

# VESTAVIA

# HILLS

# STORM WATER MANAGEMENT PROGRAM PLAN September 2024

Prepared For City of Vestavia Hills 1032 Montgomery Hwy.

Vestavia Hills, Alabama 35216

Prepared by Jefferson County Department of Health 1400 Sixth Avenue South Birmingham, Alabama 35233 (205) 930-1230



#### Signatory and Certification Requirements:

I certify under the 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 persons who manage the system, or those persons directly responsible for gathering the information the information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Ashley C. Curry Mayor, City of Vestavia Hills Date

Jeffrey Downes City Manager, City of Vestavia Hills Date

Address: 1032 Montgomery Hwy Vestavia Hills, Alabama 35216

Phone: (205) 978-0100

# CONTENTS

INTRODUCTION	10
Regulatory Overview	10
MS4 Jurisdictional Boundary	11
LEGAL AUTHORITY AND ENFORCEMENT	11
STORM WATER COLLECTION SYSTEMS OPERATIONS	16
Structural Controls Map	16
Structural Controls Inspection	16
Standard Operating Procedure (SOP) for Structural Control Inspection and Maintenance Procedures	16
Stabilization and Re-vegetation of Eroded Areas	17
Floatables, Litter, Sediment, and Debris Removal	17
PUBLIC EDUCATION AND PUBLIC INVOLVEMENT ON STORM WATER IMPACT	S19
Public Education and Public Involvement BMPs	19
Public Education	19
Public Involvement	19
Development and Implementation of the SWMPP	19
Targeted Pollutant Sources for Public Education	19
Reduction of Litter, Floatables, and Debris	19
Educating Individuals and Households on Reducing Storm Water Pollution	20
Community Involvement with the Storm Water Program	20
General Public	20
General Public and Businesses, Including Home-based and Mobile	20
Homeowners, Landscapers, Property Managers, and City Personnel	21
Engineers, City Personnel, Review Staff, Land Use Planners, Contractors, and Developers	21
Evaluating the Effectiveness of the Public Education Program	21

Public Activities Targeting Litter, Floatables, and Debris Removal from Area Waterways	22
ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)	23
MS4 Map	23
Ordinance/Regulatory Mechanism	23
Dry Weather Screening Program	23
Source Identification	24
Illicit Discharge Elimination	24
ADEM Notification by the City	24
Illicit Discharge Reporting by the Public	25
Personnel Training	25
Ordinance/Regulatory Mechanism Availability	25
CONSTRUCTION SITE STORM WATER RUNOFF CONTROL	26
Ordinance/Regulatory Mechanism	26
Site Plan Reviews	26
Construction Site Inspection Schedule	26
Training of MS4 Site Inspection Staff	26
Construction Site Inspection Checklist	
Enforcement Response Plan (ERP)	27
Construction Site Operator Training	27
POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPME AND RE-DEVELOPMENT	
Ordinance/Regulatory Mechanism	
LID/GI Encouragement Procedures	
Inventory of Post-Construction Structural Controls	29
SPILL PREVENTION AND RESPONSE	30
City Response Protocol	30

Spill Prevention/Spill Response Plan	
Personnel Spill Prevention/Response Training	
POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPER	
Municipal Facilities Inventory	
Strategy Evaluation	
Good Housekeeping Practices SOP	
Inspection Plan	
Good Housekeeping Training Program	
APPLICATION OF PESTICIDES, HERBICIDES, AND FERTILIZERS (PHFs)	32
Application and Storage	
PHF Training Program	
OILS, TOXICS, AND HOUSEHOLD HAZARDOUS WASTE	34
Public Education on Proper Disposal	
Annual Employee Training	34
INDUSTRIAL STORM WATER RUNOFF	35
Inventory of High-risk Facilities	35
Inspection of High-risk Facilities	35
MONITORING AND REPORTING	
Monitoring Locations	
Impaired Waterways	
Monitoring Parameters and Frequency	
Sample Type, Collection, and Analysis	
OTHER REQUIREMENTS	
SWMPP Plan Review and Modification	
Annual Report	

# LIST OF FIGURES

Figure 1: MS4 Boundary15
Figure 2: Structural Controls

# LIST OF TABLES

Table 1: SWMPP Responsibilities Summary	13
Table 2: Structural Controls	16
Table 3: Post-Construction Structural Controls	29
Table 4: Municipal Facilities	
Table 5: Sampling Sites	36

## **APPENDICES**

- Appendix A Storm Water Program Documents
- Appendix B Storm Water Collection Systems Operations
- Appendix C Illicit Discharge Detection and Elimination (IDDE)
- Appendix D Construction Site Storm Water Runoff Control

Appendix E – Post-Construction Stormwater Management

- Appendix F Spill Prevention and Response
- Appendix G Pollution Prevention/Good Housekeeping for Municipal Operations
- Appendix H Application of Pesticides, Herbicides, and Fertilizers (PHFs)
- Appendix I Industrial Storm Water Runoff

### INTRODUCTION

#### REGULATORY OVERVIEW

The City of Vestavia Hills (City) was issued by the Alabama Department of Environmental Management (ADEM) a Municipal Separate Storm Sewer System (MS4) Individual Phase I Permit (ALS000017) on June 7, 2017. Previously, the City was included as a Co-Permittee under permit number ALS00001. The current permit was issued and became effective on July 11, 2022 (**Appendix A**).

