

City of Daphne, Alabama
Stormwater Management Program Plan
Phase II MS4

2016-2021 SWMPP
Permit # ALR 040039, Expiration Date: September 30, 2021



2019 Tiawasee Creek Stream Restoration

Developed by the City of Daphne's Environmental Programs Manager
1705 Main Street, Daphne, AL 36526



2020 SWMP Plan Update & Evaluation of Minimum Control Measure Effectiveness

The sections of the City’s SWMPP were updated as follows:

1. SWMP Plan Updates

Page 10-303d Pathogen Listing

According to ADEM’s 303(d) List last updated in 2018; five (5) streams that are located within, or flowing through, Daphne are designated as impaired. ADEM’s 303(d) listed streams located within the City of Daphne are summarized in Table 3 and shown in Figure 4. ADEM has included Joe’s Branch, Tiawasee Creek, un-named tributary to Tiawasee Creek, D’Olive Creek and Un-named Tributary to D’Olive Creek on the 303(d) List as impaired for siltation and habitat alteration. *D’Olive Creek is also listed for pathogen impairment. ADEM, lists the source of the siltation impairment as land development and they attribute the pathogen listing source to collection system failure. As a result of these streams’ designations, EPA requires the establishment of a Total Maximum Daily Load (TMDL) under the Clean Water Act. The TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and safely meet water quality standards. Currently there are no EPA approved TMDLs for these streams.*

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D’Olive Creek’s Pathogen Listing has been added to the Daphne Streams on the 303(d) List as of April 2020

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D. Flood Damage Prevention Ordinance

The City of Daphne adopted its Flood Damage Prevention Ordinance (Ordinance No. 1998-02) in 1998. The ordinance was updated in 2009 *and again in 2019 (Ordinance No. 2019-10, Appendix E)*. The purpose of this ordinance is to promote the public’s health, safety and general welfare and to minimize public and private losses due to flood conditions in specified areas of provisions designated to:

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SWMPP Revisions Table updated

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Since, Daphne has five (5) streams listed on ADEM’s 303(d) List as impaired for siltation (sediment) and one impaired by pathogens, these pollutants will be primarily targeted in the public education program.

b. Target pathogen sources will include but not be limited to:

- i. Residential Pet Waste*
- ii. Public and private dog park’s*
- iii. Residential kitchen grease and oil disposal*
- iv. Commercial kitchen grease and oil disposal*
- v. Failing septic systems*



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d. Measurable Goal:

In year five (5) of the current permit cycle, Environmental Programs in conjunction with Daphne’s EAC will initiate conversations with Daphne Utilities regarding D’Olive Creek’s 303d pathogen listing and permit requirements. Daphne will pursue partnering with Daphne Utilities on the pathogen education outreach effort. This will allow both permittees to meet the permit requirements more cost effectively and result in a better pathogen education outreach plan. The City’s outreach strategies and goals will be detailed in its 2022-2027 SWMPP.

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Appendix E Updated to Current Flood Damage Prevention Ordinance No. 2019-01

2. Evaluation of Minimum Control Measure Effectiveness

Comments regarding the annual review of the overall effectiveness of the City’s MCM goals and strategies are detailed below.

A. MCM1-Education Outreach/Public Participation

The City feels that the strategies and goals established for this MCM are effective in meeting the permit requirements. At this time, the City has no plans to change the SWMPP strategies or goals.

B. MCM2-Illicit Discharge

The City feels that the strategies and goals established for this MCM are effective in meeting the permit requirements. At this time, the City has no plans to change the efforts. However, the City will continue to strive to make the dry weather screening, inspection and reporting process a little more stream line by pursuing new software to track the data.

C. MCM3-Construction Site Runoff Control

The City feels that the strategies and goals established for this MCM are effective in meeting the permit requirements. At this time, the City has no plans to change the SWMPP strategies or goals.

D. MCM4-Post Construction Stormwater Management

The City feels that the strategies and goals established for this MCM are effective in meeting the permit requirements. At this time, the City has no plans to change the efforts.

E. MCM5-Pollution Prevention/Good House Keeping for Municipal Operations

The City feels that the strategies and goals established for this MCM are effective in meeting the permit requirements. At this time, the City has no plans to change the efforts. However, the City will strive to make the tracking of employee training more efficient.

F. Water Quality Monitoring Plan

The City feels that the strategies and goals established for this MCM are effective in meeting the permit requirements. At this time, the City has no plans to change the efforts.

Certification

City of Daphne, Alabama

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is 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.

**2016/2021 Stormwater Management Program
2020 Annual Report and Plan Update**



Dane Haygood, Mayor

Date: May 21, 2020

ATTEST:



Date: May 21, 2020





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Chapter 1 – Introduction

1-1 Program Overview

This document presents the City of Daphne’s Stormwater Management Program (SWMP) as required by the Alabama Department of Environmental Management’s (ADEM) National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Separate Storm Sewer System (MS4) Permit. This permit covers stormwater discharges from regulated small municipalities. The overall goal of the program is to protect water quality by an effort to reduce to the maximum extent practicable the discharge of pollutants in stormwater.

1-2 Regulatory Background

In 1990, the Environmental Protection Agency (EPA) promulgated regulations establishing Phase I of the NPDES stormwater program. The Phase I program for municipal separate storm sewer systems (MS4s) requires operators of “medium” and “large” MS4s that generally serve populations of 100,000 or greater to implement a stormwater management program as a means to control polluted discharges from certain municipal, industrial and construction activities into the MS4.

In 1999, EPA promulgated regulations establishing Phase II of the NPDES stormwater program. The Phase II program extends coverage of the NPDES stormwater program to regulated “small” MS4s. A regulated small MS4 is located within an “Urbanized Area” or is designated by the NPDES permitting authority. An Urbanized Area (UA) is a densely settled core of census tracts and/or census blocks that have a population of at least 50,000, along with adjacent territory containing non-residential urban land uses as well as territory with low population density included to link outlying densely settled territory with the densely settled core. It is a calculation used by the Bureau of the Census to determine the geographic boundaries of the most heavily developed and urban areas.

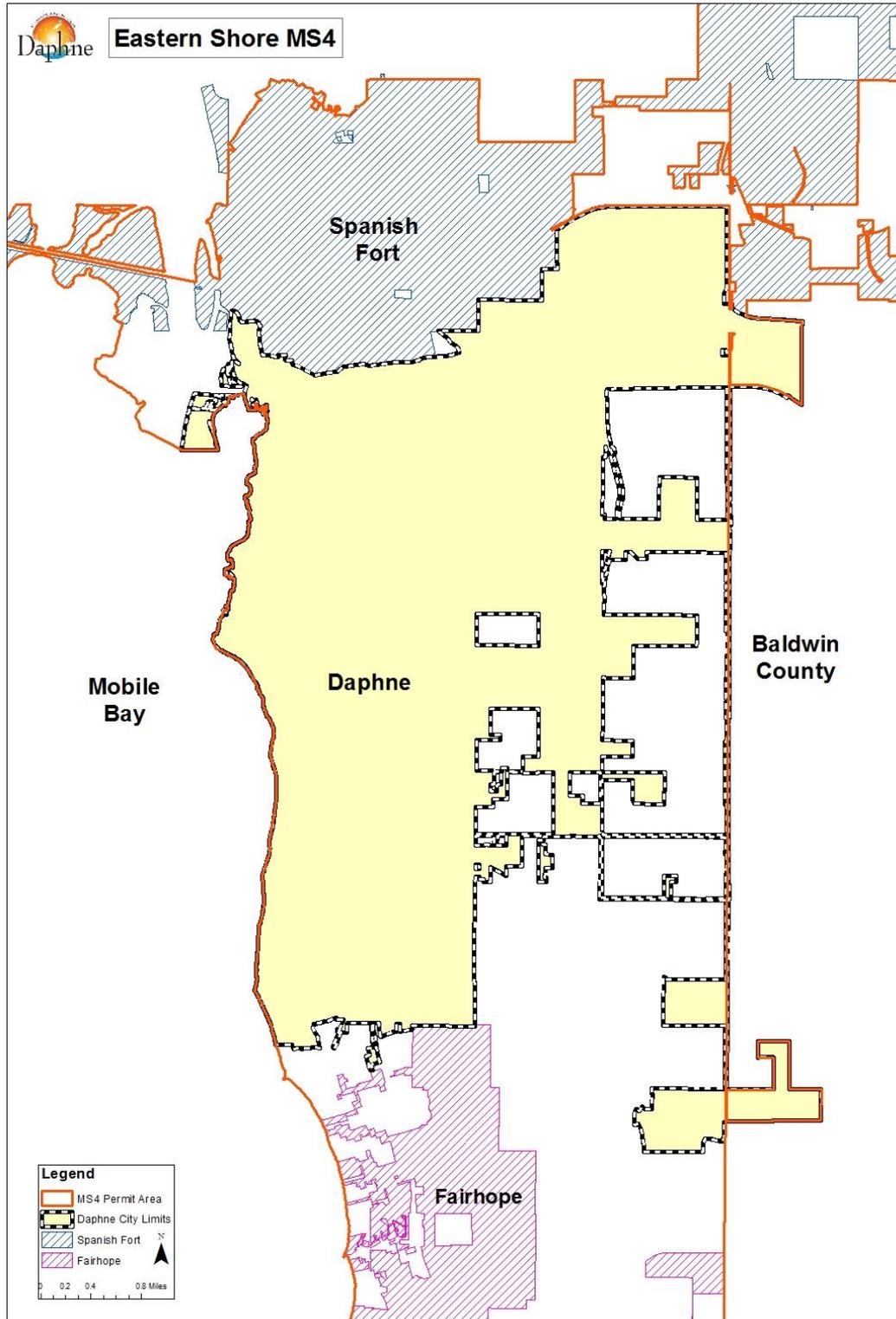
The ADEM presently has primary jurisdiction over permitting and enforcement of the Phase I and II stormwater program for Alabama. On October 31, 2016, ADEM issued its latest MS4 Phase II General Permit (NPDES Permit Number ALR040039, Appendix A) for stormwater discharges associated with small MS4s in Alabama. The City of Daphne is permitted under the General Permit and the permit will expire September 30, 2021.

1-3 Regulated Area

The Phase II MS4 General Permit applies to operators of regulated small MS4s that discharge stormwater to waters of the State. The City of Daphne is located on the eastern shore line of Mobile Bay, or south of Spanish Fort and north of Fairhope. Figure 1 displays Daphne’s city limit boundaries.



FIGURE 1. CITY OF DAPHNE MAP



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Daphne is one of the fastest growing cities in Alabama. From the 2000 Census to the 2010 census, the City experienced a thirty percent (30%) increase in population from 16,581 to 21,570 persons. This makes Daphne the most populous City in Baldwin County and designates it as a Phase II MS4.

In order to develop, implement and maintain an effective SWMP that minimizes pollutant discharges in stormwater runoff, it is important for the City to have knowledge of the major drainage basins within the City, potential sources of pollutants by land use, and water quality concerns of each drainage basin.

