices with goals of controlling peak discharge rates and providing gravity settling of pollutants.

Developer means a person who undertakes land disturbance or development activities.

Development means any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation, or drilling operation.

Drainage easement means a legal right granted by the landowner to a grantee allowing use of private land for stormwater management purposes.

Erosion and sediment control plan means a plan that is designed to minimize the accelerated erosion and sediment runoff at a site during construction activities.

Forestry best management practices means silvicultural practices developed and endorsed by the state forestry commission to prevent soil erosion and surface water degradation due to timber harvest.

Hotspot means an area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater.

Impervious coverage means those surfaces that cannot effectively infiltrate rainfall (e.g., building rooftops, pavement, sidewalks, driveways, etc.).

Industrial stormwater permit means a National Pollutant Discharge Elimination System permit issued to a commercial industry or group of industries which regulates the pollutant levels associated with industrial stormwater discharges or specifies on-site pollution control strategies.

Infiltration means the process of percolating stormwater into the subsoil.

Infiltration facility means any structure or device designed to infiltrate water to the subsurface. These facilities may be above grade or below grade.

Jurisdictional wetland means an area that is subject to permit jurisdiction by the U.S. Army Corps of Engineers under section 10 of the Rivers and Harbors Act or section 404 of the Clean Water Act (33 USC 1344).

Land disturbance activity means any activity which changes the volume or peak flow discharge rate of rainfall from the land surface. This may include grading, digging, cutting, scraping, or excavating of soil, placement of fill materials, paving, construction, substantial removal of vegetation, or any activity which bares soil or rock or involves the diversion or piping of any natural or manmade watercourse.

Landowner means the legal or beneficial owner of land, including those holding the right to purchase or lease the land, or any other person holding proprietary rights in the land.

Maintenance agreement means a legally recorded document that acts as a property deed restriction and which provides for long-term maintenance of stormwater management practices.

Nonpoint source pollution means pollution from any source other than from any discernable, confined and discrete conveyances, and shall include, but not be limited to, pollutants from agricultural, silviculture, mining, construction, subsurface disposal and urban runoff sources.

Off-site facility means a stormwater management measure located outside the subject property boundary described in the permit application for land development activity.

On-site facility means a stormwater management measure located within the subject property boundary described in the permit application for land development activity.

Recharge means the replenishment of underground water reserves.

Redevelopment means any construction, alteration or improvement exceeding 500 square feet in areas where existing land use is high density commercial, industrial, institutional or multi-family residential.

Stop work order means an order issued which requires that all construction activity on a site be stopped.

Stormwater design manual means the planning and design manual for the control of erosion, sediment and stormwater written by the state department of environmental quality, state soil and water conservation commission and the USDA Soil Conservation Service.

Stormwater management means the use of structural or non-structural practices that are designed to reduce stormwater runoff pollutant loads, discharge volumes, and/or peak flow discharge rates.

Stormwater retrofit means a stormwater management practice designed for an existing development site that previously had either no stormwater management practice in place or a practice inadequate to meet the stormwater management requirements of the site.

Stormwater runoff means water flow on the surface of the ground, resulting from precipitation.

Stormwater treatment practices means measures, either structural or nonstructural, that are determined to be the most effective, practical means or preventing or reducing point source or nonpoint source pollution inputs to stormwater runoff and water bodies.

Variance means a modification from the literal provisions of this article in cases where a literal enforcement of its provisions would result in unnecessary hardship due to circumstances unique to the individual property for which the variance is granted.

Watercourse means a permanent or intermittent stream or other body of water, either natural or manmade, which gathers or carries surface water.

(Ord. No. 442, § 2, 1-4-2005)

Sec. 22-34. Permit procedures and requirements.