As a condition of this permit, "The permittee is required to develop, revise, implement, maintain and enforce a storm water management program (SWMP) which shall include controls necessary to reduce the discharge of pollutants from its MS4 consistent with Section 402(p)(3)(B) of the Clean Water Act and 40 CFR Part 122.26. These requirements shall be met by the development and implementation of a storm water management program plan (SWMPP) which addresses the best management practices (BMPs), control techniques and systems, design and engineering methods, public participation and education, monitoring, and other appropriate provisions designed to reduce the discharge of pollutants from the MS4 to the Maximum Extent Practicable (MEP)".

Per the requirements of NPDES Permit Number ALS000017, BMPs, measurable goals, and responsibility designations are provided for each of the following program elements:

- Storm Water Collection System Operations
- Public Education and Public Involvement on Storm Water Impacts
- Illicit Discharge Detection and Elimination
- Construction Site Storm Water Runoff Control
- Post-Construction Storm Water Management in New Development and Re- Development
- Spill Prevention and Response
- Pollution Prevention/Good Housekeeping for Municipal Operations
- Application of Pesticides, Herbicides, and Fertilizers
- Oils, Toxics, and Household Hazardous Waste Control
- Industrial Storm Water Runoff

ADEM defines the fiscal year as October 1st to September 30th. Annual reports are required to be submitted to ADEM no later than January 31st following the previous fiscal year.

#### MS4 JURISDICTIONAL BOUNDARY

Vestavia Hills' MS4 boundary is bound to the north by the Cities of Homewood, Mountain Brook and Birmingham, to the south and west by the Cities of Hoover and Birmingham, and to the east by the Cities of Mountain Book, Irondale, Birmingham and Jefferson County. Approximately 20 square miles of residential, commercial, industrial, undeveloped lands, and streams make up the MS4 boundary. See **Figure 1: MS4 Boundary**.

There are two waterbodies, the Cahaba River and Patton Creek, which are considered impaired by the U.S. Environmental Protection Agency and ADEM within the MS4 boundary. The Cahaba River has a listed Total Maximum Daily Load (TMDL) for Siltation and Habitant Alteration as well as for Nutrients. Patton Creek has a listed Total Maximum Daily Load (TMDL) for Organic Enrichment and Dissolved Oxygen. Designated uses of this section of the Cahaba River include being listed as an Outstanding Water of Alabama (OAW) and Public Water Source (PWS). Designated use of Patton Creek is Fish and Wildlife (F&W).

### LEGAL AUTHORITY AND ENFORCEMENT

Part II C of the permit requires the City to review and revise its ordinances and regulatory mechanisms as necessary to comply with the permit. In June 2022, the City adopted revisions to the City's Zoning code that included aspects to promote Low Impact Development and reduce stormwater runoff from redeveloping single family homes. Below is a summary of the current ordinances, municipal codes, and regulations related to the management of Vestavia Hills's MS4. These ordinances are found in **Appendix A**.

- Ordinance 2987, Erosion and Sedimentation Control Ordinance: Replaced previous Ordinance 2769. Controls sedimentation leaving construction sites. The ordinance describes the fees, regulations, and the requirements surrounding a land disturbing permit issuance.
- Ordinance 2988, Illicit Discharge Ordinance: Replaced previous Ordinance 2770. The ordinance defines and prohibits illicit connections and discharge to storm water conveyance system.
- Ordinance 2771, Post-Construction BMP Ordinance: The ordinance identifies and enforces post-construction storm water management standards on qualifying sites to prevent and minimize water quality impacts.

- **Post-Construction Storm Water Management Manual and Technical Memorandum:** Technical aspects of the City's Post-Construction Storm Water Management requirements. This document outlines the City's Engineering Departments guidelines for permit issuance for qualifying sites, water quality treatment requirements, and other aspects to enforce provisions of Ordinance 2771.
- Ordinance 3099, Zoning Ordinance: Replaces previous Ordinance Numbers 2331, 2331-A, 2331-B and Appendix A. Dictates land use, maximum developable area, buffers, landscaping, parking, tree preservation, conservation subdivisions, and other manners in the development of land. This now also clearly defines Impervious Surfaces and amends definition of Buildable Areas to limit imperviousness. This tool assists the City's ability to preserve drainage sensitive areas, manage storm water runoff, and promote low-impact developments.
- **Subdivision Regulations:** Adopted by the Planning and Zoning Commission pursuant to Alabama law and carry the force of a City Ordinance. This document addresses design requirements for residential and commercial storm water infrastructure and dictates storm water management requirements.
- **Public Works Manual and Engineering Design Standards:** Adopted by the Planning and Zoning Commission, and provides additional engineering design requirements for public storm water infrastructure.
- Ordinance 2916, Flood Damage Prevention Ordinance: Replaced previous Ordinance 2429. Promotes public health, safety and general welfare by controlling construction and construction practices in and around the floodplain as well as controlling the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters.
- Ordinance 2262, Property Maintenance Code: Institutes and establishes enforcement of litter, rubbish, garbage, abandoned vehicles, and others items in effort to promote and protect interest of public health, safety and general welfare.
- Ordinance 2378, Standard Operating Procedure (SOP) Manual: Adopted in 2011 and details guidelines for addressing many activities associated with the program elements.