A. Major Drainage Basins within the City

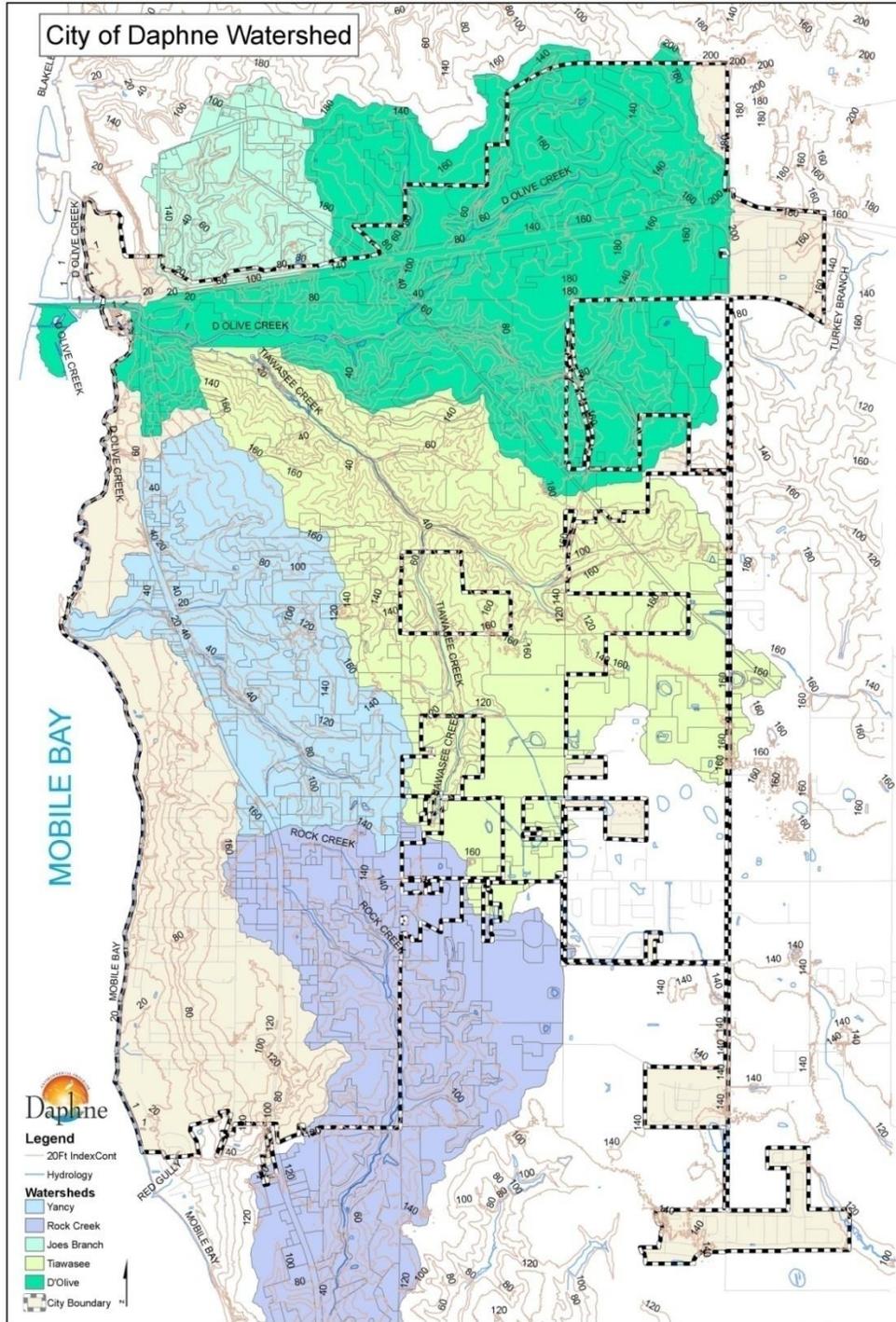
The City’s total area is sixteen point three eight (16.38) square miles with sixteen point three six (16.36) square miles of land and point zero two (.02) square miles of water. The City of Daphne expands across four (4) watersheds that are designated by a twelve (12) digit Hydrologic Unit Code (HUC-12). Areas of the City of Daphne located within each HUC-12 watersheds are summarized in Table 1 and shown in Figure 2.

TABLE 1. HUC-12 WATERSHED

HUC-12 Watersheds	Area (Mi ²)	Area (%)
HUC#031602040505 Tensaw River-Apalachee River Sub-watershed D'Olive Creek	9.70	59.3
HUC#031602050301 Yancey Branch	4.23	25.8
HUC#031602050302 Fly Creek	1.51	9.2
HUC#031602050304 Upper Fish River	0.94	5.7
Total	16.38	100.0



FIGURE 2. DAPHNE WATERSHEDS



Map compiled by City of Daphne GIS Manager, June 8, 2012.

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B. Potential Sources of Pollutants by Land Use

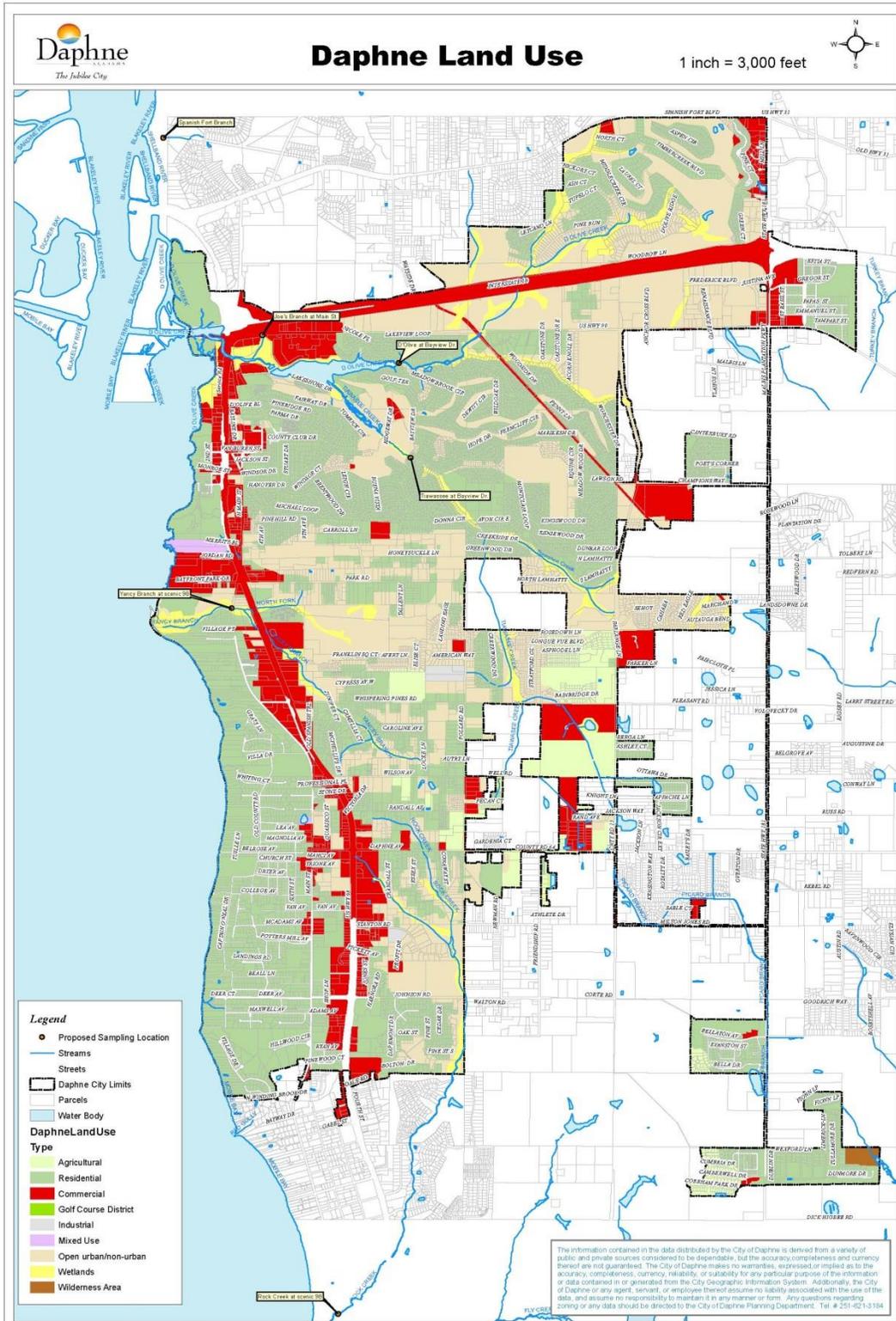
Because various pollutants are associated with specific land uses, it is important for the City to know the land uses within its watersheds. Based on Baldwin County’s 2009 GIS data, the City’s major land use categories include the following: Agriculture, Commercial, Forested, Industrial, Institutional, Recreational, Residential, Water and Wetlands. A summary of the major land uses is listed in Table 2 and shown Figure 3.

TABLE 2. LAND USE

Land Use	Area (mi2)	Area (%)
Agriculture	0.47	2.9
Commercial	2.18	13.3
Forested	3.53	21.5
Industrial	0.05	0.3
Institutional	0.59	3.6
Recreational	0.73	4.5
Residential	7.57	46.2
Water	0.02	1.2
Wetlands	1.07	6.5
Total	16.38	100%



FIGURE 3. DAPHNE LAND USE MAP





C. Water Quality Concerns of Each Drainage Basin

The City of Daphne’s primary receiving water is Mobile Bay. It is listed as Fish and Wildlife and Swimming by ADEM for its water use classification. The water use classification is the most beneficial use that the water of the stream will support. Mobile Bay is Alabama’s principal estuary, receiving drainage from all but the extreme northern and southeastern portions of the State. Mobile Bay is included in the National Estuary Program, one of only twenty eight (28) officially designated estuaries across the nation. The National Estuary Program (NEP) was established in 1987 by amendments to the Clean Water Act to identify, restore, and protect nationally significant estuaries of the United States.

The D’Olive Creek Watershed shown in Figure 2 is the City’s largest watershed and the most impacted (impaired). Portions of the watershed are located within Spanish Fort, Baldwin County and Daphne. It drains over seven thousand and seven hundred (7,700) acres and consists of three principal tributaries including D’Olive Creek, Tiawasee Creek, and Joe’s Branch. The ADEM water use classification for these tributaries is Fish and Wildlife. The three (3) principal tributaries and their tributaries are all listed on ADEMs 303(d) List impaired by silt (sediment) due to land use change over time. Severe stream channel erosion has been documented on each of the streams in the municipalities and the county.

1. Discharge Compliance with Water Quality Standards

The general permit requires, at a minimum, that permittees develop, implement and enforce a SWMP designed to reduce the discharge of pollutants to the maximum extent practicable. Full implementation of best management practices, using all known, available, and reasonable methods to prevent and control stormwater pollution from entering waters of the State of Alabama is considered an acceptable effort to reduce pollutants from the municipal storm drain system to the maximum extent practicable.

2. Discharges to Impaired Waters

According to ADEM’s 303(d) List last updated in 2020; five (5) streams that are located within, or flowing through, Daphne are designated as impaired. ADEM’s 303(d) listed streams located within the City of Daphne are summarized in Table 3 and shown in Figure 4. ADEM has included Joe’s Branch, Tiawasee Creek, un-named tributary to Tiawasee Creek, D’Olive Creek and Un-named Tributary to D’Olive Creek on the 303(d) List as impaired for siltation and habitat alteration. D’Olive Creek is also listed for pathogen impairment. ADEM, lists the source of the siltation impairment as land development and they attribute the pathogen listing source to collection system failure. As a result of these streams’ designations, EPA requires the establishment of a Total Maximum Daily Load (TMDL) under the Clean Water Act. The TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and safely meet water quality standards. Currently there are no EPA approved TMDLs for these streams.



TABLE 3. DAPHNE STREAMS ON THE 303(d) LIST AS OF APRIL 2020

Stream Name	Watershed	Designated Use	Pollutant of Concern	Source
D'Olive Creek	D'Olive Creek	Fish & Wildlife	Siltation Habitat Alteration	Land Development
Joe's Branch	D'Olive Creek	Fish & Wildlife	Siltation Habitat Alteration	Land Development
Tiawasee Creek	D'Olive Creek	Fish & Wildlife	Siltation Habitat Alteration	Land Development
Un-Named Tributary to D'Olive Creek	D'Olive Creek	Fish & Wildlife	Siltation Habitat Alteration	Land Development
Un-Named Tributary to Tiawasee Creek	D'Olive Creek	Fish & Wildlife	Siltation Habitat Alteration	Land Development
D'Olive Creek	D'Olive Creek	Fish & Wildlife	Pathogens	Collection System Failure





1-4 Legal Authority

Daphne was officially incorporated in July 1927. As an incorporated city, Daphne has the legal authority to create land use and design regulations for developments within the City and its corporate limits in accordance with the statutory provisions of the State of Alabama. Listed below are the City’s existing ordinances that support Daphne’s efforts in MS4 Stormwater Management Program compliance:

A. Land Use and Development Ordinance (LUDO)

Daphne adopted its original Land Use and Development Ordinance (LUDO) in September 1987. The ordinance has been amended several times since its adoption with the latest revision in 2011 (Ordinance No. 2011-54, Appendix B). The LUDO addresses both the City’s Zoning and Subdivision Regulations that are detailed below.

1. Zoning Provisions

Components of the Zoning Provisions include the following:

- a. Classification and establishment of districts;
- b. Enforcement;
- c. Board of Adjustments;
- d. Amendment (of the Zoning Ordinance);
- e. Legal status provisions;
- f. General provisions;
- g. District regulations;
- h. Outdoor advertising signs and structure.

2. Subdivision Provisions

Components of the Subdivision Provisions include the following:

- a. Authority and jurisdiction;
- b. Procedures;
- c. Requirements for plats and supplementary data;
- d. Design standards;
- e. Required improvements (including drainage);
- f. References to the Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas;
- g. Required Construction Best Management Practices Plan (CBMPP);
- h. Required 50 foot Non-Disturbed Vegetated Stream Buffers;
- i. Required 30 foot Non-Disturbed Vegetated Wetland Buffers;
- j. Requirements for first flush treatments of stormwater;



- k. Requirement that all stormwater detention structures must attenuate the post development peak flow rates from the two (2), five (5), ten (10), twenty five (25), fifty (50) and one hundred (100) year 24 hour design storms to release a graduated discharge at or below the predevelopment peak flow rates;
- l. Requirement that post development peak outflow rates not exceed the predevelopment outflow rate as the basis of detention design;
- m. Allowance for variances;
- n. Definitions, and
- o. Severability clause.

The latest version of Daphne’s LUDO is incorporated into the SWMP Plan by reference and is available on the City’s website www.daphneal.com.

