Shelby County Storm Water Management Program Plan

MS4 Storm Water Program NPDES ALS000008

"Protecting, Preserving, and Restoring Our Local Water Resources"

November 2022

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1.0 General Information

1.1 Introduction

In 1990, the U.S. Environmental Protection Agency (EPA) promulgated regulations establishing Phase I of the National Pollutant Discharge Elimination Systems (NPDES) storm water program. These Phase I storm water regulations were incorporated into Section 402(p) of the Clean Water Act as part of the existing NPDES permit rules that address point source discharges. As a result, urban nonpoint source runoff became regulated as a point source. 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 storm water management program as a means to control, to the maximum extent practicable (MEP), polluted discharges from certain municipal, industrial and construction activities into the MS4.

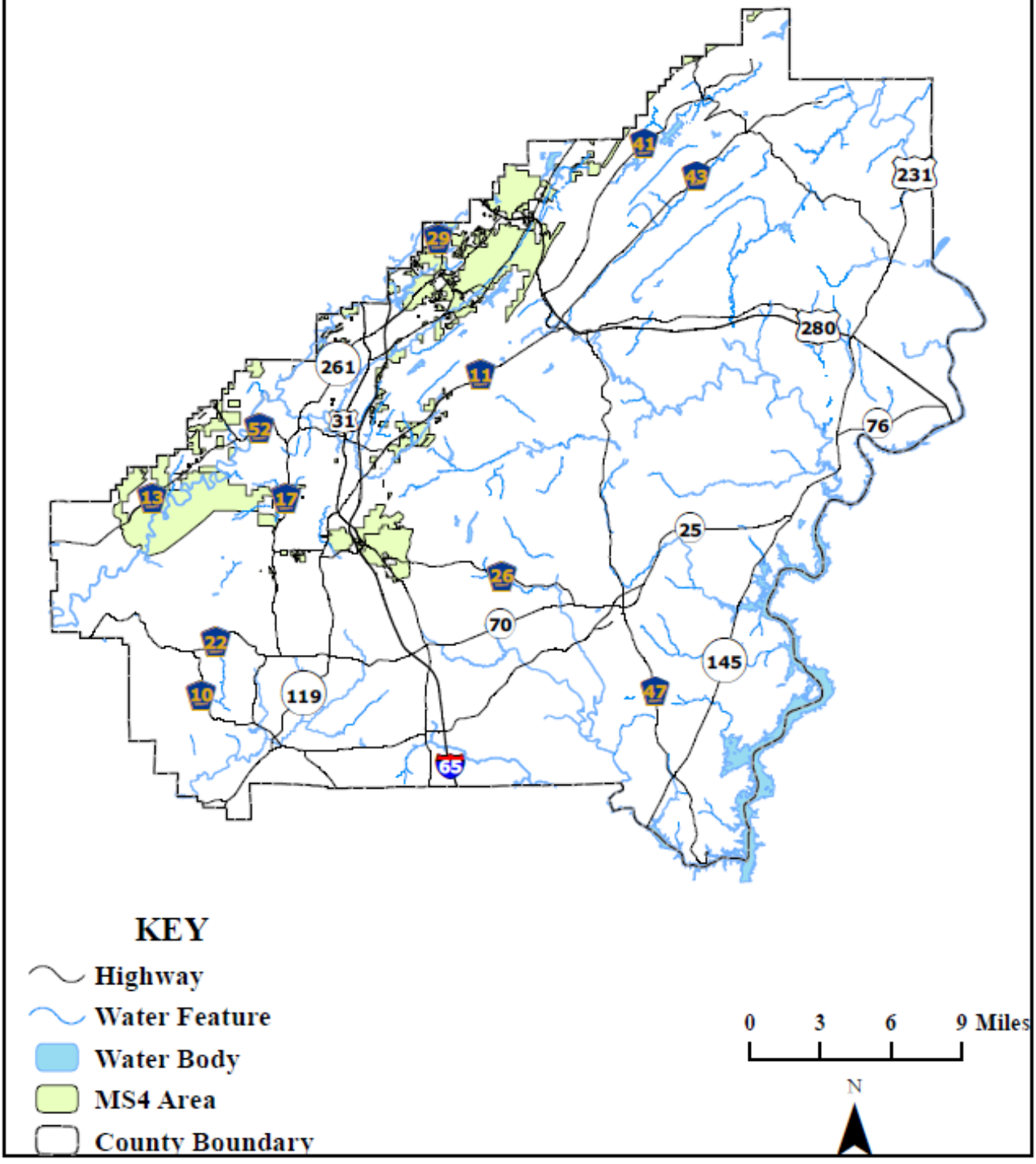
The Alabama Department of Environmental Management (ADEM) has primary jurisdiction over permitting and enforcement of the Storm Water Program for Alabama.