**Table 1: SWMPP Responsibilities Summary** reflects which department is responsible forimplementing or coordinating BMPs for each separate program element.

DEPARTMENT	RESPONSIBILITIES			
Storm Water Collection Systems Operations				
Engineering/JCDH	Maintain map of city-owned/maintained structural controls			
Engineering	Semi-annual inspection of new and existing structural controls			
Engineering	Develop SOP, inspection checklist, and maintenance procedures			
Public Works	Stabilize and re-vegetate eroded areas as needed			
Public Works	Remove floatable, litter, sediment, and debris from structural controls			
1	Public Education and Public Involvement on Storm Water Impacts			
Administration	Seek and consider public input in the development and implementation of the SWMPP			
Administration	Identify targeted pollutant sources			
Administration/Public Works	Post litter signage			
Administration	Educate individuals and households on reducing storm water pollution			
Administration	Encourage community involvement in the storm water program			
Administration	Evaluate the effectiveness of the public education program			
Administration	Organize annual cleanup			
	Illicit Discharge Detection and Elimination (IDDE)			
JCDH	Develop MS4 map of outfalls			
Administration	Develop applicable ordinances and other regulatory mechanisms			
JCDH	Screen at least 15% of the outfalls during dry weather conditions			
City Personnel	Identify illicit discharge source			
Code Enforcement Officer / Administration	Eliminate illicit discharges			
Engineering	Notify ADEM of a suspected illicit discharge entering the MS4 from an adjacent MS4			
Administration/Engineering	Receive complaints and investigate illicit discharges reported by the public			
Administration	Educate employees on detecting an IDDE, tracing the source of and eliminating illicit discharge			
Administration	Make publicly available ordinances and regulatory mechanisms			
	Construction Site Storm Water Runoff Control			
Administration/Engineering	Develop applicable ordinances and other regulatory mechanisms			
Engineering/Inspections	Perform site plan reviews			
Engineering/Inspections	Complete monthly qualifying site inspections			
Engineering	Train inspection staff			
Engineering/Inspections	Provide construction site inspection checklist			
Administration	Document Enforcement Response Plan (ERP) actions			
Administration/ Engineering/Inspections				

 Table 1: SWMPP Responsibilities Summary

DEPARTMENT	RESPONSIBILITIES	
Post-Construction Storm Water Management in New Development and Re-Development		
Engineering Develop applicable ordinances and other regulatory mechanisms		
Administration/Engineering/Inspections	Encourage the application of LID/GI practices	
Engineering	Inventory post-construction structural controls	
	Spill Prevention and Response	
Fire	Follow City response protocol	
Fire	Follow spill prevention/spill response plan	
Fire/Administration	Educate employees on spill prevention/spill response	
Pollution Pre	vention/Good Housekeeping for Municipal Operations	
All Departments	Inventory municipal facilities	
All Departments	Evaluate strategy for trash removal	
All Departments	Follow good housekeeping practices SOP	
All Departments	Complete municipal inspections	
Administration	Educate employees on good housekeeping	
Applicati	on of Pesticides, Herbicides, and Fertilizers (PHFs)	
Parks and Recreation/Contractors	Document application and storage of PHFs	
Administration Educate employees on PHFs usage and storage		
Oils, T	oxics, and Household Hazardous Waste Control	
Administration Educate public on proper disposal		
Administration	Educate employees on oils, toxics, and household hazardous waste	
	Industrial Storm Water Runoff	
Administration/JCDH	Inventory high-risk facilities	
JCDH	Inspect high-risk facilities	
	Monitoring and Reporting	
JCDH	Monitor locations	
JCDH	Review identified impaired waterways	
JCDH	Monitor parameters and frequency	
JCDH	Perform sampling and analysis	
Other Requirements		
All Departments	All Departments Perform SWMPP plan review and modification	
JCDH	Prepare annual report for submittal	

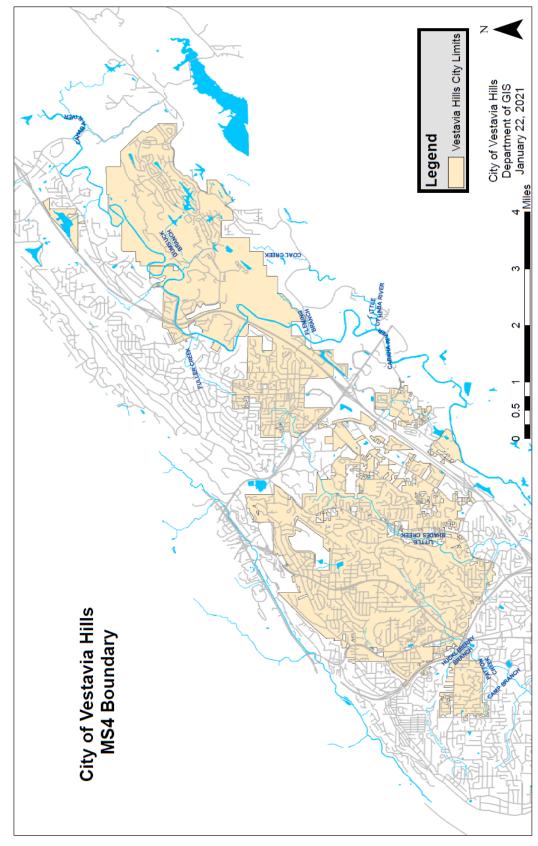


Figure 1: MS4 Boundary

## STORM WATER COLLECTION SYSTEMS OPERATIONS

#### STRUCTURAL CONTROLS MAP

Currently, there are four city-owned structural controls within the MS4 boundary limits (see **Table 2: Structural Controls**). A map of the structural controls can be found in **Figure 2: Structural Controls**. The City will monitor the addition of any city-owned/ maintained structural controls and include them in the annual report.