B. Low-Impact Development Ordinance

The City of Daphne adopted an Ordinance titled *Amend the City of Daphne’s Land Use and Development Ordinance with the addition of Appendix O, Low Impact Development and Green Infrastructure* (Ordinance No. 2013-12, Appendix C) in 2013. The ordinance allows for the use of Low Impact Development (LID) practices in the City of Daphne. LID practices focus on mimicking natural hydrologic functions to reduce stormwater runoff, promote infiltration and groundwater recharge, and increase greenspace while promoting native vegetation and landscapes where possible. By encouraging green space and infiltration, LID can reduce impervious surfaces thereby reducing the overall volume of stormwater runoff rushing into storm drains and eventually into our streams.

The ordinance established a guide for development in Daphne wherein the ecological impacts to the environment are minimized through appropriate design, landscaping, erosion control, stormwater management and proper planning. The intent of the City is to protect valuable natural resources, the natural environment and the quality of life for all its citizens.

The latest version of Daphne’s Low Impact Development Ordinance is incorporated into the SWMP Plan by reference and is available on the City’s website www.daphneal.com.

C. Construction Best Management Practices for Residential Dwelling and Other Land Disturbance within the City Ordinance

The City’s residential erosion and sediment control ordinance was developed in 2007 (Ordinance No. 2007-03). It was amended in 2008 (Ordinance No.2008-54) and again in 2014 (Ordinance No. 2014-14, Appendix D). The ordinance includes:



1. References to the Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas and the ADEM General Construction Permit requirements;
2. Requirements for CBMPPs for all new home sites and any land disturbance greater than 1000 square feet;
3. Requirements for CBMP implementation, inspection and maintenance;
4. Procedures for detecting violations and enforcement.

The latest version of the ordinance is incorporated into the SWMP Plan by reference and is available on the City’s website www.daphneal.com.

D. Flood Damage Prevention Ordinance

The City of Daphne adopted its Flood Damage Prevention Ordinance (Ordinance No. 1998-02) in 1998. The ordinance was updated in 2009 (Ordinance No. 2009-01) and again in 2019 (Ordinance No. 2019-10, Appendix E). The purpose of this ordinance is to promote the public’s health, safety and general welfare and to minimize public and private losses due to flood conditions in specified areas of provisions designated to:

1. Require that certain uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
2. Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which increase flood heights, velocities, or erosion;
3. Control filling, grading, dredging and other development which may increase flood damage or erosion;
4. Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters which may increase flood hazards to other lands; and,
5. Control the alteration of natural flood plains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters.

The latest version of the Flood Damage Prevention Ordinance is incorporated into the SWMP Plan by reference and is available on the City’s website www.daphneal.com.

E. Illicit Discharge Detection and Elimination Ordinances

The City’s current LUDO references the City’s MS4 permit and prohibits illicit discharges from new commercial development. An excerpt from Article X, Section 10-7, “Water Pollution”, prohibits illicit discharges into the City’s MS4 and is provided below:



10-7 Water Pollution

“The following shall apply:

(a) No development or operation shall discharge, cause to be discharged liquid or solid waste into public waters unless it is in conformance with the provisions of the Municipal Separate Storm Sewer System (MS4) permit of the City of Daphne, the Alabama Department of Environmental Management, the Alabama State Board of Health Statutes and any regulations promulgated there under.....”

On March 17, 2014 the City adopted a stand-alone Illicit Discharge Detection and Elimination Ordinance (Ord. No. 2014-09, Appendix F) to address existing developments and residential illicit discharges. The Ordinance was based on EPA guidance and the objectives are the following:

1. To regulate the introduction of pollutants to the MS4 by stormwater discharges by any user;
2. To prohibit illicit connections and discharges to the City’s MS4;
3. To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with this Ordinance.

The latest version of the Illicit Discharge Ordinance is incorporated into the SWMP Plan by reference and is available on the City’s website www.daphneal.com.

F. Solid Waste Ordinance

The City updated its current Solid Waste Ordinance (2002-34, Appendix G) in 2002. The Ordinance has provisions in it prohibiting throwing, dumping and burying trash on public right of ways. The ordinance gives the City enforcement capability with penalties.

The latest version of the Solid Waste Ordinance is incorporated into the SWMP Plan by reference and is available on the City’s website www.daphneal.com.

G. Handbill Ordinance

In 2016, due to chronic problems with handbills impacting the City’s right of way and MS4 Stormwater system, the City adopted its Hand Bill Ordinance (2016-32, Appendix H). The ordinance regulates the distribution of handbills in the City of Daphne. The ordinance gives the City enforcement capability with penalties.

The latest version of the Handbill Ordinance is incorporated into the SWMP Plan by reference and is available on the City’s website www.daphneal.com.



H. Motorized Vehicle Trespass Ordinance

In 2017, desiring to protect the welfare and safety of the citizens of the City of Daphne and in an effort to prevent impacts to environmentally sensitive areas, prevent erosion and to protect water quality entering into its streams and Municipal Separate Storm Sewer System (MS4), the City determined it was necessary to establish standards that will regulate the operation of motorized vehicles on trespassed private property, public property and rights-of-way within the City of Daphne, Alabama and its police jurisdiction. The Motorized Vehicle Trespass Ordinance No. 2017-05 (Appendix Z) regulates motorized vehicle trespass and gives the City enforcement capability with penalties.

The latest version of the Motorized Vehicle Trespass Ordinance is incorporated into the SWMP Plan by reference and is available on the City's website www.daphneal.com.

I. Additional Ordinances

If the City determines that additional ordinances are necessary for proper implementation of its SWMP, the City will use its legal authority as a municipality to create them.



Chapter 2 - SWMP Program Administration

2-1 SWMP Plan Implementation Responsibilities

The Building Department’s Environmental Programs Manager (EPM) is responsible for the overall management of SWMP. However, no single department within the City is responsible for all of the necessary activities associated with the permit’s Minimum Control Measures (MCM). It takes a City wide team approach to effectively manage storm water. Therefore, multiple departments and agencies have a role in program management. The key departments and their responsibilities are detailed below:

A. City of Daphne’s Council

The Council is the legislative body for the City and is responsible for the promulgation of resolutions, ordinances and the budget related to the implementation of the SWMP.

B. Mayor’s Office

The Mayor is the executive for the City and is responsible for overall oversight of the program, and for maintaining communication between the Council and each department.

C. Building Department-Environmental Programs-Flood Plain Management

The Building Department’s EPM will lead the day-to-day activities and administration of the program, with substantial assistance and input from other departments as depicted in this Plan. The EPM will take the lead in assuring that MS4 training occurs city-wide. The Building Department will assist with flood plain management, illicit discharge detection and elimination, construction site runoff control, post-construction stormwater management, and training for the good housekeeping for municipal operation’s MCM.

D. Public Works/Recreation & Parks

Public Works and Recreation Department will have a role in several of the MCM, including public education, illicit discharge detection and elimination. In addition, these Departments are responsible for city-owned and maintained grounds and landscaping and will be largely responsible for the Pollution Prevention/Good Housekeeping for Municipal Operation’s MCM.

E. Community Development Department

The Community Development Department will assist by the development of criteria that includes elements and conditions of approval on land use projects consistent with the City’s Land Use and Development Ordinance (LUDO) and its SWMP Plan. Community Development will also assist with public education and outreach, construction site runoff control, and post-



construction stormwater management. The Department’s GIS personnel will assist in mapping various elements of the program.

F. Police Department

The Police Department provides a support role through its Code Enforcement Officer who issues municipal offense tickets for City ordinances. The Police Department is the enforcement mechanism for MS4 compliance through illicit detection and elimination, construction site runoff control and post construction stormwater management.

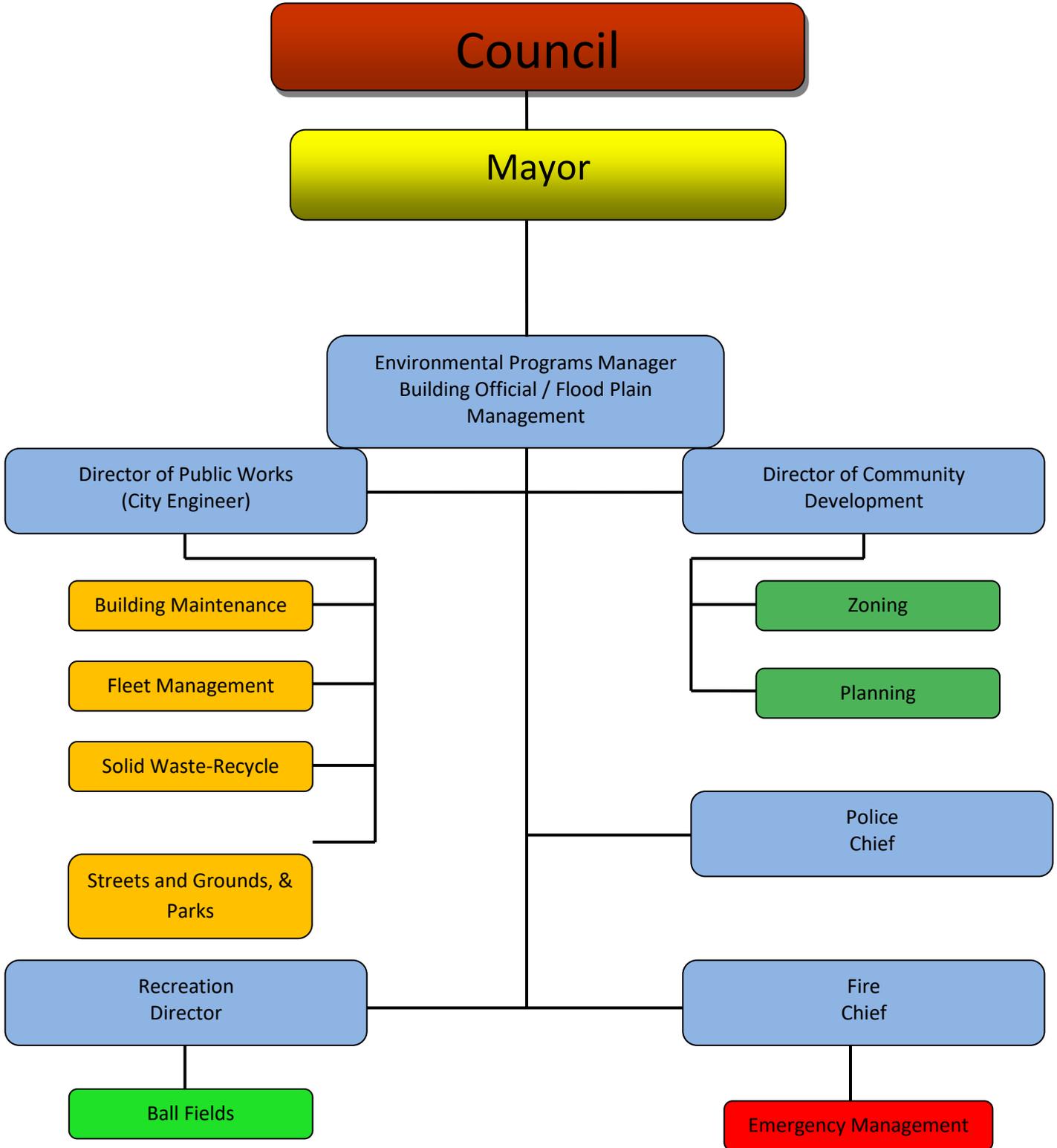
G. Fire Department

The Fire Department provides a support role through non-hazardous and hazardous waste spill reporting. Their responsibilities include public education, illicit discharge detection and elimination and pollution prevention and good housekeeping.

The Department Organizational Chart shown in Figure 5 presents the City’s departments with their relationships for purposes of the stormwater management program. As mentioned previously, the EPM will be in charge of overall program management. Future revisions to these responsibilities and relationships will be updated in the City’s SWMP Plan Annual Report, if necessary.



FIGURE 5. CITY SWMP ORGANIZATIONAL CHART





2-2 Coordination between Local MS4s

Daphne shares sections of its watersheds with other cities and the County. The City does not rely on any of these entities for compliance with our general permit. Therefore, there is no need for any Intra-Jurisdictional Agreements. However, the City does anticipate sharing some of its efforts in implementing various MCM of the permit such as Education Outreach and Public Participation. This coordination will be on a voluntary basis only and allows for cost effective implementation of certain program MCM.

2-3 SWMP Revisions and Updates

As part of the annual review of the SWMP and in conjunction with the preparation of the annual report, all revisions and updates that are required by ADEM or necessary to maintain permit compliance will be submitted to the ADEM for review. Upon approval of the revisions and updates, the modified SWMP Plan will become effective. Revisions to the SWMP shall be documented below in Table 4.

TABLE 4. SWMPP REVISIONS

Date:	Revised By:	Revision Description
8/30/2012	Ashley Campbell	Grammatical and Formatting Changes
03/20/2013	Ashley Campbell	Grammatical and SWMP Plan Annual Update
3/20/2014	Ashley Campbell	SWMP Plan Annual Update (See Page 3 of SWMPP)
3/25/2015	Ashley Campbell	SWMP Plan Annual Update (See Page 3 of SWMPP)
3/25/2016	Ashley Campbell	SWMP Plan Annual Update (See Page 3 of SWMPP)
12/20/16	Ashley Campbell	2016-2021 New SWMPP-Five Year Plan
5/30/17	Ashley Campbell	SWMP Plan Annual update due to ADEM comments to SWMPP
5/30/18	Ashley Campbell	SWMP Plan Annual Report & Update
5/30/19	Ashley Campbell	SWMP Plan Annual Report & Update
5/19/20	Ashley Campbell	SWMP Plan Annual Report & Update



Chapter 3 – Program Components

This chapter provides guidance to staff and others to meet the requirements of the ADEM general permit for stormwater discharges from the MS4.