1.2 Program History

Shelby County was issued NPDES Permit Number ALS000003 effective October 1996. The permit was renewed and reissued after the initial 5-year permit period on October 12, 2001 with an effective date of November 1, 2001 and expiration date of October 31, 2006. This permit was administratively extended by ADEM until a new permit, ALS000008, was issued September 30, 2015 with an effective date of October 1, 2015. The permit had a 5-year permit period to expire on September 30, 2020. The permit; however, was renewed and administratively extended in April 2020 until the new permit was issued on February 16, 2022. The new permit, ALS000008, is also a 5-year permit with an effective date of February 16, 2022 through February 15, 2027.

While unincorporated Shelby County does not have a population of 100,000 or greater within its jurisdiction and a significantly smaller population within the unincorporated area inside the Cahaba River Basin, the County maintains a Phase I MS4 permit and is required to develop and implement a Storm Water Management Program (SWMP) in accordance with the NPDES Permit requirements. The majority of Shelby County's landmass and a significant majority of the unincorporated population is located outside the Phase I MS4 jurisdiction and within the Coosa River Basin that is primarily rural in nature. The focus of the Phase I MS4 permit ALS000008 is in the suburban, populated Cahaba River basin upstream of Piney Woods Creek to the Jefferson County boundary line. As illustrated on Map 1, the permit area is defined as the Cahaba River drainage basin, upstream of Piney Woods Creek within Shelby County.

SHELBY COUNTY
MS4
Map 1



1.3 Objective of Program

The objective of this Storm Water Management Program (SWMP) is to prohibit the discharge of non-storm water discharges into the municipal separate storm sewer system (MS4) and to reduce the discharge of pollutants from the MS4 to the maximum extent practicable in compliance with the requirements of NPDES Permit No. ALS000008. As outlined in part 1.7, this program shall be updated annually to further comply with the Permit's scheduled requirements.

1.4 Contact Information

Shelby County Commission
Shelby County Department of Development Services
1123 County Services Drive
Pelham, AL 35124

1.5 Roles and Responsibilities

The Shelby County Commission assumes the responsibility for program management and annual reporting to ADEM, as dictated by this document and the Shelby County Storm Water Management Ordinance. The County is responsible for verification of all information and data gathered within its legal jurisdiction and enforcement of its local storm water management ordinance. Shelby County will work with adjacent MS4s to accomplish the goals and requirements of the respective programs. The primary departments responsible for program management within the Shelby County organization are the Department of Development Services, the Shelby County Emergency Management Agency, Facilities and General Services, which includes Environmental Services, and the Shelby County Highway Department.

1.6 Legal Authority

Act No. 95-775, Legislature of Alabama – 11-89C-1 – 14, Code of Alabama 1975, and other provisions thereof, grants the legal authority to set up a local storm water management program, with the associated ordinance and fees, to "the governing bodies of all Class 1 Municipalities with the state and the county governing bodies in which the Class 1 municipalities are located and the governing bodies of all municipalities located within those counties, and where any such municipality is also located partially within an adjoining county, then the governing body of such adjoining county." Among other privileges, the Legislature granted the legal authority to: (1) control discharges and prohibit discharges to and from those portions of the MS4 over which it has jurisdiction, (2) control spills that may pose a threat to the MS4, (3) have interagency agreements, (4) require compliance with applicable local, state, and federal laws, and (5) perform inspections on private property to investigate sources of illicit discharges to the MS4. This legal authority was utilized by the County to adopt

local ordinances addressing these issues. These ordinances are hereby incorporated into this document and are included by reference.

The County's Development Regulations are available electronically through the County's website at www.shelbyal.com . A summary of the Regulations applicable to the County's storm water program are provided in the following sections.

1.6.01 Zoning Ordinance

Shelby County adopted a Zoning Ordinance in June 1974. The Zoning Ordinance has been amended several times since initial adoption with the latest revision occurring in 2019.

The latest version of the *Zoning Ordinance of Shelby County* is incorporated into the SWMP Plan (SWMPP) by reference and is available on the County's website at www.shelbyal.com.