#### **Table 2: Structural Controls**

Location	Site Name	Description	Latitude	Longitude
1221 Montgomery Highway	Library	Detention Chamber	33.431140	-86.787826
4851 Sicard Hollow Road	SHAC	Detention	33.475559	-86.667847
4750 Sicard Hollow Road	Liberty Park	Retention	33.472371	-86.676065
2369 Dolly Ridge Road	Town Village	Retention	33.422232	-86.77551

#### **Responsible Departments: Engineering/JCDH**

#### STRUCTURAL CONTROLS INSPECTION

As stated in the permit, all existing and new structural controls owned/maintained by the Permittee shall be inspected using a standard inspection form found in **Appendix B** on a semiannual basis, at a minimum. Maintenance activities will also be documented using the provided maintenance form found in **Appendix B**. The completed forms should be uploaded to the Storm Water Online Activity Record (SOAR) program. A city inspector and/or a contractor will perform inspections. Any deficiencies or maintenance recommendations listed on the inspection form in regard to the structural control will be addressed and documented by Public Works.

#### **Responsible Department: Engineering**

# STANDARD OPERATING PROCEDURE (SOP) FOR STRUCTURAL CONTROL INSPECTION AND MAINTENANCE PROCEDURES

The standard operating procedure for structural control inspection and maintenance is found in **Appendix B**.

#### **Responsible Department: Engineering**

#### STABILIZATION AND RE-VEGETATION OF ERODED AREAS

During the inspection of the structural controls, areas of erosion will be documented. The Public Works Department will receive a copy of the inspection documentation noting the eroded areas and will stabilize and re-vegetate these areas. Activities are to be documented and submitted as described.

#### **Responsible Department: Public Works**

#### FLOATABLES, LITTER, SEDIMENT, AND DEBRIS REMOVAL

All floatables, litter, sediment, and/or debris found during the structural inspection will be documented. The Public Works Department will receive a copy of the inspected documentation and will address the noted items. Public Works will also complete documentation of the estimated amounts of floatables, litter, sediment and debris removed during maintenance activities and upload to SOAR.

#### **Responsible Department: Public Works**

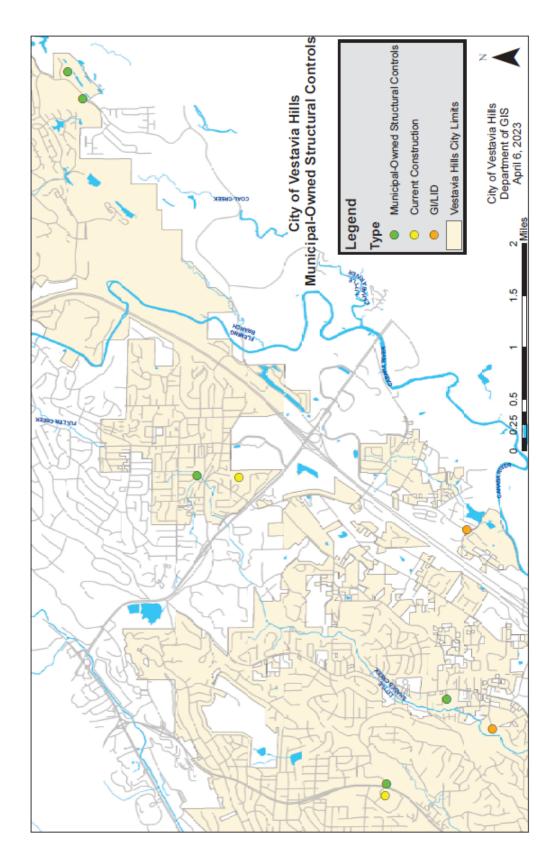


Figure 2: Structural Controls

# PUBLIC EDUCATION AND PUBLIC INVOLVEMENT ON STORM WATER IMPACTS

#### PUBLIC EDUCATION AND PUBLIC INVOLVEMENT BMPS

#### PUBLIC EDUCATION

The City will provide public education information via its stormwater webpage and distribution of stormwater brochures. In November 2022, the City initiated "Only Rain in the Drain" targeted to educate landscape maintenance hazards and detrimental impacts of leaves and yard debris being disposed in the stormwater collection system (see **Appendix G**).

#### PUBLIC INVOLVEMENT

The City activities for public involvement include a litter clean-up and a household hazardous waste collection event.

#### DEVELOPMENT AND IMPLEMENTATION OF THE SWMPP

The City seeks public input on the SWMPP annually. Notification of the public comment period will be made at council meetings. The SWMPP is available for review on the City's website. If revisions are approved, the updated SWMPP will be submitted to ADEM and posted on the website.