The Five Program Minimum Control Measures (MCM) are:

- 3-1 Public Education and Outreach/Public Participation/Involvement (MCM 1)
- 3-2 Illicit Discharge Detection and Elimination (MCM 2)
- 3-3 Construction Site Runoff Control (MCM 3)
- 3-4 Post Construction Stormwater Management (MCM 4)
- 3-5 Pollution Prevention/Good Housekeeping for Municipal Operations (MCM 5)

The following sections in this chapter will detail the MCM with the following criteria for each:

- A. Program Introductions
- B. Program Strategies, Goals and Timelines
- C. Program Evaluation



3-1 MCM 1-Public Education and Public Involvement on Stormwater Impacts

A-1. Program Introduction/Public Education

1. Permit Requirement

The Public Education on Stormwater Impacts minimum control measure requires the City to implement and evaluate a public education and outreach program. The program must inform the community about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff to the maximum extent practical.

2. Target Audiences

MCM 1 includes the following diverse target audiences: engineers, developers, review staff, land use planners, the general public, businesses (including home-based and mobile businesses), homeowners, landscapers, property managers, schools, elected officials, contractors, federal, state and other local agencies. Educational materials will be tailored to communicate a specific stormwater pollutant concern to a targeted audience.

3. Target Pollutants and Sources

Non-point source pollutants found in stormwater will be targeted by MCM 1A-1. These pollutants include, but are not limited to, sediment, trash, fertilizers, pesticides, pathogens and oils and greases. The sources that are targeted include, but are not limited to, illegal dumping, pool water disposal, car washing, home auto repair, failing septic systems, illicit discharges, impacts from development, construction site erosion, commercial parking lot runoff and improper application of fertilizers, pesticides and herbicides.

Since, Daphne has five (5) streams listed on ADEM's 303(d) List as impaired for siltation (sediment) and one impaired by pathogens, these pollutants will be primarily targeted in the public education program.

a. Target sediment sources will include but not be limited to:

- i. Residential development
- ii. Commercial development
- iii. All-terrain trespass erosion
- iv. Construction site erosion



b. Target pathogen sources will include but not be limited to:

- i. Residential Pet Waste
- ii. Public and private dog park's
- iii. Residential kitchen grease and oil disposal
- iv. Commercial kitchen grease and oil disposal
- v. Failing septic systems

4. Other Subject Areas

Other items to be addressed in the Public Education Outreach campaign are:

- a. Low Impact Development has become a topic of much interest within the City. Since the 1st MS4 Phase II permit cycle, the City has adopted Low Impact Development standards in the Appendix O of the Land Use Ordinance 2011-54, Appendix C in the SWMPP.
- b. Storm water Infrastructure Maintenance of private stormwater infrastructure is a critical component of a properly managed stormwater program. This topic will be added to the education outreach campaign.

B-1. Strategies, Goals and Timeline

The City employs a variety of strategies for MCM 1A-1 including the utilization of existing materials from other agencies and permittees and the creation of new materials to educate the targeted audiences. Some of the City's current and possible future compliance activities include:

- Articles in Local Publications
- Brochures, Pamphlets
- Environmental Webpage
- Workshops
- School Presentations
- Curbside Recycling & Used Motor Oil Recycling Program
- Watershed Signage & Environmental Awareness Signage
- Elected Officials Training

These activities will represent efforts (best management practices) that are effective in reducing polluted stormwater runoff. Each outreach strategy is detailed below along with its goal, timeline and department responsible for implementation of the measure.



The City’s Environmental Advisory Committee (EAC) members are surveyed periodically to determine which targeted pollutants, audiences and strategies that they would like addressed. The results of the surveys guide the updates to this plan.

1. Submit Materials to Local Media

Current Program:

In previous years, the City has released several articles to local Property Owners Association’s papers and the local press. Several of these documents are included in Appendix I. This element of MCM 1A-1 will involve a local media campaign about the City’s stormwater program activities, general stormwater pollution impacts and ways to mitigate impacts. Media resources will be submitted to local or regional publishers and/or radio stations for use.

Potential Target Audience: General Public

a. Measurable Goal:

In year one (1) of the permit cycle, the EAC will be surveyed to create a list of target pollutants, audiences and strategies that they would like to see addressed during this permit cycle.

Throughout the remainder of the permit cycle, the list will be used to guide the development of additional education outreach strategies that focus on these target pollutants and audiences.

b. Measurable Goal:

In years one (1) through five (5) of the permit cycle, the City will continue to identify and update its list of local media sources that will assist the City in publishing and/or broadcasting the stormwater education materials.

c. Measurable Goal:

During the permit cycle, the City will submit five (5) environmental education outreach resources (which may include articles, articles with interviews, advertisements, commercials, etc.) for publication in local media outlets.

d. Measurable Goal:

In year five (5) of the current permit cycle, Environmental Programs in conjunction with Daphne’s EAC will initiate conversations with Daphne Utilities regarding D’Olive Creek’s 303d pathogen listing and permit requirements. Daphne will pursue partnering with Daphne Utilities on the pathogen education outreach effort. This will allow both permittees to meet the permit requirements more cost effectively and result in a better pathogen education outreach plan. The City’s outreach strategies and goals will be detailed in its 2022-2027 SWMPP.

Responsible Department: Environmental Programs



2. Create Stormwater Education Outreach Brochures-Pamphlets

Current Program:

This element of MCM 1A-1 allows for the distribution of new and existing stormwater education brochures and pamphlets for targeted groups, such as erosion and sediment control brochures for contractors working in the City, flyers for presentations given to school children, and flyers targeting residential activities to homeowners. The City currently displays several flyers and brochures in its Building Department permit office for distribution. Table 5 lists the brochures and flyers and a copy of each is located in Appendix J.





TABLE 5. CITY BROCHURES & HANDOUTS & LOCATIONS

ID #	Brochure	Minimum Control Measure	Source	Distribution Location
1	Clean Water Future Brochure	1	City of Daphne	Building Department, Public Works, City Library, & Recreation Department
2	Clean Water Future Clean Environment Coloring Book	1	City of Daphne	Building Department, Public Works, City Library, & Recreation Department
3	CBMP Plans Brochure	1&3	City of Daphne	Building Department, Public Works, City Library, & Recreation Department
4	Illicit Discharge Detection & Elimination	1&2	City of Daphne	Building Department, Public Works, City Library, & Recreation Department
5	Just Say No to Plastic	1	City of Daphne, MBNEP, Baldwin County	Building Department, Public Works, City Library, & Recreation Department
6	Phase II MS4 Brochure	1	City of Daphne	Building Department, Public Works, City Library, & Recreation Department
7	Proper Disposal of Expired and Un-needed Medication	1	City of Daphne	Building Department, Public Works, City Library, & Recreation Department
8	Off Road Vehicle Owners CWF Brochure	1	City of Daphne	Building Department, Public Works, City Library, & Recreation Department
9	Rain Barrel Brochure	1	City of Daphne	Building Department, Public Works, City Library, & Recreation Department
10	Rain Garden Design-ACES Master Gardner's	1&4	ACES	Alabama Cooperative Extension Systems Master Gardner
11	Recycle Brochure-Updated	1	City of Daphne	Building Department, Public Works, City Library, & Recreation Department
12	Storm Drain Protection	1&4	City of Daphne	Building Department, Public Works, City Library, & Recreation Department
13	Stormwater Pond Maintenance	1&4	City of Daphne	Building Department, Public Works, City Library, & Recreation Department
14	The 10 Best Native Trees	1	City of Daphne	Building Department, Public Works, City Library, & Recreation Department
15	The 10 Best Native Shrubs	1	City of Daphne	Building Department, Public Works, City Library, & Recreation Department
				<i>Community Development Location Removed</i>



Potential Target Audience: Contractors, Developers, Elected Officials, General Public, Home Owners, Landscapers, Schools

a. Measurable Goal:

In years one (1) through five (5) of the permit cycle, the City will continue to update the list of existing EPA and other stormwater educational brochures and pamphlets that can be used to implement this element of the MCM 1A-1. Also, with guidance from the EAC, distribution locations will be determined and the brochures (pamphlets) will be placed at the desired locations for distribution.

b. Measurable Goal:

In year two (2), the City will secure additional brochure space at other City facilities to distribute applicable education outreach brochures. Locations may include but are not limited to the following:

- a. Recreation Center
- b. Police Departments

c. Measurable Goal:

In year two (2) of the permit cycle, the City will create a tracking system to account for how many brochures are given out during a permit year at each location.

d. Measurable Goal:

During the current permit cycle, the City will create three, 3 additional education outreach documents, brochures or handouts for distribution.

Responsible Department: Environmental Programs

3. Environmental Web Page

Current Program:

The internet provides a very accessible means for making information and data available to citizens. The City’s website has been expanded to incorporate an environmental page which has a link to the City’s SWMP Plan, MS4 Annual Report, and other stormwater related topics, as well as information on any existing and future stormwater related activities.

Potential Targeted Audience: General Public

Measurable Goal:

Throughout the permit cycle, the website will be maintained and updated as needed to remain in compliance with the general permit.



Responsible Department: Environmental Programs

4. Workshops

Current Program:

Workshops are useful in educating specific target audiences about specific issues. Using existing training programs, the City will work with its partners to sponsor workshops on a variety of stormwater topics for homeowners and professionals. Examples of some potential workshops include but are not limited to the following: Non-point Education for Municipal Officials (NEMO), Rain Barrel, Erosion and Sediment Control, Stream Restoration, Invasive Species Control, and Low Impact Development (LID)/Green Infrastructure (GI) Workshops.

Potential Targeted Audience: General Public, Contractors, Developers, Elected Officials, Homeowners, Landscapers, and Professionals

Measurable Goal:

The City will sponsor three (3) workshops per permit cycle.

Responsible Department: Environmental Programs

5. School and Workshop Presentation

Current Program:

Teaching all ages of students about stormwater and its impacts is of utmost importance to any stormwater program. Visiting local schools, outdoor class rooms, workshops and other educational events and discussing the ways that students can reduce stormwater impacts is critical. Educating all ages is the key to a future with effective stormwater management.

Potential Targeted Audience: K-12 students, college students, conference and workshop attendees

Measurable Goal:

During the permit cycle, the City will present stormwater related topics at local schools or during environmental workshops or conferences twice a year. During these events, stormwater facts and other related topics will be presented to the students.

Responsible Departments: Environmental Programs & Public Works

6. Watershed Signage & Environmental Awareness Signage

Current Program:

Watersheds are a logical way to think about the connection between the land and water quality. How we manage and treat the land has a direct impact on the ability of water to support



a number of important public uses like swimming, fishing, aquatic species habitat and a clean drinking water supply.

Watershed signs increase public awareness about the importance of watersheds and encourage proper stewardship of our valuable streams, wetlands, lakes and ground water. The City has installed watershed signage in its largest two watersheds-D'Olive and Yancey Branch. A map showing the watershed sign locations is located in Appendix K.

Potential Targeted Audience: General Public

Measurable Goal:

Throughout the permit cycle, the City will inspect and maintain existing watershed and environmental awareness signage.

Responsible Departments: Environmental Programs & Public Works

7. Watershed Wagon

Current Program:

In the past, Daphne has worked with the Weeks Bay National Estuarine Research Reserve to promote stormwater education through the use of its Watershed Wagon. The Watershed Wagon is a utility trailer fitted with stormwater educational signage, games and displays that can be set up at public events.

Potential Targeted Audience: Public

Measurable Goal:

The City will sponsor the Watershed Wagon at two (2) City public events during the permit cycle.

Responsible Departments: Environmental Programs

8. Elected Officials Training

Current Program:

Since, elected officials are responsible for approving resolutions and ordinances that guide the implementation of the City's SWMP and also have budgetary control of it, it is very important to expand their knowledge of stormwater management.

Potential Targeted Audience: Elected officials



Measurable Goal:

The City will present the *Understanding Your Stormwater Management Plan*- (Appendix X) MS4 Education outreach video to its new elected officials after each municipal election.

Responsible Department: Environmental Programs

9. Create a Clean Water Future Stormwater Campaign

Current Program:

Create a Clean Water Future is a stormwater campaign to help residents of Alabama learn more about stormwater runoff and its impacts, increase demand for stormwater management, and provide tools that empower Alabama residents to reduce polluted runoff in our waterways. The public awareness and action campaign includes public service announcements, user friendly online resources and information and take action tools. The City adopted the plan by resolution in 2014 (Resolution 2014-52-Resolution, Appendix L) in Support of the Create a Clean Water Future Stormwater Education Outreach Campaign).