1.6.02 Subdivision Regulations

Shelby County adopted Subdivision Regulations in 1971. The Subdivision Regulations have been amended several times since initial adoption with the latest revision occurring in 2021. Requirements for storm drainage improvements and post-construction storm water management are provided in Section 6.04, Storm Water Facilities.

The latest version of the *Subdivision Regulations of Shelby County* is incorporated into the SWMPP by reference and is available on the County's website at www.shelbyal.com.

1.6.03 Flood Damage Prevention Ordinance

On August 23, 2021, Shelby County adopted revisions to the Flood Damage Prevention Ordinance. The purpose of this ordinance is to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas of provisions designed to:

- Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- 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;

- Control filling, grading, dredging and other development which may increase flood damage or erosion;
- Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands; and,
- 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 SWMPP by reference and is available on the County's website at www.shelbyal.com.

1.7 Program Review and Modification

As required in Part II.D.1, the County shall annually review the SWMPP and modify as necessary to maintain compliance and improve program efficacy. The Storm Water Management Program may be updated and modified as necessary to comply with the requirements set forth in the NPDES Permit ALS000008. All proposed modifications shall be submitted to ADEM for review at the time the modification is made. Prior to the submittal of the annual report each year, this SWMPP will be reviewed by staff to insure that it meets the current actions of the program and the permit conditions are met to the maximum extent practicable. Modifications may include, but are not limited to replacement of ineffective BMPs, addition of program components, or revisions of the jurisdictional area.

1.8 Program Components

The County's SWMP Plan has been updated to address the storm water pollution prevention and management programs described in the NPDES Permit. Part II.B of the NPDES Permit describes ten (10) program elements that are required to be incorporated into the County's SWMP.

- Structural Controls;
- Public Education and Public Involvement on Storm Water Impacts;
- Illicit Discharges Detection and Elimination (IDDE);
- Construction Site Storm Water Runoff Control;
- Post-Construction Storm Water Management in New Development and Redevelopment;
- Spill Prevention and Response;
- Pollution Prevention / Good Housekeeping for Municipal Operations;
- Application of Pesticide, Herbicide, and Fertilizer (PHFs);

- Oil, Toxics, and Household Hazardous Waste Control; and,
- Industrial Storm Water Runoff.

The SWMP addresses the minimum program elements, referenced above, to include the following:

- A map of the Permittee's MS4 jurisdictional boundaries;
- The BMPs that will be implemented for each program element;
- Low impact development (LID)/green infrastructure (GI) shall be considered and actively encouraged where feasible. Information on LID/GI is available on the following websites: http://www.adem.alabama.gov/programs/water/waterforms/LIDHandbook.pdf and http://epa.gov.nps/urban-runoff-low-impact-development;
- The measureable goals for each of the program elements outlined in Part II.B.;
- The proposed schedule – including interim milestones, as appropriate, inspections, and the frequency of action needed to fully implement each program element; and,
- The person and/or persons responsible for implementing or coordinating the BMPs for each separate program element.

The Storm Water Management Program Plan (SWMPP) has been updated to generally describe the County's efforts to maintain compliance with the requirements of NPDES Permit ALS000008. This document is intended to be a dynamic document and shall be revised as needed to accurately reflect the County's activities in implementing its SWMP.

2.0 Structural Controls

2.1 Introduction

All storm water structural controls owned and/or operated by the County within the MS4 shall be inspected and maintained by the County in such a way as to reduce the discharge of pollutants to the maximum extent practicable.

Multiple other structural controls, primarily retention and detention ponds, exist in the project area, but all are owned, operated, or maintained by private land owners or neighborhood associations (see Post-Development Construction portion of this document for requirements associated with proposed privately owned structural controls due to developments and/or re-developments). The proposed construction of any new structural controls in the MS4 shall be reported to Development Services.

2.2 Inventory

The following structural controls are currently maintained by the MS4:

- Caldwell Mill North Detention Pond
- Caldwell Mill South Detention Pond

2.3 Mapping

The County shall maintain a map of all County owned or operated structural controls within the MS4. This map is included as Map 2 of this SWMPP. The structural controls map shall be updated annually.

2.4 Standard Operating Procedures

The County shall utilize an inspection sheet, provided as Appendix 2, when performing an inspection of each structural control listed in the inventory above. Required maintenance and/or deficiencies noted shall be reported to the Shelby County Environmental Services manager for action. Eroded areas shall be stabilized and re-vegetated as needed and all floatables, litter, sediment, and debris found shall be removed as needed. All maintenance performed shall be documented and retained for record purposes.