#### **Responsible Department: Administration**

#### TARGETED POLLUTANT SOURCES FOR PUBLIC EDUCATION

The City discusses targeted pollutant sources in the section of the SWMPP titled "Community Involvement with the Storm Water Program".

#### REDUCTION OF LITTER, FLOATABLES, AND DEBRIS

Litter signage is maintained throughout the City. Signage will be updated as necessary to properly address these issues. Administration approves of the messages and Public Works installs the signs and/or labels.

#### **Responsible Departments: Administration/Public Works**

# EDUCATING INDIVIDUALS AND HOUSEHOLDS ON REDUCING STORM WATER POLLUTION

Information describing Vestavia Hills's Storm Water Program is posted on the City's website. The information includes general information about the storm water permit with links and brochures about different ways to reduce storm water pollution in relation to the different community segments. These same brochures on storm water issues are placed at City Hall for public pickup. These materials will be updated as needed.

#### **Responsible Department: Administration**

#### COMMUNITY INVOLVEMENT WITH THE STORM WATER PROGRAM

#### GENERAL PUBLIC

The City has a storm water page on its website and placed brochures containing information in City facilities that inform the general public of:

- General impacts litter has on waterbodies and ways to reduce litter.
- General impacts of storm water on surface water from impervious surfaces.
- Source control BMPs in areas of pet waste, home vehicle maintenance, landscaping and rainwater reuse.
- Impacts of illicit discharges and how to report them.

These materials will be updated as needed.

#### **Responsible Department: Administration**

#### GENERAL PUBLIC AND BUSINESSES, INCLUDING HOME-BASED AND MOBILE

The City has a storm water page on its website and placed in City facilities brochures containing information on the following business-related topics:

- Information on BMPs for use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials.
- Impacts of illicit discharges and how to report them.

These materials will be updated as needed.

#### HOMEOWNERS, LANDSCAPERS, PROPERTY MANAGERS, AND CITY PERSONNEL

The City has a storm water page on its website and placed brochures containing educational information in City facilities that inform homeowners, landscapers, and property managers on the following topics:

- Landscape or yard care techniques that protect water quality.
- BMPs and storage of pesticides, herbicides, and fertilizers.
- BMPs for carpet cleaning and auto repair and maintenance.
- Detention/retention pond maintenance.
- General impacts of storm water from impervious surfaces into surface water.

These materials will be updated as needed.

#### **Responsible Department: Administration**

# ENGINEERS, CITY PERSONNEL, REVIEW STAFF, LAND USE PLANNERS, CONTRACTORS, AND DEVELOPERS

The City has a storm water page on its website and also placed in City facilities brochures to inform engineers, contractors and developers on the following topics:

- Impacts of increased storm water flows into receiving waterbodies.
- Technical standards for construction site sediment and erosion control.
- Stormwater treatment and flow control BMPs.
- Run-off reduction techniques and low impact development (LID)/green infrastructure practices and maintenance. Specifically addressing site design, pervious pavement, alternative parking lot design, retention of forests and mature trees.

These materials will be updated as needed.

#### **Responsible Department: Administration**

#### EVALUATING THE EFFECTIVENESS OF THE PUBLIC EDUCATION PROGRAM

The City will on a continuing basis evaluate the effectiveness of the public education program by monitoring and reporting the number of visitors to the storm water page and the number of brochures that are picked up from City facilities on an annual basis.

# PUBLIC ACTIVITIES TARGETING LITTER, FLOATABLES, AND DEBRIS REMOVAL FROM AREA WATERWAYS

Currently the City is planning to host or participate in a cleanup annually. The tonnage collected will be included in the annual report.

### ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

#### MS4 MAP

Maps of the major outfalls and waters of the State within the MS4 boundary that receive discharge from the major outfalls can be found in **Appendix C**. Also, a list of the major outfalls' latitude and longitude coordinates can be found in **Appendix C**.

JCDH will update the MS4 map and provide a list of location coordinates annually on behalf of the City in the annual report.

#### **Responsible Department: JCDH**

#### ORDINANCE/REGULATORY MECHANISM

Ordinance 2988 addresses illicit discharges as required by the City's Permit.

#### **Responsible Department: Administration**

#### DRY WEATHER SCREENING PROGRAM

Dry weather screening of at least 15% of the major outfalls will be performed annually with 100% of the major outfalls screened at least once per the five-year permit period. This work will be completed by JCDH. Currently there are no priority outfalls identified within the MS4 boundary, but if illicit discharges are identified during the dry weather inspections, those outfalls will be screened on an annual basis. JCDH shall use the EPA's guidance manual, *Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments*, Center for Watershed Protection, October 2004, for the main source of investigative techniques and guidance for the dry weather screening process. Outfalls will be field inspected after a minimum of 72 hours of dry weather. Data sheets found in **Appendix C** will be filled out for each outfall inspected. The protocols for dry weather screening are in the Standard Operating Procedure Manual found in **Appendix A**.