Potential Targeted Audience: Public

Measurable Goals:

Throughout the permit cycle, the City will continue to use and support the Create a Clean Water Future campaign.

Responsible Department: Environmental Programs

A-2. Program Introduction/Public Involvement

1. Permit Requirement

Public Involvement requires the City to develop, implement and evaluate a public participation program centered on the SWMP and the annual report. The development of this program will be documented throughout the process. Ongoing activities for public involvement include advisory councils, watershed associations, committees, stewardship programs and other environmental related activities.

2. Target Pollutants and Sources

Non-point source pollutants found in stormwater will be targeted by MCM 1A-2. These pollutants include, but are not limited to, sediment, trash, fertilizers, pesticides, pathogens and oils and greases. The sources that are targeted include, but are not limited to, illegal dumping, failing septic systems, impacts from development, construction site erosion, commercial parking lot runoff and improper application of fertilizers, pesticides, and herbicides.



B-2. Strategies, Goals and Timelines

The City will employ a variety of strategies for MCM 1A-2 from involvement with existing groups to developing additional mechanisms. Some efforts will also focus on public participation as a whole. Each strategy is detailed below along with its goal, timeline and department responsible for implementation of the measure.

1. Citizens Environmental Advisory Committee

Current Program:

The Citizen’s Environmental Advisory Committee of Daphne was created by ordinance in 2007 (Ordinance No. 2007-66, Appendix M) and positions filled in 2011. The committee is made up of environmental consultants, biologists, engineers, botanists, private business owners, and City staff, including the Director of Public Works and the Environmental Programs Manager. The Committee serves various roles for the City from the annual review of the SWMP to environmental ordinance promulgation and review. Also, the committee assists the City in applying for federal and state grant monies to support its efforts in stormwater management through each of the MCM.

a. Measurable Goal:

In years one (1) through five (5) of the permit cycle, the City will hold at least four (4) EAC meetings a year.

b. Measurable Goal:

In year one (1) of the meetings, the City’s SWMP will be reviewed and updated as needed to maintain permit compliance.

Responsible Departments: Environmental Programs, and Public Works

2. Watershed Organizations

Current Programs:

a. D’Olive Creek Watershed Working Group

The D’Olive Watershed Working Group (DWWG) is a local group made up of citizens, elected officials, federal, municipal, and state employees. The group initially formed to commence the development of a Watershed Management Plan (WMP) for D’Olive Creek. The DWWG served as an advisory group and assisted in the development and review of the plan. In 2010, the Plan was completed. Since then, the group has been inactive but the City plans on turning the group into a citizen based watershed group. If the group is revitalized the City will participate in its meetings.



Measurable Goal:

Throughout the permit cycle, if the group is revitalized the City will attend the DWWG meetings.

Responsible Department: Environmental Programs

b. D'Olive Creek Restoration Task Force (DWRT)

The D'Olive Creek Restoration Task Force (DWRT) is a local group made up of Daphne, Spanish Fort and Baldwin County elected officials that try to meet quarterly to address watershed issues. This group has a more direct role in the implementation of the Watershed Management Plan. The group meets to discuss needed watershed projects and prioritizes the projects for implementation. The Mobile Bay National Estuary Program (MBNEP) is the lead for the task force. Daphne's Mayor and EPM represent the City during the meetings.

Measurable Goal:

Through the permit cycle, the City will attend scheduled meetings. The meetings attended will be tracked and documented in the SWMP Plan Annual Report.

Responsible Department: Environmental Programs

3. Baldwin County Water Festival and Coastal Kids Quiz

Current Program:

The Baldwin County Water Festival and the Coastal Kids Quiz are two efforts to educate students about all aspects of the water cycle and other related natural resources. These efforts also instill in the students a general environmental awareness and stewardship regarding specific coastal issues and protection strategies. The Water Festival includes 4th grade students, their teachers and parents. It is an all-day event centered around hands on learning about watersheds and the importance of water. The Coastal Kids Quiz includes 5th grade students, teachers and parents. Fifth grade students are given coastal reading materials about native species, coastal topics, environmental issues, etc. and are quizzed on the topics in a school verses school competition. The City has participated actively in both efforts. The Environmental Programs Manager teaches one of the Water Festival demonstrations and moderates for the Coastal Kids Quiz. These efforts of participation will continue in the future.

Measurable Goal:

Through the permit cycle, if the programs take placed, the City will participate in one event a year and document it in the City's annual report.

Responsible Department: Environmental Programs



4. Community Clean-Up Day and Household Hazardous Waste Amnesty Day

Current Program:

Community Clean-Up Days are requested by neighborhoods and coordinated by the City in order to remove litter and trash from drainage ways and rights-of-way within small communities of Daphne. The City sponsors the Alabama Coastal Cleanup which is a state wide effort that focuses on cleaning up trash and debris from the coastal area.

Measurable Goal:

Through the permit cycle, based on available funding, the City may participate and/or assist with at least one (1) clean-up day per permit year.

Responsible Department: Environmental Programs and Public Works

5. Keep Daphne Beautiful Day

Current Program:

The City of Daphne became a Keep America Beautiful affiliate in 2015 and started the Keep Daphne Beautiful Day that is held during spring of each year. The program allows citizens to de-clutter their homes of household hazardous waste items by providing means for proper disposal. The items that are taken include but are not limited to: aerosol cans, cleaners, spot removers, adhesives, glues, resins, latex paint, oil paint, thinners, strippers, insecticides, herbicides, poisons, propane cylinders, swimming pool chemicals, tires, used motor oil, transmission fluids, car batteries, out of date prescriptions, and kitchen oil and grease. Household Hazardous Waste Amnesty Days allow residents to bring household hazardous wastes to the City for disposal through a licensed hazardous waste contractor.

Measurable Goal:

Through the permit cycle, based on available funding, the City will hold one Keep Daphne Beautiful Day.

Responsible Department: Public Works

6. Curbside Recycling & Used Motor Oil Recycling Program

Current Program:

The City provides curbside recycling which reduces the potential pollutant source by reducing, recycling and reusing; they are a benefit to stormwater management.

Potential Targeted Audience: Homeowners, Renters, and Rental Management Agencies

Measurable Goal:

Throughout the permit cycle, the City will track the quantity of recycled goods and report the data in the annual report.



Responsible Departments: Public Works & Environmental Programs

7. Arbor Day Tree Give Away

Current Program:

Increasing the native urban tree canopy in Daphne provides many benefits to water quality and habitat. Trees reduce stormwater runoff by absorption (infiltration) and their roots help prevent erosion. Therefore, the City is excited each year to celebrate Arbor Day by giving away trees.

Measurable Goal:

In years one (1) through five (5) of the permit cycle, based on available funding, the City will sponsor and/or assist with a local Arbor Day celebration.

Responsible Department: Public Works

8. Environmental Web Page

Current Program:

The internet provides a very accessible means for allowing for public participation by making information and data available to citizens for upcoming future stormwater related activities. The City maintains an environmental web page that includes information on stormwater regulations and other related topics.

Potential Targeted Audience: General Public

Measurable Goal:

In years one (1) and five (5) of the permit cycle, the website will be maintained and updated as needed to remain in compliance with the general permit.

Responsible Department: Environmental Programs

9. Comprehensive Land Use Plan

Current Program:

In 2003, Daphne adopted its Comprehensive Land Use Plan. The City sought public input through multiple meetings of citizens, public officials, City staff, the Planning Commission and other entities. The plan was developed as guidance for future development within Daphne. There were four guiding principles, or mission statements, outlined in the document and are listed below:

- a. To continually confirm our purpose as the “Preferred Community in South Alabama” by providing superior educational facilities and opportunities so that Daphne children may remain nationally competitive graduates.



- b. Excel in the provision of protection services, infrastructural facilities and cultural opportunities so that Daphne residents are afforded the highest quality of living possible.
- c. Maintain vigorous citizen’s oversight of municipal activities to ensure that opportunities are realized for continuous improvement in the provision of services, facilities and resources.
- d. Foster an atmosphere which stimulates economic growth and attracts quality industry through adequate transportation facilities, a stable and active business environment, a skilled and educated workforce and a strong customer base.

This document is available on the City website www.daphneal.com under Community Development Department.

Measurable Goal:

With the wealth of public input for the development of this document, the City plans to continue the pursuit of following the guiding principles as Daphne continues to grow. Within the permit cycle, if the Comprehensive Plan is updated, the City’s Environmental Advisory Committee and Environmental Programs will participate in the update.

Responsible Departments: Community Development and Environmental Programs

10. Coordination with other Agencies and Groups on Environmental Efforts

Current Programs:

a. All-Terrain Vehicle (ATV) Trespass Taskforce

The All-Terrain Vehicle (ATV) Trespass Taskforce is a City sponsored working group. Its members include the City of Spanish Fort, Daphne Police, Daphne Environmental Programs Manger, and an AT&T representative. The ATV Trespass Taskforce’s goal is to prevent all-terrain vehicle trespass and the erosion resulting from the activity.

b. Clean Water Partnership

There are many coastal groups that provide support for local efforts. The Coastal Clean Water Partnership brings together federal, state, local and nonprofit groups to discuss environmental issues and educational efforts. Daphne has participated in this group for over five (5) years. The EPM will continue this effort.



c. Mobile Bay National Estuary Program Community Action Committee (CAC)

The Mobile Bay NEP CAC is tasked to bring together coastal grassroots organizations for networking, information sharing, issues development, and cooperative training purposes. Daphne just recently started attending these committee meetings. The EPM will continue this effort.

d. Mobile Bay National Estuary Program Project Implementation Committee (PIC)

The Mobile Bay NEP PIC is responsible for identifying tasks and citizen input mechanisms to be implemented, conduct periodic project status meetings to follow progress of projects and to cooperatively identify tasks/roles for the MBNEP in addressing issues. Daphne has been a participant in this group for several years. The EPM will continue this effort.

e. Village Point Foundation

Village Point Foundation is a local group made up of citizens that work together to enhance the City's Village Point and Bay Front Property, environmentally and recreationally. When requested, the City staffs attend the foundations quarterly meetings.

Measurable Goal:

In years one (1) through five (5) of the permit cycle, City staff will attend at least four (4) such meetings per year for the duration of the permit.

Responsible Departments: Environmental Programs and Public Works

11. Eastern Shore MS4s Meeting to Discuss Education Outreach Opportunities

Daphne shares sections of its watersheds with Spanish Fort, Fairhope and Baldwin County. The City does not rely on any of these entities for compliance with our general permit. However, the City does anticipate sharing some of its efforts in implementing various MCM of the permit such as Education Outreach and Public Participation. This coordination will be on a voluntary basis only and allows for cost effective implementation of certain program MCM.

Measurable Goal:

Host or attend one meeting each permit year with the other Eastern Shore MS4s to discuss education outreach opportunities.

Responsible Departments: Environmental Programs



12. Alabama Water Watch (Included in City Monitoring Plan page 63)

Alabama Water Watch (AWW) is a citizen’s volunteer water quality monitoring program covering all major river basins in the state. The mission of AWW is to improve both water quality and water policy through its citizen monitoring and action.

Measurable Goal:

Throughout the permit cycle, the City will purchase needed replacement chemicals for the City’s AWW kits. The City will coordinate with the AWW volunteers to report data collected in the City’s Annual MS4 Report.

Responsible Departments: Environmental Programs

C. Evaluation of Public Education and Public Involvement

The evaluation of a Public Education and Public Involvement Program is best measured by the goals that are met. At the end of the permit year, the City will evaluate the overall effectiveness of MCM 1 through assessment of the goals that were achieved.



3-2 MCM 2-Illicit Discharge Detection and Elimination (IDDE)

A. Introduction

Illicit discharges into a storm drain system are defined by EPA as “...any discharge to a MS4 that is not composed entirely of stormwater...” Some exceptions include permitted industrial sources and discharges from firefighting activities. Some examples of illicit discharges include: sanitary wastewater, car wash, laundry wastewaters, etc. These illicit discharges can enter a storm drain system either through a direct connection or indirectly by spills, dumped materials, and cracks in pipes. As a result, inadequately treated waste containing high levels of pollutants enter storm drain system.

1. Permit Requirement

The Illicit Discharge Detection and Elimination (MCM 2) requires the City to develop, implement, enforce and evaluate a program to detect and eliminate illicit discharges and improper disposal, including spills into the City’s regulated MS4 area not under the purview of another agency responding to the maximum extent practicable. The program must include the following:

- a. Annually update the stormwater infrastructure inventory map, showing the latitude/longitude location of all know outfalls and the names and locations of all waters of the State that receive discharges from those outfalls and structural BMPs owned, operated, and maintained within the boundaries of the City’s MS4 area.
- b. To the extent allowable under State or local law, effectively prohibit-through ordinance or other regulatory mechanism non-stormwater discharges into the MS4 and implement appropriate enforcement procedures and actions. The ordinance shall be reviewed on an annual basis and updated when necessary.
- c. Develop and implement a plan to detect and address non-stormwater discharges, including illegal dumping, to the system that are not authorized by a separate NPDES permit. The plan shall have procedures for tracing the source of illicit discharge, eliminating the discharge, and notifying ADEM. It shall also have a mechanism for the public to report illicit discharges.
- d. Dry weather screening program to detect and address non-stormwater discharges to the MS4 including screening of at least 15% of the major outfalls (36” or greater in size) annually with all (100%) screened at least once per five years.