- (a) *Permit required.* No land owner or land operator shall receive any zoning compliance certification, building; grading or other land development permits required for land disturbance activities without first meeting the requirements of this article prior to commencing the proposed activity.
- (b) *Application requirements.*
 - (1) Unless specifically excluded by this article, landowners proposing the development of a single-family residential unit or a multi-family complex under three units shall submit to the city building official a permit application on a form provided by the city building office for that purpose and a nonrefundable permit review fee.
 - (2) Unless specifically excluded by the article, landowners proposing the development of commercial or multi-family units of four or more units and on a site under one acre in size, should submit a stormwater management plan as part of their site plan review documentation, a stormwater maintenance agreement; and a nonrefundable permit review fee to the city building office.
 - (3) Unless specifically excluded by the article, landowners proposing the development of commercial or multi-family units of four or more units and on a site one acre or more, should submit a copy of their stormwater management plan, as required by MDEQ under the NPDES Phase I and Phase II programs as part of their site plan review documentation, a stormwater maintenance agreement and a nonrefundable permit review fee to the city building office.
 - (4) The stormwater management plan shall be prepared to meet the requirements of section 22-36. The stormwater maintenance agreement shall be prepared to meet section 22-40 and fees shall be established by the city council.
- (c) *Application procedure.*

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- (1) Applications for land disturbance activity permits must be filed with the city building office on any regular business day.
 - (2) Applications for single-family residential units and multi-family units of three or fewer units will be reviewed by the building official and a designee of the site plan review committee. The building official will act on all applications within seven working days after the applicant has fully complied with provisions of this article. The building official shall either issue a permit or notify the applicant in writing of the reasons for the refusal.
 - (3) Applications for all commercial and multi-family units of four units or more should submit a stormwater management plan and stormwater maintenance agreement as part of the site plan review documentation. Within 60 days of receiving an application for site plan review, the city planning commission shall act to approve, disapprove, or approve with conditions the site plan application. in the case of approval with conditions, the city planning commission shall specify what conditions are necessary.

If the stormwater management plan or maintenance agreement is disapproved, the applicant may revise the stormwater plan or agreement. If additional information is submitted, the planning commission shall have 15 business days from the date the additional information was received to inform the applicant that the plan and maintenance agreement are either approved or disapprove.

- (d) *Permit duration.* Permits issued under this section shall be valid from the date of issuance to through the date the city building official notifies the permit holder that all stormwater management practices have passed the final inspection under permit conditions.

(Ord. No. 442, § 3, 1-4-2005)

Sec. 22-35. Waivers to stormwater management requirements.

Waivers for providing stormwater management. The city council shall have the power to authorize variances from the provisions or requirements of this article as will not be contrary to the public interest, provided that the applicant for an exception follows the rules and procedures required by the city planning commission as defined within section 1005 of the zoning ordinance. No variance from the strict application of any provision shall be granted unless it is found that:

- (1) Literal interpretation of the provisions of this article would deprive the owner of reasonable use of his land; and
- (2) Granting the variance would be in harmony with the general purpose and intent of this article and will not be injurious to the neighborhood or otherwise detrimental to the public welfare.

(Ord. No. 442, § 4, 1-4-2005)

Sec. 22-36. General performance criteria for stormwater management.

Unless determined by the city council to be exempt or granted a variance, the following performance criteria shall be addressed for stormwater management at all sites:

- (1) All sites shall establish stormwater management practices to control the peak flow rates of stormwater discharge associated with specified design storms and reduce the generation of stormwater for the site to provide treatment for both water quality and quantity. Peak post-construction stormwater runoff will not exceed peak pre-construction stormwater runoff from the site to the greatest extent possible.