#### SOURCE IDENTIFICATION

If during the dry weather screenings, Public Works' identification, or citizen complaint, an outfall is found to be discharging a liquid, the city inspector or JCDH personnel will traverse upstream of the discharge in an attempt to identify the source of the discharge. If the discharge source is unidentifiable, then a sample of the discharge shall be collected by JCDH and analyzed by a qualified lab. Based on the lab results, the outfall will be prioritized and scheduled for further investigation if needed.

#### **Responsible Departments: City Personnel**

#### ILLICIT DISCHARGE ELIMINATION

Once the source and responsible party of an illicit discharge has been identified, either the City will take action through **Ordinance 2988**.

#### Responsible Departments: Code Enforcement Officer/Administration

#### ADEM NOTIFICATION BY THE CITY

If a suspected illicit discharge enters the City's MS4 boundary from an adjacent MS4, the City will notify the adjacent MS4 and the ADEM Water Division within 48 hours of observing the suspected illicit discharge. The Standard Operating Procedure for this action is found in **Appendix C**.

#### **Responsible Department: Engineering**

#### ILLICIT DISCHARGE REPORTING BY THE PUBLIC

The City receives calls for illicit discharges at the City Hall phone number 205-978-0150 frequently. The City also receives notifications via the City's online "Action Center". There is also a phone number, 205-930-1999, listed on the City's website to report illicit discharges.

#### **Responsible Department: Administration/Engineering**

#### PERSONNEL TRAINING

City administrators, engineers, inspectors, and laborers will be trained on IDDE identification and response annually.

#### **Responsible Department: Administration**

#### ORDINANCE/REGULATORY MECHANISM AVAILABILITY

The illicit discharge ordinance is found on the City's website at the link below:

https://vhal.org/community/stormwater-management/

### CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

#### ORDINANCE/REGULATORY MECHANISM

**Ordinance 2987** addresses Construction Site Regulations as required by the City's Permit. The ordinance is found on the City's website at the link below:

#### https://vhal.org/community/stormwater-management/

#### **Responsible Department: Administration/Engineering**

#### SITE PLAN REVIEWS

According to **Ordinance 2987**, a BMP plan must be submitted to the City along with the permit application before any land disturbance. The City must either approve or disapprove the BMP plan within 14 days. Reasons for disapproval must be submitted to the applicant in writing. All revisions have an additional 14-day response time. Land disturbing activity may not be commenced prior to the issuance of the permit by the City.

#### **Responsible Department: Engineering/Inspections**

#### CONSTRUCTION SITE INSPECTION SCHEDULE

The City will perform a monthly inspection, at a minimum, on qualifying sites that have been issued land disturbance permits. Due to the Cahaba River's impaired status, Vestavia Hills's sites are categorized as "Priority Construction Sites". Erosion controls and best management practices will be inspected during these inspections. Deficiencies identified during an inspection will be subjected to enforcement procedures outlined in the Erosion Control Ordinance.

#### **Responsible Department: Engineering/Inspections**

#### TRAINING OF MS4 SITE INSPECTION STAFF

Personnel responsible for construction site inspections receive BMP training annually.

#### **Responsible Department: Engineering**

#### CONSTRUCTION SITE INSPECTION CHECKLIST

See Appendix D for the City's construction site inspection checklist.

#### **Responsible Department: Engineering/Inspections**

#### ENFORCEMENT RESPONSE PLAN (ERP)

An Enforcement Response Plan is included in **Ordinance 2987.** Documentation of formal enforcement actions and ADEM referrals is available via the SOAR program.

#### **Responsible Department: Administration**

#### CONSTRUCTION SITE OPERATOR TRAINING

The City provides construction site operator's informational materials regarding appropriate application and maintenance of erosion and sediment controls when they receive their permits from the Inspections Department. The City has a storm water page on its website and brochures at City facilities that inform the engineers, contractors and developers on:

- Impacts of increased storm water flows into receiving waterbodies.
- Run-off reduction techniques and low impact development (LID)/green infrastructure practices. Specifically addressing site design, pervious pavement, alternative parking lot design, retention of forests and mature trees.

These materials will be updated as needed.

#### **Responsible Departments: Administration/Engineering/Inspections**

# POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND RE-DEVELOPMENT

#### ORDINANCE/REGULATORY MECHANISM

**Ordinance 2771** addresses storm water design requirements for post-construction storm water management.

The Ordinance addresses the following:

- Procedures to develop, implement and enforce systems of appropriate structural and/or non-structural BMPs.
- Procedures to develop, implement and enforce performance standards.
- Procedures for encouragement of the utilization of LID/green infrastructure practices.
- Procedures to ensure compliance including sanctions and enforcement mechanisms.
- Procedures for post-construction inspections to include tracking and enforcement.
- Procedures to ensure adequate long-term operation and maintenance of BMPs.

The post-construction ordinance is found on the City's website at the link below:

https://vhal.org/community/stormwater-management/

#### **Responsible Department: Engineering**

#### LID/GI ENCOURAGEMENT PROCEDURES

Information detailing the importance of LID/GI is provided along with the City's land disturbance permit application. This also includes a statement acknowledging receipt of the information by the applicant.

#### **Responsible Department: Administration/Engineering/Inspections**

#### INVENTORY OF POST-CONSTRUCTION STRUCTURAL CONTROLS

Currently there are nine privately owned structural controls within the City (**Table 3: Post-Construction Structural Controls**). The City will monitor the addition of any privately-owned structural controls and include them in the annual report. See **Appendix E** for more information on the structural controls and a map of the sites.