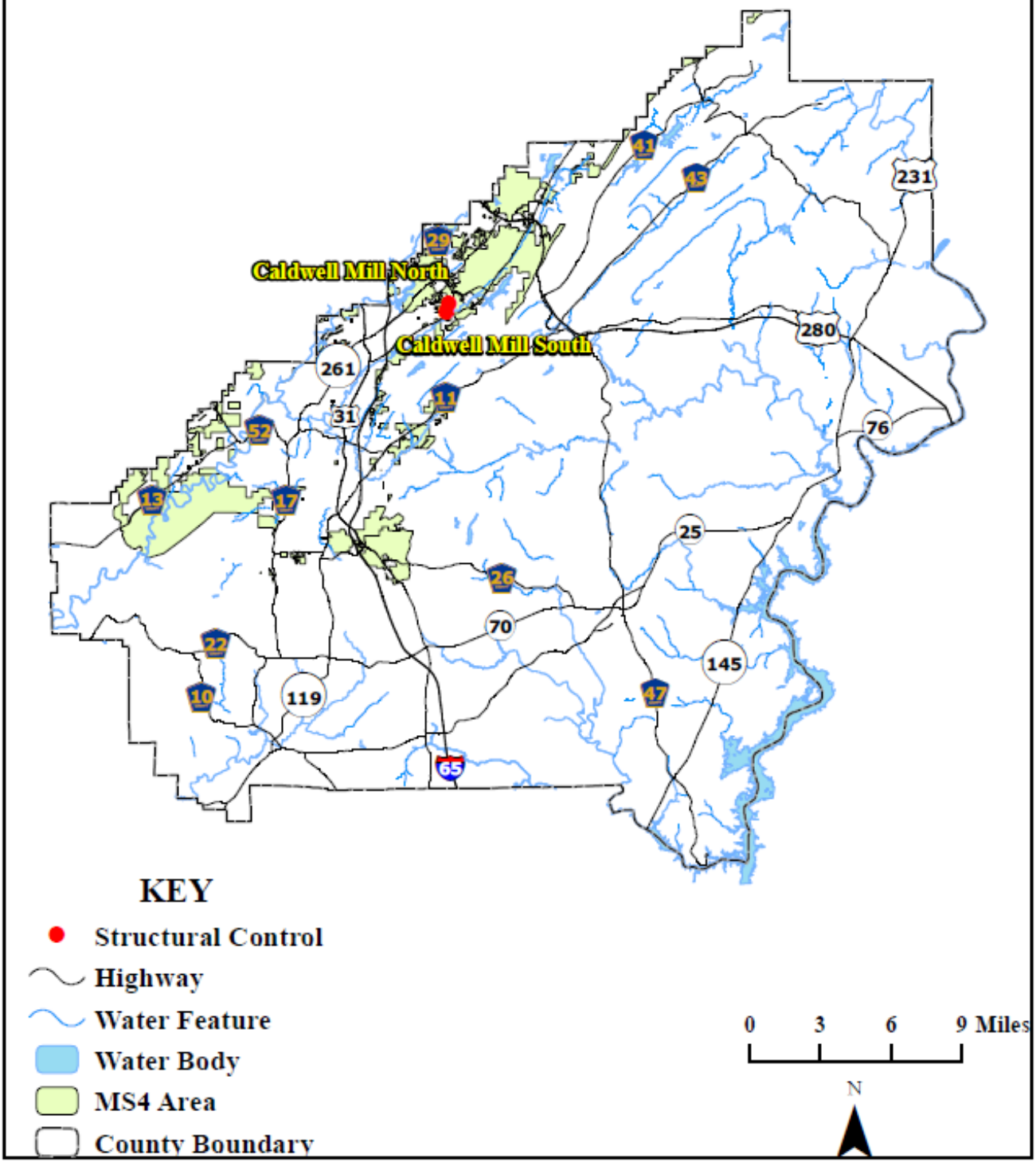
2.5 Responsible Departments

Inspections, Mapping, & Coordination: Shelby County Development Services
Maintenance & Repairs: Shelby Co. Environmental Services/Highway Dept.