- e. Inform public employees, businesses, and the general public of the hazards that are generally associated with illegal discharges and improper disposal of waste.

- f. Address the following categories of non-storm water discharges or flows only if the City or the ADEM identifies them as contributors of pollutants to the City’s MS4
 - i. Water line flushing
 - ii. Landscape irrigation
 - iii. Diverted stream flows
 - iv. Rising ground waters
 - v. Uncontaminated groundwater infiltration
 - vi. Uncontaminated pumped groundwater
 - vii. Discharges from potable water sources
 - viii. Foundation drains
 - ix. Air conditioning condensation
 - x. Irrigation water
 - xi. Springs
 - xii. Water from crawl space pumps
 - xiii. Footing drains
 - xiv. Lawn watering
 - xv. Individual residential car washing
 - xvi. Flows from riparian habitats and wetlands
 - xvii. De-chlorinated swimming pool discharges
 - xviii. Firefighting flows

- g. The City may also develop a list of other similar occasional incidental non-stormwater discharges that are not addressed as illicit discharges such as charity car washes.

2. Target Pollutants and Sources

Non-point source pollutants found in stormwater will be targeted by MCM 2. These pollutants include, but are not limited to, sediment, paints, fertilizers, pesticides, swimming pool discharges, pathogens, oils and greases. The sources that are targeted include, but are not limited to, illegal dumping, failing septic systems and/or illicit connections, swimming pool illicit connections, un-permitted construction site discharges, improper disposal of fertilizers, pesticides, herbicides, paints, etc.



The City of Daphne does not have operational or financial control of its sanitary sewer system. Daphne Utilities maintains the system and is responsible for its ADEM permit. However, the City and Daphne Utilities have a great relationship and work together to achieve compliance with all environmental permits.

B. Strategies, Goals and Timelines

The City will employ a variety of strategies for MCM 2 from enforcement of ordinances to education outreach. The City’s goal is to reduce illicit discharge to its MS4 to the maximum extent practicable. Each strategy will be detailed below along with its goal, timeline and department responsible for implementation of the measure.

1. Compiling and Organizing Existing City Stormwater Infrastructure Data

Current Program:

This element of MCM 2 will involve staff locating all existing stormwater infrastructure data in GIS format, manipulating it into more usable software and creating new maps. Currently, the City has a map showing the location of existing stormwater outfalls that discharge to state waters. The map is included in Appendix N.

Measurable Goal:

Throughout the permit cycle, the City will continue to improve and update its stormwater infrastructure inventorying and inspection process.

Responsible Department: Environmental Programs and Public Works

2. Review and update (when needed) the City’s existing IDDE Ordinances

Current Program:

In July 2011, the City adopted revisions to the Land Use and Development Ordinance (LUDO, Ordinance No. 2011-54, Appendix B). These revisions include IDDE language.

These regulations are enforced in several ways, including applying environmental mitigation to project design, applying conditions of approval to use permits, and/or use of the City’s code enforcement personnel. This element of MCM 2 allows for the annual review and update of the City’s IDDE Ordinance.

Measurable Goal:

Throughout the permit cycle, the City will review the IDDE ordinance and update as necessary to remain compliant with MCM 2 of the MS4 permit.

Responsible Departments: Code Enforcement, Environmental Programs, and Public Works



3. Perform Field Assessments, Dry Weather Screening and Site Inspections

Current Program

To reduce the amount of pollutants in runoff, City crews regularly perform maintenance and cleaning on roadways, ditches, culverts, grounds, parks, and creek channels. These practices will be described and recognized in appropriate parts of this program document.

Field assessments of smaller outfalls and other infrastructure are observations made during the daily duties of City programs. Currently, if a potential illicit discharge is discovered during a field assessment, depending on severity of the discharge, either the Fire Department and/or the Environmental Programs is notified. The potential discharge is investigated as a site inspection.

A site inspection is a field visit outside of an employee’s normal duties in response to reports of potential non-compliance, or as a result of program directives. The inspection is recorded as an illicit discharge inspection in a database maintained by the Building Department.

The Public Works Field Assessment Flow Chart and Dry Weather Screening Flow Chart (Appendix O) detail guidance for addressing and reporting illicit discharges within the City or ones discovered entering the City to Federal and State agencies.

Throughout the permit cycle, the City will:

a. Measurable Goal:

Educate the general public and commercial and industrial developments on hazards associated with illegal discharges.

b. Measurable Goal:

Respond per established procedures to all identified and reported potential illicit discharges and connections.

c. Measureable Goal:

The City will implement a dry weather screening program to detect and address non-stormwater discharges to the MS4 including screening of 15% of its major outfalls (36” or greater in size) annually with all (100%) screened at least once per five years.

d. Measurable Goal:

Evaluate dry screening program, field assessments and inspections to establish priority areas and pollutants for more focused inspections.

Responsible Departments: Environmental Programs, Fire Department and Public Works



4. Hazardous Materials Response Program

Current Program: The stormwater program will be coordinated with the existing hazardous materials response program operated by the City’s Fire Departments. The Public Works Department and other entities that respond to spills will also be involved in this effort. The Haz-Mat Spill Response Flow Chart (Appendix O) details guidance for addressing and reporting hazardous spills within the City of Daphne.

Measurable Goal:

During the permit cycle, the City will receive, respond and report appropriately to all illicit discharge complaints. This information will be submitted with the City’s SWMP Annual Report.

Throughout the permit cycle, the city will monitor location, frequency, and type of response events and report information in the Annual SWMP Plan report.

Responsible Departments: Environmental Programs, Fire Department, Police Department and Public Works

5. Train City Staff

Current Program:

The goal of this element is to ensure that City staff understand stormwater issues and are appropriately trained to recognize and report illicit discharges and connections while performing their normal duties in the field. Training will be provided to hazardous and non-hazardous materials response teams, public works, and other employees. These training sessions may be offered in conjunction with other training elements of the program.

Throughout the permit cycle, the City will:

a. Measurable Goal:

Provide IDDE training session for new employees with program responsibilities.

b. Measurable Goal:

Provide additional stormwater training as needed during permit cycle to employees with program responsibilities such as, street, and mowing crews.

Responsible Departments: Environmental Programs and Public Works



6. Maintain City IDDE Web Complaint Form

Current Program:

The internet provides a very accessible means for making information and data available to citizens. The City's website has been expanded to incorporate an environmental page which has a link to the City's SWMP Plan, MS4 Annual Report, and other stormwater related topics, as well as a IDDE complaint form to allow anonymous complaints regarding potential illicit discharge within the City.

Measurable Goal:

Throughout the permit cycle, the IDDE complaint form on the City's website will be maintained and updated as needed to remain in compliance with the general permit.

C. Evaluation

The evaluation of the City's IDDE Program is best measured by the goals that are met. At the end of the permit year, the City will evaluate the overall effectiveness of MCM 2 through the assessment of goals that were achieved.



3-3 MCM 3-Constructions Site Stormwater Runoff Control

A. Introduction

1. Permit Requirement

The Construction Site Stormwater Runoff Control (MCM 3) requires the development, implementation and enforcement of a program to reduce, to the maximum extent practicable, pollutants in any stormwater runoff to the MS4 from construction activities that result in a total land disturbance of greater than or equal to one (1) acre and activities that disturb less than one (1) acre but are part of a larger common plan of development or sale that would disturb one (1) acre or more. ADEM terms these sites as *qualified construction sites*.

2. Targeted Pollutants and Sources

MCM 3 will mainly target construction sites for erosion and sediment control. Other potential targeted pollutants and sources are petroleum, oils and greases from equipment storage areas, pathogens from lack of portable facilities and pH changes through concrete washouts.

B. Strategies, Goals and Timeline

The City will employ a variety of strategies for MCM 3 from training City building inspectors to implementing and enforcing an erosion and sediment control program through City ordinances. The City will rely upon ADEM standards for appropriate erosion and sediment controls for qualified construction sites. There will also be a focus on coordination with ADEM on compliance concerns. Each strategy will be detailed below along with its goal and timeline and department responsible for implementation of the measure.

1. Residential Erosion and Sediment Control Ordinance

Current Program:

In 2007, the City developed and adopted an Erosion and Sediment Control Ordinance (No. 2007-03) which was subsequently amended in 2008 (Ordinance No. 2008-54) and most recently in 2014 (Ordinance No. 2014-14, Appendix D). This ordinance regulates land disturbance that exceeds one thousand (1000) square feet of exposed soils associated with land disturbance with the exception of agricultural operations. A copy of the permit is included as Appendix P.

For single family residential construction sites, the owner or contractor has to design and submit a detailed site specific BMP plan for each home site. The BMP plan is reviewed by City staff trained in the practices of erosion and sediment control. A BMP Plan checklist, included in Appendix Q, of plan specific details is used to document any plan deficiencies. Per the ordinance, components of the plan have to meet and/or exceed the Alabama Handbook for Best Management Practices for Erosion and Sediment Control, most current edition (Alabama Handbook) and ADEM permit requirements. If for any reason, additional state and federal



permits are required, such as an ADEM NPDES or US Corps wetland permit, the City will not issue the construction site a land disturbance permit or building permit until proof of the federal or state permit is submitted to the City. Sites are inspected along with building inspections for compliance with the ordinance. Enforcement mechanisms include written warning letters, stop work orders and municipal fines through the issuance of municipal offense tickets. The Residential Construction Best Management Practices Plan Review and Enforcement SOG Flow Chart (Appendix O) details the permitting and enforcement process.

If complaints are received for sites with less than a thousand (1000) square feet of disturbance, the City will inspect the site and request BMP implementation and maintenance. If compliance is not achieved, the ADEM will be contacted regarding the site compliance issues. City environmental staff documents State and Federal compliance referrals on the site inspection forms and in a database.

Measurable Goal:

Throughout the permit cycle, when needed update ordinances, review procedures and inspection forms.

Responsible Departments: Building Department and Environmental Programs

2. Subdivision & Commercial LUDO, Article 18

Current Program:

For all new and redevelopments within the City of Daphne corporate limits and planning jurisdiction, an erosion and sediment control plan is required to be designed and submitted by a qualified credentialed professional (QCP). This plan is reviewed and approved by the EPM and then forwarded to the Planning Commission for approval. Components of the plan have to meet and/or exceed the Alabama Handbook and ADEM permit requirements. A commercial BMP Plan checklist, included in Appendix R, of site specific details is used to document plan deficiencies. If for any reason, additional state and federal permits are required, such as an ADEM NPDES or US Corps wetland permit, the City will not issue the site a land disturbance permit or building permit until proof of the federal or state permit is submitted to the City. Sites are inspected along with building inspections for compliance with the ordinance. Enforcement mechanisms include written warning letters, stop work orders and municipal fines through the issuance of municipal offense tickets.

Measurable Goal:

In years one (1) through five (5) of the permit cycle, the City will review 100% of all submitted new and redevelopment erosion and sediment control plans.

Responsible Department: Community Development and Environmental Programs



3. Erosion and Sediment Control Training for City Building Inspectors

Current Program:

City Building Inspectors are required to receive annual training through ADEM’s Qualified Credential Inspector Program. This training gives the inspectors the knowledge to effectively monitor single family residential and commercial construction sites for erosion and sediment controls and stormwater runoff concerns.

The City’s EPM is a Certified Professional in Erosion and Sediment Control. The certification is kept active by receiving annual training related to erosion and sediment control and other stormwater issues.

Measurable Goal:

In years one (1) through five (5) of the permit cycle, continue the annual training required to keep building inspectors and the EPM current in their certifications. Track the training and submit data in the City’s Annual SWMP Report.

Responsible Department: Environmental Programs

4. Commercial and Residential Construction Site Inspections and Enforcement

Current Program:

Inspections of all construction sites are an integral part of MCM 3. Prior to the issuance of any City land disturbance permits for construction sites, if an ADEM NPDES permit is required by the state, the developer must submit their ADEM construction general permit authorization. The City maintains an inventory of all residential construction sites. The database is housed in the Building Department. Currently, applicable construction sites are inspected numerous times during the entire construction process. The inspections include but are not limited to erosion and sediment control inspections.

The City has created an erosion and sediment control and stormwater complaint inspection forms (Appendix S) that includes the following: developer/owner information, status of BMPs, deficiencies noted, if a re-inspection is required and if enforcement action will be pursued. During the inspection, BMPs are inspected and other site conditions are evaluated. Any deficiencies are noted and reported to the site manager and/or the developer. The developer has forty eight (48) hours to correct all deficiencies from the inspection or face a stop work order until they are corrected. The construction site is not issued a certificate of occupancy until all areas are landscaped or stabilized and all construction debris and temporary sediment control structures are removed. A final inspection is required prior to release from the permit.