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- (2) All stormwater runoff generated from new development shall not discharge untreated stormwater directly into a jurisdictional wetland or local water body without adequate treatment. Where such discharges are proposed, the impact of the proposal on wetland functional values may be assessed using a method acceptable to the city council. In no case shall the impact on functional values be any less than allowed by the state department of environmental quality or the state department of marine resources.
 - (3) For new development, structural and non-structural stormwater treatment practices shall be designed to treat the first one inch of stormwater runoff.
 - (4) For new development, sanitary wastewater treatment facilities shall be designed and installed to comply with existing state department of health regulations, and to prevent the discharge of untreated sanitary waste that could come in contact with stormwater runoff.
 - (5) To protect stream channels from degradation, a specific channel protection shall be utilized. The criteria shall require 24-hour detention for runoff generated by a rainfall event based upon annual rainfall for the region.
 - (6) Stormwater discharges to critical areas with sensitive resources (including shellfish beds, swimming areas, water supply reservoirs and groundwater recharge areas) may be subject to additional performance criteria, or may need to utilize or restrict certain stormwater management practices.
 - (7) Certain industrial sites and sites of a certain size are required to prepare and implement a stormwater pollution prevention plan, and file a notice of intent (NOI) under the provisions of the National Pollutant Discharge Elimination System (NPDES) general permit. The stormwater pollution prevention plan requirements will be required to be submitted to the building official as part of the site plan review process.
 - (8) Stormwater discharges from land uses or activities with higher potential pollutant loadings, known as "hotspots," may require the use of specific structural and pollution prevention practices.
 - (9) Prior to design, applicants are required to consult with the building official to determine if they are subject to additional stormwater design requirements.
 - (10) The calculations for determining peak flows as found in the stormwater design manual, chapter 6. The stormwater design manual shall be used for sizing all stormwater management practices.

(Ord. No. 442, § 5, 1-4-2005)

Sec. 22-37. Basin stormwater management design criteria.

- (a) *Minimum control requirements.* Projects shall be designed so that post-development peak discharge for the ten-, 25- and 100-year frequency storm events will not exceed the pre-development peak discharge rates for the ten-, 25- and 100-year frequency storm events; unless the city council grants the applicant a waiver or the applicant is exempt from such requirements. In addition, if hydrologic or topographic conditions warrant greater control than that provided by the minimum control requirements, the building official reserves the right to impose any all additional requirements deemed necessary to control the volume, timing and rate of runoff.
- (b) *Site design feasibility.* Applicants should consider the following conditions of the site when they determine the types of practices they will use to control stormwater on the site. These include topography, the drainage area, the depth of the water table, soils, slopes, terrain and the location of environmentally sensitive areas located on site.

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- (c) *Specific requirements.* The stormwater control practices shall be designed to remove pollutants and reduce flow velocities, shall utilize an acceptable water quality pre-treatment requirement and shall capture and treat stormwater in accordance to specifications defined in the stormwater design manual.
 - (d) *Landscaping plans required.* For any structural improvements proposed, a landscape plan which affords stabilization of the areas adjacent to the improvements will be required.
 - (e) *Maintenance agreements.* Enforceable operations and maintenance agreements are required to ensure the system will function as designed. The maintenance agreements will include any and all maintenance easements required to access and inspect the stormwater treatment practice, and to perform routine maintenance as necessary to ensure proper functioning of the stormwater treatment practice. The owners of the stormwater treatment practice must perform maintenance on the facility and direct their engineer to certify that annual maintenance was completed. This certification must be submitted to the building official, each year. In addition, a legally binding covenant specifying the parties responsible for the proper maintenance for all stormwater treatment practices shall be secured prior to issuance for any permits for land disturbance activities.

(Ord. No. 442, § 6, 1-4-2005)

Sec. 22-38. Requirements for stormwater management approval.

- (a) *Stormwater management plan required for all developments.*
 - (1) Pre-construction review and approval is required for all developments within the city. Landowners of proposed single-family residential units and multi-family units under four units will submit the plan on a form provided by the building office.
 - (2) Landowners of proposed commercial developments and multi-family units larger than four units, and under one acre, will submit a stormwater management plan as part of the site development process.
 - (3) Landowners of proposed commercial development and multi-family units larger than four units and one acre or over will submit a copy of the stormwater management plan required by MDEQ under the NPDES Phase I or Phase II program.
- (b) *Stormwater management plan requirements.* Required information for the stormwater management plan includes the following information and data, prepared and certified by a registered professional engineer or certified contractor in the state. This information, submitted as a stormwater management plan will be submitted with site plan documents.
 - (1) Existing conditions shown on a topographic map with two-foot minimum contours of the land proposed for development or redevelopment. The following will be shown on the map:
 - a. The banks and centerline of streams and channels;
 - b. The normal shoreline of lakes, ponds, coastlines and retention/detention basins and lines of inflow and outflow;
 - c. The location, size and slope of stormwater conduits and drainage swales;
 - d. Storm, sanitary and combined sewer and outfalls of record;
 - e. Delineation of upstream and downstream drainage features and watersheds which might be affected by the development;
 - f. Base flood (100-year) elevation (BFE) and floodways for the property;
 - g. Environmental features including limits of wetlands areas and any designated natural areas.