2.6 Measurable Goals

Table 2-1 Structural Controls –Program Goals				
Program Component	**BMP**		**Schedule**	**Responsible Department**
	Description	**Frequency**		
Structural Inventory Control	Structural Control inventory	Update as needed	Reviewed Annually	Development Services
	Update map	Annually	Reviewed Annually	Development Services
Standard Operating Procedures (SOPs)	Inspection	Update as needed	Reviewed Annually	Development Services
	Cleaning	Update as needed	Reviewed Annually	Property owner/HOA
	Maintenance and Repair	Update as needed	Reviewed Annually	
Inspections	Comprehensive inspection form	Develop and update as needed	Reviewed Annually	Development Services
	Comprehensive Inspection	Annually	Reported Annually	
	Floatables, litter & Sediment Inspection Form	Develop and update as needed	Reviewed Annually	
	Floatables, litter and sediment inspection	Monthly	Reported Annually	
Maintenance	Tracking System (eyes@shelbyal.com)	Update as needed	Continuously Recording	Development Services
	Cleaning	Track	Reported Annually	Development Services/ Highway Department
	Maintenance	Track	As needed	
Program Evaluation	Evaluate program effectiveness	Annually	Reviewed Annually	Development Services

STRUCTURAL CONTROLS Map 2



3.0 Public Education and Public Involvement

3.1 Introduction

The MS4 NPDES permit requires the County to develop, implement and evaluate a public education, involvement, outreach, and participation program. Increasing public awareness of storm water pollution concerns and prevention ultimately serves to reduce the contribution of pollutants in storm water runoff. Public education is an important element of the County's storm water program. Goals of the program are to:

- Inform and educate all target audiences on steps they can take to reduce storm water pollution in their daily routine and about the impacts of storm water discharges into streams, rivers, lakes and ponds;
- Identify steps that the community can take to help reduce pollutants in storm water runoff;
- Provide opportunities for public input and feedback;
- Offer opportunities for all target audiences to become actively involved in the County Storm Water Management Program;
- Facilitate opportunities to provide public education; and,
- Maintain a means of public reporting of discharge violations.

3.2 Program Administration

The County recognizes that opportunities for education and outreach can present themselves in a variety of ways through interactions with the community. As the public gains a greater understanding of the benefits of a storm water program, the County is likely to gain more support for the SWMP and increased compliance with the NPDES permit requirements. The County will utilize every opportunity to educate the public about storm water and watershed management, which, at a minimum, will include the best management practices (BMPs) detailed below.

3.3 Target Audiences

Development within the County consists of agricultural, residential, commercial, institutional, and industrial uses. Audiences typically associated with these types of development and land use include: home owners, renters, students, business owners and employees, professionals, farmers, developers, contractors and elected officials. Educational materials will be specifically tailored to communicate a specific topic to a targeted audience. The primary target

audiences within the County and the rationale for selecting these audiences are listed below:

3.3.01 General Public: Residential and Commercial Developments

This target audience are potential contributors of storm water pollution through activities such as littering, illicit discharges, improper waste management and improper application of pesticides, herbicides and fertilizers. The primary pollutants potentially associated with this target audience are litter, floatables, debris, nutrients, oils, toxics and pathogens.

3.3.02 Engineers, Developers and Builders

This target audience are potential contributors of storm water pollution through construction activity and improper site development, as well as, engineering design of storm water pollution prevention best management practices and post-development storm water management controls. The primary pollutants potentially contributed by this target audience are sediment, floatables and nutrients.

3.3.03 Landscape Companies and Golf Courses

This target audience are potential contributors of storm water pollution primarily through lawn maintenance activities. The primary pollutants potentially associated with this target audience include pesticides, herbicides, and fertilizers.

3.3.04 Ranchers, Farmers and Horse Owners

This target audience are potential contributors of storm water pollution improper application of pesticides, herbicides, and fertilizers and improper disposable of animal waste. The primary pollutants potentially associated with this target audience include pesticide, herbicides, fertilizers and pathogens.

3.3.05 Local Businesses

This target audience are potential contributors of storm water pollution through activities such as illicit discharges and daily business activities. The primary pollutants potentially associated with this target audience includes floatables, grease, oils, toxics, pathogens, pesticides, herbicides, and fertilizers.

3.4 Target Pollutant Sources

Several sources of pollution need to be targeted in the public education program. Target pollutant sources shall include, but are not limited to, the following:

- Illicit discharges and improper disposal;

- Disposal of used oil and household hazardous wastes;
- Impacts of development;
- Construction site erosion and sediment;
- Improper application of pesticides, herbicides and fertilizers;
- Household , agriculture sources of pathogens; and,
- General Sources of litter, debris and floatables.