Table 3: Post-Construction Structural Controls				
Project Name	Project Address	Description	Latitude	Longitude
Anytime Fitness	11971 Liberty Parkway	Bioswale	33.652869	-86.561463
On Tap	11967 Liberty Pkwy	Bio-retention Pond	33.474009	-86.696159
Swaid Medical Building	1021 Old Montgomery Highway	Pervious Parking	33.440262	-86.788780
Baumhowers	1270 Montgomery Highway	Inlet Filters	33.430080	-86.790047
Publix Liberty Park	10021 Liberty Parkway/3215 Endeavor Ln	Stormwater Filtration	33.472733	-86.703353
Hancock Construction	2828 Old 280 Court	Detention Pond	33.427319	-86.729729
Cottages on Green Valley	2961 Green Valley Road/1517 Cottage Grove	Detention Pond	33.460461	-86.743085
Gentry Pharmacy	3100 Blue Lake Drive	Pervious Parking	33.431580	-86.734707
Liberty Park Chevron	11981 Liberty Parkway	Detention Pond	33.473017	-86.694476
Cahaba Station	8011 Liberty Parkway	Underground Detention	33.479424	-86.703497

#### **Table 3: Post-Construction Structural Controls**

**Responsible Department: Engineering** 

### SPILL PREVENTION AND RESPONSE

#### CITY RESPONSE PROTOCOL

Vestavia Hills Fire Department is responsible for investigating, responding, and conducting response actions for any spill within the City's boundaries. Jefferson County's Emergency Management Agency (EMA) will additionally respond at the request of the City. Vestavia Hills's Fire and Rescue and EMA track the spills, the response, and the cleanup activities for all spills.

#### **Responsible Department: Fire**

#### SPILL PREVENTION/SPILL RESPONSE PLAN

The City's SOP for spill response is found in Appendix F.

#### **Responsible Department: Fire**

#### PERSONNEL SPILL PREVENTION/RESPONSE TRAINING

Vestavia Hills Fire Department is responsible for the training and certification of their personnel. An annual training will be provided to municipal personnel on spill prevention/response.

# POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

#### MUNICIPAL FACILITIES INVENTORY

See **Table 4: Municipal Facilities** for a list of facilities. The list will be updated as needed in the annual report.

#### **Responsible Departments: All Departments**

#### STRATEGY EVALUATION

City personnel pick up trash prior to it entering the MS4 and remove trash from the MS4. Volunteer organizations assist with removal of trash from waterbodies and the MS4. Trash collected is assessed and documented. The City also participates in a household hazardous waste collection event. An SOP for special events is in **Appendix G**. These activities have been successful in removing and preventing trash from entering the MS4.

#### **Responsible Departments: All Departments**

#### GOOD HOUSEKEEPING PRACTICES SOP

The SOP detailing good housekeeping practices is found in the 2011 SWMA SOP Manual (**Appendix A**).

#### **Responsible Departments: All Departments**

#### **INSPECTION PLAN**

Annual inspections will be conducted for municipal facilities that have the potential to discharge pollutants via stormwater runoff. See **Appendix G** for the inspection checklist.

#### **Responsible Departments: All Departments**

#### GOOD HOUSEKEEPING TRAINING PROGRAM

City staff will be educated annually on good housekeeping practices. The SOP manual (**Appendix A**) contains procedures related to Good Housekeeping.

### APPLICATION OF PESTICIDES, HERBICIDES, AND FERTILIZERS (PHFS)

#### APPLICATION AND STORAGE

The Parks and Recreation Department keeps annual records of applied pesticides, herbicides, and fertilizers (PHFs). Each chemical used is applied per the labeling instructions. Safety Data Sheets (SDS) on each product are found in the chemical storage areas. City staff responsible for application of PHFs receive annual training in safe use, storage, and disposal of PHFs. All contractors contracted to apply pesticides or herbicides to City property shall provide proper certification and licensing before performing work. Also, contractors contracted to apply fertilizer must provide qualification in utilizing proper nutrient management practices.

City facilities that store PHFs will be inspected annually to determine proper storage, product labeling, and SDS accessibility (**Table 4: Municipal Facilities**). The SOP manual (**Appendix A**) contains procedures related to usage and storage of PHFs.

#### **Responsible Department: Parks and Recreation/Contractors**

#### PHF TRAINING PROGRAM

Necessary staff will be educated annually on proper PHF practices.