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- (2) Stormwater plan to be designed to safely and completed manage stormwater runoff onsite and detain increased stormwater runoff to meet standards defined in sections 22-36 and 22-37. The plan shall be accompanied by maps and other descriptive material to include the following:
- a. The extent of drainage channels on site and direction of the flow of the channels and the flow from the site;
 - b. Proposed stormwater conveyance practices to be onsite, existing off-site stormwater conveyance system including receiving streams, channels and outfall and inlet locations. Include elevations of locations and high water elevations. Hydrologic and hydraulic design calculations for the pre-development and post-development condition for the design storm proposed in section 22-36. The calculations for determining peak flows are found in the stormwater design manual, chapter 6. The stormwater design manual shall be used for sizing all stormwater management practices. Calculations will include description of design storm frequency, intensity and duration, time of concentration, soil curve number or runoff coefficients, peak runoff rates and total runoff volumes, infiltration rates, culvert capacities, flow velocities, data on the increase in rate and volume of runoff for the design storm identified in section 22-37. And documentation of sources for computation methods and field test results.
 - c. Maintenance and repair plan to include detailed and maintenance and repair procedures, timeframes for maintenance and proposed maintenance costs.
 - d. Maintenance agreements or covenants and maintenance easements.
 - e. Other environmental permits that may be required.
- (3) Sanitary waste treatment facilities shall be designed and located on the plan to comply with current state department of health regulations.
- (c) *Performance bond.* The city council may, at its discretion, require the submittal of a performance security or bond prior to issuance of a permit in order to ensure that the stormwater practices are installed by the permit holder as required by the approved site plan within a specified period, not to exceed two years. Such bond shall be in an amount adequate to cover the cost of the improvements as determined by the council, plus an additional 25 percent to cover contingencies, with surety and conditions satisfactory to the council.

(Ord. No. 442, § 7, 1-4-2005)

Sec. 22-39. Construction inspection.

- (a) *Notice of construction commencement.* The applicant must notify the building official in advance before the commencement of construction.
- (b) *Record drawings.* All applicants for commercial and multi-family residential units over four units are required to submit actual record drawings for any stormwater management practices located on-site after final construction is completed. The plan must show the final design specification for all stormwater management facilities and must be certified by a professional engineer. A final inspection is required before the release of any performance security, performance bond or guaranty.
- (c) *Landscaping and stabilization requirement.*
 - (1) Permanent vegetation must be seeded or planted within 30 days after the final grade is reached.
 - (2) Planting guidance for permanent vegetative practices is included in chapter 5 of the stormwater design manual.

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- (3) Any area of re-vegetation must exhibit a survival of a minimum of 75 percent of the crop cover throughout the year immediately following re-vegetation. Re-vegetation must be repeated in successive years until the minimum 75 percent survival for one year is achieved.
- (d) *Dedication of facilities.* Whenever drainage facilities are planned to serve several projects or a specific area deemed necessary by the city planning commission, the drainage facilities may be dedicated to the city. When these projects are of a regional nature, the city will maintain these facilities. In these cases, access easements shall be provided to the city.
- (e) *Inspection of facilities.* The city engineer shall inspect all drainage facilities while under construction. When facilities are not constructed according to approved plans, the city has the explicit authority to compel compliance and have any situations corrected which are not according to the approved plans. All drainage facilities located on private property, whether dedicated to the city or not, shall be accessible at all times for inspection by the city engineer or other responsible public official.
- (f) *Inspection of sanitary waste treatment facilities.* The city engineer shall inspect all sanitary waste treatment facilities while under construction and upon completion to ensure proper installation and connection to waste water collection systems when applicable. Proper function of sanitary waste treatment facilities is required prior final approval and issuance of a certificate of occupancy.
- (Ord. No. 442, § 8, 1-4-2005)

Sec. 22-40. Maintenance and repair of stormwater facilities.