Enforcement varies based on the severity of the deficiencies. Minor concerns will receive a written or verbal warning requiring forty eight (48) hours to comply with the ordinance. If not



corrected or if there are major deficiencies, the City may either stop work on the construction site or issue a municipal offense ticket which results in a court fine. Stop work orders are typically issued on sites with active construction while BMP deficiencies still exist. Municipal fines are typically issued on sites where there is no active construction and BMP deficiencies exist.

When a phone or website erosion or sediment control complaint regarding a permitted construction site is received, immediate action is taken by Environmental Programs to inspect, document and resolve the compliance issue using enforcement, if needed. If complaints are received for sites with less than a thousand (1000) square feet of disturbance, the City will inspect the site and request BMP implementation and maintenance. If compliance is not achieved, the ADEM will be contacted regarding the site compliance issues. City environmental staff documents State and Federal compliance referrals on the site inspection forms and in a database.

Site inspections will be prioritized based on status of construction, site conditions, location and size of site and proximity of site to sensitive areas such as streams and wetlands. Priority construction sites include qualified construction sites that discharge to an impaired water or an Outstanding Alabama Water (OAW). The D'Olive Creek Watershed has five (5) streams that are impaired by siltation. Therefore, any sites that discharge to the watershed are considered priority construction sites. Priority construction sites will receive precedence in inspections.

a. Measurable Goal:

In years one (1) through five (5) of the permit cycle, the following will be implemented:

- i. Non-priority permitted construction sites will be evaluated during the building inspection process. If deficiencies are noted, the building inspector will inform the Site Containment inspector to inspect the site for compliance. If needed, a building inspection hold or stop work order may be issued until site compliance is achieved.
- ii. The City plans to meet the MS4 permit requirement of inspecting all priority construction sites at a minimum frequency of once a month.
- iii. Because large areas of disturbance can result in a greater potential for water quality impacts, the City will inspect *priority watershed sites* that are greater than one (1) acre in disturbance twice a month. .

If deficiencies are not corrected within forty eight (48) hours, the site may receive enforcement action. For chronic or severe compliance issues, the City will also coordinate with ADEM through phone or email correspondence. The compliance correspondence will be noted on the site inspection form. The City will track staff inspections and submit the inspection data in its annual report.



b. Measurable Goal:

Throughout the permit cycle, the City will determine the overall effectiveness of the program and modify as needed for permit compliance.

Responsible Departments: Code Enforcement and Environmental Programs

5. Construction Associated with Sensitive Areas

Current Program:

Daphne is located on the eastern shore of Mobile Bay. Its coastal area has many sensitive habitats such as salt marshes, wetlands and streams. Although the erosion and sediment control permit includes land disturbance over one thousand (1000) square feet, small land disturbances near sensitive coastal areas could create adverse impacts to the environment. In order to prevent impacts to these sensitive areas, the City requires that all bulkheads, piers, boat houses, retaining walls and docks within the City’s corporate limits possess approved federal and state permits prior to issuance of any land disturbance (residential site), site disturbance (commercial site) and/or building permit. After the permitting process, the site is inspected during construction and a final inspection is performed upon completion to ensure that there are no adverse environmental impacts that have occurred during construction.

Measurable Goal:

Throughout the permit cycle, the City plans to continue the implementation of this review process. The process will be reviewed annually as part of the SWMP and any changes will be documented in the SWMP Plan Annual Report.

Responsible Department: Environmental Programs

6. Maintain City Erosion & Sediment Control Web Complaint Form

Current Program:

The internet provides a very accessible means for making information and data available to citizens. The City’s website has been expanded to incorporate an environmental page which has a link to the City’s SWMP Plan, MS4 Annual Report, and other stormwater related topics, as well as a Erosion and Sediment Control complaint form to allow anonymous complaints regarding potential erosion and sediment control violations within the City.

Measurable Goal:

Throughout the permit cycle, the Erosion and Sediment Control complaint form on the City’s website will be maintained and updated as needed to remain in compliance with the general permit.



C. Evaluation

The evaluation of a Construction Site Stormwater Runoff Control Program is best measured by the goals that are met. At the end of the permit year, the City will evaluate the overall effectiveness of MCM 3 through assessment of goals that were achieved.



3-4 MCM 4-Post Construction Stormwater Management in New and Re-development Sites

A. Introduction

Daphne will employ a variety of strategies for MCM 4 from enforcement of ordinances to education outreach. Its goal is to minimize water quality impacts from new development and redevelopment sites. Each strategy is detailed below along with its goal and timeline and department responsible for implementation of measure.

1. Permit Requirement

Permittees are required to:

- a. Develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre by ensuring that controls are in place that would prevent or minimize water quality impacts.
- b. Develop and implement strategies that include a combination of structural and/or non-structural BMPs appropriate for the community.
- c. Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law.
- d. Ensure adequate long term operation and maintenance of BMPs.

2. Target Pollutants and Sources

Non-point source pollutants found in stormwater will be targeted by MCM 4. These pollutants include, but are not limited to, sediment, paints, fertilizers, pesticides, swimming pool discharges, pathogens and oils and greases. The sources that are targeted include, but are not limited to, illegal dumping, failing septic systems and/or illicit connections, swimming pool illicit connections, unpermitted construction site discharges, improper disposal of fertilizers, pesticides, and herbicides, paints, etc.

B. Strategies, Goals and Timelines

Daphne will employ a variety of strategies for MCM 4 from enforcement of ordinances to education outreach. The City's goal is to reduce negative water quality impacts from new development and redevelopment to the maximum extent practicable. Each strategy will be detailed below along with its goal, timeline and department responsible for implementation.



1. Land Use and Development Ordinance (LUDO)

Current Program:

Daphne’s LUDO establishes design requirements including the use of structural and non-structural BMPs for new and redevelopment projects.

a. Non-structural BMPs

Daphne has developed zoning and subdivision ordinances that guide land uses and development within the City. The LUDO contains general provisions to address quantity of post development stormwater runoff. It includes first flush treatment of stormwater. It also addresses development peak outflow rates. Post development peak outflow rates cannot exceed the predevelopment peak outflow rate. This is the basis of detention design. All stormwater detention structures must attenuate the post development peak flow rates from two (2), five (5), ten (10), twenty five (25), fifty (50) and one hundred (100) year 24 hour design storms to release a graduated discharge at, or below, predevelopment peak flow rates.

b. Structural BMPs

There are a variety of structural BMPs that not only manage the volume and velocity of stormwater runoff, but also provide very effective water quality treatment of runoff. Structural BMPs may include, but are not limited to, the following:

- Stormwater retention/detention
- Stormwater infiltration basins/trenches
- Pervious pavers and concrete
- Grassed swales
- Filter strips
- Bio-retention
- Rain gardens
- Constructed wetlands
- Stream restorations
- Stream and wetland buffers

Each new development and redevelopment site undergoes an environmental and engineering review by City staff. These reviews are then presented to the City’s Planning Commission for consideration during its monthly site plan and subdivision review meeting.

In order for post development BMPs to be effective, routine maintenance of the BMP is necessary. Daphne’s LUDO requires that any development within the City complete a Stormwater Management Indemnification Form (Appendix T). This official document requires that the landowner manage the site’s BMP and perform any needed maintenance. Failure to maintain the BMP may lead to the abatement of the detention/retention facility as a public



nuisance. Whenever such public nuisance occurs, the City Council may, by resolution, declare the facility to be a public nuisance and order its abatement.

Throughout the permit cycle, the City will:

a. Measurable Goal:

In years one (1) through five (5) of the permit cycle, as part of any site plan and subdivision development, the City’s Planning Commission will evaluate one hundred percent (100%) of all site plan applications and site conditions to ensure that the site’s engineer has chosen the most appropriate BMPs for that development. BMPs will be designed, by the site’s engineer, based on the requirements of the City’s LUDO which references the Alabama Handbook for Erosion and Sediment Control for Construction Sites and Urban Areas.

b. Measurable Goal:

In years one (1) through five (5), review and update, as needed, City ordinances, documents, and the development review process as necessary to remain compliant with MCM 4 of the MS4 permit. All changes will be submitted with the City’s Annual SWMP Report.

Responsible Departments: Community Development, Environmental Programs and Public Works

2. Perform Field Evaluations and Long-term Maintenance and Monitoring of BMPs

The goal of this element is to periodically review and assess the performance of the post-construction BMPs installed with new and redevelopment projects. Field inspections verifying the adequate construction of the BMPs in accordance with the approved improvement plans will be performed along with permit cycle inspections. The field inspections will include an evaluation of the BMPs and how well the BMP has been maintained since construction. Performance and potential improvements will be noted. If possible, the BMPs will be viewed while functioning during a rainfall event. Information gathered with this element will be used to revise acceptable BMPs and processes.

a. Measurable Goal:

Once during the permit cycle, the City will inspect the private post construction BMPs, evaluate performance and design, conduct enforcement as required ensuring compliance and report the results in the SWMP Annual Report.

b. Measurable Goal:

Once a year require or perform annual inspection of stormwater facilities built after 9/13/2016.



Responsible Departments: Environmental Programs, Community Development, Public Works

3. Low Impact Development/Green Infrastructure Ordinance (LID/GI)

Current Program:

Low Impact Development (LID) is a term used to describe a land planning and engineering design approach to managing stormwater runoff. LID emphasizes conservation and use of on-site natural features to protect water quality. This approach implements engineered small scale hydrologic controls to replicate the predevelopment hydrologic regime of watersheds through infiltrating, filtering, storing, evaporating, and detaining runoff close to its source.

Green Infrastructure is a concept that highlights the importance of the natural environment in decisions about land use planning. It emphasizes the “life support” functions provided by a network of natural ecosystems including interconnectivity to support long term sustainability. EPA has extended the concept to apply to the management of stormwater runoff at the local level through the use of natural systems, or engineered systems that mimic natural systems to treat polluted runoff. Currently, the City LUDO provides guidance for the use of LID/GI practices.

Measurable Goal:

Throughout the permit cycle, the City will track LID practices implemented within the City and submit the data in the City’s Annual SWMP Report.

Responsible Departments: Community Development, Environmental Programs, and Public Works

C. Evaluation

The evaluation of the City’s Post Construction Stormwater Management in New and Re-development Program is best measured by the goals that are met. At the end of the permit year, the City will evaluate the overall effectiveness of MCM 4 through assessment of goals that were achieved.





3-5 MCM 5-Pollution Prevention/Good Housekeeping for Municipal Operations

A. Introduction

1. Permit Requirement

Pollution Prevention/Good Housekeeping for Municipal Operations (MCM 5) requires the City to develop and implement a program for pollution prevention and good housekeeping at municipal operations. It also requires the development and implementation of an employee training program designed to prevent and reduce stormwater pollutants, to the maximum extent practicable, in areas such as parks maintenance, fleet and building maintenance, new construction and land disturbances, stormwater system maintenance, and all other applicable municipal operations.

The program must list all municipal operations that are impacted by this operation and maintenance program. The program shall include maintenance activities, schedules and long-term inspection procedures for controls to reduce pollutants to the MS4. The program shall also address controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, waste transfer stations, recycling collection centers, fleet or maintenance shops with outdoor storage areas and fill dirt storage areas.

MCM 5's training program shall be coordinated with the public outreach programs for general stormwater pollution and illicit discharges.

Procedures shall be outlined for the proper disposal of waste removed from the MS4 and municipal operations, including materials such as dredge spoil, accumulated sediments, floatables and other debris. There will also be procedures to ensure that new flood management projects are assessed for impacts on water quality and existing projects are assessed for incorporation of additional water quality protection devices or practices.

2. Targeted Pollutants and Sources

MCM 5 will target non-point source pollutants found in stormwater. These pollutants include, but are not limited to, sediment, trash, fertilizers, pesticides, pathogens, oils and greases. The targeted sources are municipal operations and facilities and publicly owned properties and rights-of-way.



B. Strategies, Goals and Timelines

Daphne will employ a variety of strategies for MCM 5. These strategies are separated into two (2) categories- Pollution Prevention and Good Housekeeping. Each strategy is detailed below along with its goal, timeline and department responsible for implementation of the measure.

1. Pollution Prevention

Pollution prevention includes measures that involve rights-of-way, including bridges, stormwater management systems and roadways. This section includes the following measures for compliance with the permit requirements:

a. Bridge Inspections

Current Program:

Daphne currently inspects its bridges for structural integrity.

Measurable Goal:

In years one (1) through five (5) of the permit cycle, in conjunction with ALDOT, the City will perform bridge inspections twice during the permit cycle. Within the permit cycle one hundred percent (100%) of bridges will be inspected. During the inspection, areas of erosion and stream degradation will be recorded. Immediate action will be taken to address these deficient areas. The results will be submitted in the Daphne’s SWMP Annual Report.

Responsible Departments: Environmental Programs and Public Works

b. Street Sweeping Operations

Current Program:

The City owns a street sweeper. Generally it is in operation daily, weather permitting, and foregoing any maintenance issues. On average the sweeper travels fifty- three (53) miles a day, averaging thirteen and a quarter (13.25) cubic yards a day of sediment removal from City streets. The City has a tracking system for streets swept and the quantity of materials collected.