**Table 4: Municipal Facilities** 

Name	Address	Inspection	
Public Works Shop	1281 Montgomery Hwy Vestavia Hills 35216	Yes. Vehicle/Equipment Maintenance and Storage	
Aquatic Complex at	720 Waldridge Road,	Yes. Chemical Storage	
Wald Park	Vestavia Hills, AL 35216	Tes. Chemical Storage	
City Hall	1032 Montgomery Hwy,	No. No potential to discharge	
City Hall	Vestavia Hills, AL 35216	pollutants.	
Vestavia Hills Library in	1221 Montgomery Hwy,	No. No potential to discharge	
the Forest	Vestavia Hills, AL 35216	pollutants.	
City of Vestavia Hills Fire	509 Montgomery Hwy,	No. No potential to discharge	
Station 1	Vestavia Hills, AL 35216	pollutants.	
City of Vestavia Hills Fire	2925 Columbiana Road,	No. No potential to discharge	
Station 2	Vestavia Hills, AL 35216	pollutants.	
City of Vestavia Hills Fire	3201 Morgan Drive,	No. No potential to discharge	
Station 3	Vestavia Hills, AL 35216	pollutants.	
City of Vestavia Hills Fire	13041 Liberty Parkway,	No. No potential to discharge	
Station 4	Vestavia Hills, AL 35242	pollutants.	
City of Vestavia Hills Fire	3241 Cahaba Heights Rd,	No. No potential to discharge	
Station 5	Vestavia Hills, AL 35243	pollutants.	
Civia Cantor	1090 Montgomery Hwy,	No. No potential to discharge	
Civic Center	Vestavia Hills, AL 35216	pollutants.	
New Merkel Community	2150 Hollis Crossing,	No. No potential to discharge	
Center	Vestavia Hills, AL 35243	pollutants.	
Cahaba Heights Baseball	4401 Dolly Ridge Road,	No. No potential to discharge	
Park	Vestavia Hills, AL 35216	pollutants.	
Sicard Hollow Athletic	4851 Sicard Hollow Road,	No. No potential to discharge	
Complex (SHAC)	Vestavia Hills, AL 35242	pollutants.	
Liberty Park Sports	4700 Sicard Hollow Road,	No. No potential to discharge	
Complex	Vestavia Hills, AL 35242	pollutants.	

### OILS, TOXICS, AND HOUSEHOLD HAZARDOUS WASTE

#### PUBLIC EDUCATION ON PROPER DISPOSAL

The City has contact information on its webpage regarding where to report spills, illicit discharges and improper disposals. The webpage also includes a link to the website Earth911\_<u>http://earth911.com/</u> which provides local sites for recycling of oils, toxics and household hazardous waste. Brochures on oils, toxics, and household hazardous waste are on the City storm water webpage as well as placed in City facilities for public pick-up.

#### **Responsible Department: Administration**

#### ANNUAL EMPLOYEE TRAINING

Annual training on spill prevention is provided to City personnel.

### INDUSTRIAL STORM WATER RUNOFF

#### INVENTORY OF HIGH-RISK FACILITIES

The City maintains a list of industrial and high risk facilities within the city limits (**Appendix H**). The list of facilities will be reviewed annually for accuracy and included in the annual report.

#### **Responsible Departments: Administration/JCDH**

#### INSPECTION OF HIGH-RISK FACILITIES

JCDH will inspect these sites annually on behalf of the City. See **Appendix H** for the Industrial Inspection form.

## MONITORING AND REPORTING

#### MONITORING LOCATIONS

JCDH will take grab samples annually on behalf of the City. See **Table 5: Sampling Sites** for a list of sampling sites.

#### Table 5: Sampling Sites

Water Body	Latitude, Longitude	Description
Patton Creek	33.410772, -86.810525	Grab Sample
Cahaba River	33.481772, -86.712765	Grab Sample as well as Water Quality Sonde Site

An hourly water quality sonde is installed on the Cahaba River and managed by the United States Geological Survey (USGS). The site's title is USGS 02423380 Cahaba River near Mountain Brook, AL (River Run Drive).

#### **Responsible Department: JCDH**

#### IMPAIRED WATERWAYS

The City will review the waterbodies listed in the latest final §303(d) list, annually. If a waterbody becomes listed that falls within the MS4 boundary, the SWMPP will be updated as needed.

#### MONITORING PARAMETERS AND FREQUENCY

Grab samples will be analyzed for the following parameters:

- a. E. coli
- b. Total Nitrogen (TN) (mg/l)
- c. Total Phosphorus (mg/l)
- d. Total Suspended Solids (TSS) (mg/l)
- e. Temperature
- f. pH/ORP
- g. Turbidity (NTU)
- h. Conductivity
- i. Dissolved Oxygen (mg/l)
- j. Ammonia Nitrogen (NH3-N) (mg/l)
- k. Biochemical Oxygen Demand (BOD) (mg/l)
- I. Chemical Oxygen Demand (COD) (mg/l)
- m. Hardness as CaCO3 (mg/l)
- n. Nitrate plus Nitrite Nitrogen (NO3+NO2-N) (mg/l)
- o. Oil and Grease (mg/l)
- p. Total Dissolved Solids (TDS) (mg/l)
- q. Total Kjeldahl Nitrogen (TKN) (mg/l)

The water quality sonde monitors the following parameters at least hourly:

- a. Temperature
- b. Turbidity (NTU)
- c. Conductivity
- d. Dissolved Oxygen
- e. Water level

#### **Responsible Department: JCDH**

#### SAMPLE TYPE, COLLECTION, AND ANALYSIS

JCDH will collect grab samples and submit them to a certified laboratory for analysis.

### OTHER REQUIREMENTS

#### SWMPP PLAN REVIEW AND MODIFICATION

This plan will be reviewed annually and updated as necessary.

#### **Responsible Departments: All Departments**

#### ANNUAL REPORT

The annual report will be compiled by JCDH for the City of Vestavia Hills.