- (a) *Maintenance easement.* Prior to the issuance of a permit that has a stormwater management facility as one of the requirements of the permit, the applicant or owner of the site must execute a maintenance easements agreement that shall be binding on all subsequent owners of land served by the stormwater management facility. The agreement shall provide for access to the facility at reasonable times for periodic by the city or their contractor, agent or designee, and for regular assessments of property owners to ensure that the facility is maintained in proper working condition to meet design standards and any other provisions established by this article. The easement agreement shall be recorded by the city in the land records.
- (b) *Maintenance covenants.* Maintenance of all stormwater management facilities shall be insured through the creation of a formal maintenance covenant that must be approved by the city and recorded into the land record prior to final approval. As part of the covenant, a schedule shall be developed for when and how often maintenance will occur to ensure function of the stormwater management facility. The covenant shall also include plans for periodic inspections to ensure proper performance of the facility between scheduled cleanouts.
- (c) *Requirements for maintenance covenants.* All stormwater management facilities must undergo a regular yearly inspection process at a frequency sufficient to determine the functioning ability of the conveyance system and any repair needs; at a minimum this should include inspection prior to the beginning of Hurricane Season, prior to any forecasted major rains that may equal the design requirements and after any major rain events.
- (d) *Right-of-entry inspection.* All drainage facilities located on private property, whether dedicated to the city or not, shall be accessible at all times for inspection by the city engineer or other responsible public officials. All sanitary waste treatment facilities located on private property shall be accessible for inspection for proper function by the city engineer or other responsible public officials where there is reason to suspect that a malfunction has resulted in stormwater runoff pollution by unsanitary waste.
- (e) *Records of installation and maintenance activities.* Parties responsible for the operation and maintenance of a stormwater management facility shall make records of the installation and of all, maintenance and repairs,

and shall retain these records for at least five years. These records shall be made available to the city during inspection of the facility and other reasonable times upon request.

- (f) *Failure to maintain practices.* The building official will notify the owner of the premises where the BMP is located in writing that maintenance is required. The owner will have 60 days from the receipt of such written notice to bring the BMP into proper working order.

(Ord. No. 442, § 9, 1-4-2005)

Sec. 22-41. Enforcement of penalties.

- (a) *Violations.* Any person found to be in violation of any of the terms and provisions of this article shall be found guilty of a misdemeanor and subject to a fine not to exceed \$500.00 or imprisoned for no more than 90 days or both such fined and imprisoned. A continuance of a violation without reasonable effort on the part of the defendant to correct same shall be and constitute a new and separate offense each day.
- (b) *Notice of violation.* If the building official shall find that the provisions of this article are violated, the person responsible for such violation shall be notified in writing, indicating the nature of the violation and ordering action necessary to correct it. Among those actions which he shall order is discontinuance of any actions on site. In such case that the building official is left without any further recourse but to seek police assistance, he may call upon the city police department to furnish him with necessary police personnel to fulfill his duties.
- (c) *Stop work order.* In case any post-construction stormwater practice is constructed, reconstructed, altered, repaired, or converted, or any person would be damaged by such violation, in addition to other remedies, the building official may institute injunction, mandamus, or other appropriate action in proceeding to prevent violation of the final plan or any element of this article.
- (d) *Restoration of lands.* Violators may be required to restore land to its undisturbed condition. In the event that restoration is not undertaken within a reasonable time, after notice, the city may take necessary corrective action, the cost of which shall become a lien upon the property until paid.

(Ord. No. 442, § 10, 1-4-2005)

Secs. 22-42—22-61. Reserved.