Measurable Goal:

Throughout the permit cycle, the City will continue its Street Sweeping Program and report the roads swept and quantity of sediment removed each year in the SWMP Annual Report.

Responsible Departments: Environmental Programs and Public Works



c. City Recycling Program

Current Program:

The City has several municipal buildings. Each building is equipped with recycling containers for paper, aluminum, plastic and cardboard. Employees are required by ordinance (Ordinance 2011-11, Appendix U) to recycle all these wastes with the exception of confidential documents. Confidential documents are shredded and recycled through a private company. Furthermore, the City places recycling containers at each sports field and at all festivals and City sponsored events.

Measurable Goal:

During the permit cycle, the City will track the annual volume of recycled materials collected and report the data in the City’s SWMP Annual Report.

Responsible Departments: Environmental Programs and Public Works

d. Stormwater Management System Maintenance

Current Program:

The stormwater management system for the City contains grassed and concrete swales, culverts, inlets, pipes and detention structures. Currently these structures are maintained on an as-needed basis by determination of the Public Works Director (City Engineer). Areas are also maintained when valid complaints of drainage problems are filed with the City. The City has established Standard Operation Guidance (SOG) for the Public Works Department for maintenance of the storm drain system. The SOG is attached in Appendix V.

Measurable Goal:

Throughout the permit cycle, the City will continue to maintain its stormwater management system and update the program and plan as needed.

Responsible Departments: Environmental Programs and Public Works

e. Litter Patrol

Current Program:

The City operates and maintains its streets and rights-of-ways in a manner to minimize discharge of pollutants. The City's Public Works Department has a litter collection program in effect. Prior to weekly mowing, a designated crew pick-ups trash from the City’s rights of ways.

Measurable Goal:

During the permit cycle, the City will continue its Litter Patrol Program. The City will track areas patrolled and quantities of litter removed and report the data in the City’s SWMP Annual Report.



Responsible Departments: Environmental Programs and Public Works

f. Capital Stormwater Projects

Current Program:

Each new fiscal year, the City determines a list of capital projects. The Public Works Department is the lead in this effort. These projects are proposed to the City Council and Mayor for approval. If approved, they are budgeted for the following year. Some capital projects may be emergency repairs due to natural disasters. Emergency repair projects are funded and completed as soon as practicable for the safety of the public.

Measurable Goals:

During the permit cycle, City capital stormwater projects will be monitored for compliance with federal, state and city regulations and ordinances. Inspections of these projects will be conducted. Any deficiencies will require immediate attention and compliance. The annual report will reflect a list of all projects, project location, details, goals of the project, and inspections.

Responsible Departments: Council, Environmental Programs, Mayor, Public Works

2. Good Housekeeping

Good Housekeeping includes measures that involve City owned facilities. This section includes the following measures for compliance with the permit requirements: inventory of facilities, assessment of facilities, SWMP Standard Operating Guidance (SOG) for facilities, and Public Works Department ADEM Permits.

a. City Owned Facilities

Current Program:

The City operates and maintains its facilities in a manner to minimize stormwater pollutant discharge to local waters.

Measurable Goal:

Throughout the permit cycle, the City will maintain its facilities in a manner to minimize stormwater pollutant discharge including the following actions:

i. Inventory of Facilities

Update the City’s inventory (*Appendix Y*) as needed.

ii. Assessment of Facilities

All facilities that were inventoried, will have a complete assessment by year one (1) of the permit. The assessment will include an inspection of all areas. Deficiencies will be identified and reported to the appropriate supervisor for remediation.



iii. SWMP SOGs

Following the assessment, there will be a Standard Operating Guidance (SOG) document created to provide good housekeeping practices for employees to minimize the potential for pollution entering storm water. The goal is for the City to complete document by year three of the permit cycle. The SOG document will be reviewed by City department and the Environmental Advisory Committee during year four (4) and distributed it to each facility by year five (5) of this permit cycle.

b. Public Works Department ADEM Permits

Current Program:

The City’s Public Works Department currently holds the following ADEM permits: Scrap Tire and Underground Storage Tank. The City’s pesticide discharge management program has been contracted to a third party. The City will terminate its pesticide permit and work with the contractor to implement an environmentally conscious program.

Measurable Goal:

The City’s goal is to maintain compliance with each of the permit requirements. Environmental Programs will coordinate with Public Works in regards to annual reports for each permit, and annual inspections. Updates to the City’s permits and compliance records will be documented in the City’s SWMP Annual Report.

Responsible Departments: Environmental Programs and Public Works

3. Training

Current Program:

Training is essential for all City employees regarding pollution prevention and good housekeeping. Previous MCMs detail specific training programs that will be developed and implemented. The City will also develop a training program for the purpose of educating employees regarding stormwater runoff and pollution prevention. This training may be a part of other MCM training.

Measurable Goals:

In years one (1) through (5), the City will

- a. Provide stormwater training session for all new City employees
- b. Provide additional stormwater training twice during permit cycle to employees with program responsibilities,

Responsible Departments: Environmental Programs and all other City Departments



C. Evaluation

The evaluation of the Pollution Prevention and Good Housekeeping Program is best measured by the achievement of the program goals. At the end of the permit year, the City will evaluate the overall effectiveness of MCM 5 through assessment of goals that were achieved.





Chapter 4-Water Quality Monitoring Plan

A. Introduction

This chapter details the requirements for the City of Daphne’s Stormwater Monitoring Plan as required by the Alabama Department of Environmental Management’s (ADEM) National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Separate Storm Sewer System (MS4) Permit. The plan was created to monitor efforts in reducing targeted pollutants to the City’s impaired streams. The plan will be reviewed annually as part of the SWMP and any needed changes will be documented in the SWMP Plan Annual Report.

1. Background Information

Daphne has five (5) streams that fail to meet the minimum water quality standards for their designated Fish and Wildlife use. In 2010 and 2014, ADEM listed the five streams on its 303(d) List as impaired by siltation (sedimentation) and habitat alteration. The streams are Joe’s Branch, Tiawasee Creek, an unnamed Tributary to Tiawasee Creek, D’Olive Creek, and an unnamed Tributary to D’Olive Creek. All of these streams are located within the D’Olive Creek Watershed. According to the D’Olive Creek Watershed Management Plan, twenty-two thousand (22,000) linear feet of stream channel is degraded within the watershed resulting in substantial impairments. As a result of the streams’ 303(d) listings, EPA requires the establishment of a Total Maximum Daily Load (TMDL) under the Clean Water Act. The TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and safely meet water quality standards. Currently there are no EPA approved TMDLs for these streams.

2. Permit Requirements

MS4 Phase II permittees that discharge to an impaired water or to a water for which a TMDL has been approved, may have monitoring requirements under Part IV.D (Discharges to Impaired Waters), and they must comply with the following:

- a. Submit a monitoring plan within 6 months of the date of coverage of the permit;
- b. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity;
- c. Test procedures must be conducted in accordance with test procedures approved by EPA under 40 CFR Part 136;
- d. Records of the monitoring information shall include:
 - i. The date, exact place, and time of sampling measurements;
 - ii. The name of the individual who performed the sampling or measurements;



- iii. The date(s) analyses were performed;
- iv. The name(s) of the individual who performed the analysis;
- v. The analytical techniques or methods used; and
- vi. The results of such analysis.

3. Target Pollutant

Sediment will be the targeted pollutant for Daphne’s Water Quality Monitoring Program.

B. Strategies, Goals and Timelines

The City will employ a variety of strategies to meet the Phase II permit water quality monitoring requirements. Each strategy is detailed below along with its goal, timeline and department responsible for implementation of the measure.

1. City Water Quality Monitoring Plan

Five of Daphne’s streams fail to meet the minimum water quality standards for their designated Fish and Wildlife use. Therefore, the City is required to implement a stormwater monitoring plan (Appendix W) to address its 303(d) Listed streams for their impairment pollutant of concern, siltation (sedimentation).

Measurable Goals:

Throughout the permit cycle or until the tributaries of D’Olive are de-listed, the City will implement the water quality plan. All sampling data will be submitted to ADEM as part of the City’s SWMP Annual Report.

During the remainder of the permit cycle, if TMDLs are approved by EPA for the listed streams, the City will determine whether the TMDLs include a pollutant allocation or other performance requirements specifically for stormwater discharges from its MS4 and if the TMDLs address a flow regime likely to occur during periods of stormwater discharge. If the determination reflects so, the City may be required to implement specific allocations provisions of the TMDLs and assess whether the allocations are being met through implementation of existing stormwater control measures or if additional control measures are necessary.

Responsible Departments: Environmental Programs



2. Alabama Water Watch (Also listed in MCM 2 on page 37)

Alabama Water Watch (AWW) is a citizen’s volunteer water quality monitoring program covering all major river basins in the state. The mission of AWW is to improve both water quality and water policy through its citizen monitoring and action.

Measurable Goals:

Throughout the permit cycle, the City will purchase needed replacement chemicals for the City’s AWW kits. The City will coordinate with the AWW volunteers and report the data in the City’s Annual MS4 Report.

Responsible Departments: Environmental Programs

C. Evaluation

The evaluation of the Monitoring Program is best measured by the achievement of the plan implementation and goals met. At the end of the permit year, the City will evaluate the overall effectiveness of the Plan and submit results as part of the City’s SWMP Annual Report.





Chapter 5-Record Keeping and Reporting

A. Introduction

The State's general permit requires the submission of an annual report. This report must be certified by the governing body or an official designated by the governing board and at a minimum, shall contain the following information:

1. Status of compliance with permit conditions;
2. Status of the identified measurable goals of reducing the discharge of pollutants and protecting water quality;
3. Results of information collected and analyzed, including monitoring data, if any, during the reporting period;
4. A summary of the stormwater activities the Permittee plans to undertake during the next reporting cycle;
5. An assessment of the appropriateness and effectiveness of the identified BMPs; and,
6. Any proposed change(s) to the SWMP along with a justification why the change(s) are necessary; and any change in the person or persons implementing and coordinating the SWMP.

B. Responsible Department

The EPM is responsible for assembling information from the various City departments to author the annual reports. Forms for use in record keeping by involved departments will be developed to facilitate collection of the information required for the annual reports.

C. Record Retention

The City will keep records required by the permit for at least three years past each permit cycle. The records used to document compliance with the SWMP will be available to the public during regular business hours from the various implementing departments. The SWMP Plan and related documents may be viewed in the Building Department, 1705 Main Street, Daphne, AL 36526.



Table of Acronyms

Title	Acronym
Alabama Department of Environmental Management	ADEM
Alabama Department of Transportation	ALDOT
Alabama Handbook for Best Management Practices for Erosion and Sediment Control	Alabama Handbook
Alabama Water Watch	AWW
All-Terrain Vehicle	ATV
Best Management Practices	BMP
Construction Best Management Practices Plan	CBMPP
Community Action Committee	CAC
D'Olive Watershed Intergovernmental Task Force	DWITF
D'Olive Watershed Working Group	DWWG
Environmental Advisory Committee	EAC
Environmental Programs Manager	EPM
Environmental Protection Agency	EPA
Geographic Information System	GSI
Green Infrastructure	GI
Hydrologic Unit Code	HUC
Illicit Discharge Detection and Elimination	IDDE
Land Use Development Ordinance	LUDO
Low Impact Development	LID
Non-Point Source Education for Elected Officials	NEMO
Project Implementation Committee	PIC
Property Owners Association	POA
Minimum Control Measure	MCM
Mobile Bay National Estuary Program	MBNEP
Municipal Separate Storm Sewer System	MS4
National Pollutant Discharge Elimination System	NPDES
Outstanding Alabama Water	OWA
Qualified Credentialed Inspector	QCI
Qualified Credentialed Professional	QCP
Right of Way	ROW
Standard Operating Guidelines	SOG
Standard Operating Procedure	SOP
Storm Water Management Program	SWMP
Storm Water Management Program Plan	SWMPP
Total Maximum Daily Load	TMDL
Unnamed Tributary	UT
Urbanized Area	UA



Table of Appendices

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Appendix D	Construction Best Management Practices Ordinance No. 2014-14
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Appendix I	Examples of Educational Outreach Articles
Appendix J	Educational Outreach Brochures and Flyers
Appendix K	Watershed Signage Map
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Appendix O	Field Assessments & Dry Weather Screening Flow Charts, Staff Chart for IDDE & CBMPP Review & Enforcement SOG
Appendix P	Building Department’s Land Disturbance Permit Application
Appendix Q	Residential CBMP Plan Review Checklist Form
Appendix R	Commercial CBMP Plan Checklist
Appendix S	Erosion Control Inspection Forms
Appendix T	Stormwater Indemnification Form
Appendix U	City Facility Mandatory Recycle Ordinance No. 2011-11
Appendix V	Stormwater Infrastructure Maintenance SOG
Appendix W	Daphne’s Water Quality Monitoring Plan
Appendix X	Understanding Your Stormwater Management Plan Video
Appendix Y	City Facility & Property Inventory
Appendix Z	Motorized Vehicle Trespass Ordinance No. 2017-05