Educational materials will also be developed to describe BMPs that are effective in reducing the impacts of development on storm water runoff. Topics may include, but are not limited to, the following:

- General impacts of storm water runoff;
- Rain water reuse;
- Proper household hazardous waste, used oil, and grease disposal;
- Litter, rubbish, and leaf collection and control;
- Low impact development practices; and,
- Impacts of development.

3.5 Public Education

The County's Public Education and Involvement Program is designed to address all storm water pollutants of concern. Specific strategies for each target audience will vary depending on the type of audience, type of pollutant contribution, potential risk and impact of pollutant contribution and current level of education of each target audience. Specific components and activities within our Public Education and Involvement Program will consist of, but not be limited to, the topics and actions within this section of the SWMPP.

3.6 Public Participation

3.6.01 Website Connection

Citizens, developers and other professionals often utilize the County website to obtain information on items of local interest. The website is accessible 24 hours per day and can serve citizens that do not have time or the ability to physically meet with staff during normal working hours. The County continues to update the Storm Water Program website with additional materials and links. The website also allows the public to review draft documentation, participate in citizen

surveys and access to additional storm water information and materials. The website can be found at the following location:

(https://www.shelbyal.com/index.aspx?nid=416)

Some of the topics currently presented on the website include the following:

- MS4 Storm Water Program;
- Low Impact Development Techniques;
- MS4 Permit;
- Public Education Posters and Video;
- Ways to get involved and how to report concerns;
- Environmental Department services and contact information;
- State Agency contacts; and,
- Drop-off Recycling Locations

The website contains links to the County's regulations, ordinances and permitting requirements. The website is maintained and updated on an as needed basis.

One component of this update was completed in the 2016 calendar year. The County developed a Low Impact Development Techniques page for developers and citizens to review different methods of storm water control and treatment. These techniques include simple methods for the homeowner such as rain barrels to recycle rain water in yards or gardens to more complicated systems of bio retention.

3.6.02 Brochures Posters, and Targeted Mail Publications

Pamphlets, posters and brochures are an effective way to present and explain storm water issues to the populace. Unlike other communication vehicles, pamphlets and brochures can be distributed in many locations without requiring staffing and the location of distribution can specifically target the audience of interest. The County's goal is to publish additional storm water brochures to address either a specific storm water related issue or a particular audience and to make those brochures available to the public at County facilities, County functions and the County website. Brochures and Posters primarily reach a general public target audience.

A targeted mail out consists of a variety of specially designed postcards that target the audience of interest for specific potential pollutant prevention and awareness measures related to storm water. A targeted mailing may address subjects such as Fertilizer Applications, the proper disposal of Fats, Oils and Grease in the storm water system, or Waste Management and include an educational and proper disposal component. The County's goal is to reach

target audiences with specific potential pollutants and work toward education and prevention. The target audience varies depending on the type of audience, type of pollutant contribution, potential risk and impact of pollutant contribution.

3.6.03 Public Presentations

The County provides staff and/or resources to develop presentations for public meetings, conferences and workshops upon request. Presentations are typically offered in PowerPoint format and the topics are chosen by the organization requesting the information. The goal is to prepare and conduct a minimum of two public presentations per year. The target audience for public presentations will vary depending upon the organization requesting the presentation. Target audiences for presentations may include schools, environmental stakeholder groups, local Civic groups, City Councils, developers, contractors, engineers, homeowners or other interested Phase I programs. For example, the County prepared and presented to local watershed stakeholders regarding the implementation of storm water management during the initial project design phase, during and post construction as a component of development review for new and redeveloped commercial and residential projects located within the County.

The County participates in the Shelby County Water Festival to educate students about all aspects of surface water, groundwater and other related natural resources and to instill in them a general environmental awareness and stewardship ethic. The festival is designed to be a fun, educational and memorable event in a field day atmosphere. Students and their teachers leave with an increased knowledge and awareness of the importance of our precious water resources. All 4th Grade students in Shelby County are invited to participate.

3.6.04 Public Workshops

In an effort to educate contractors, developers, engineers and other County staff, the County is developing a series of workshops that will focus on local storm water issues of concern. The County's goal is to conduct a minimum of two workshops per year. Examples of these workshops include focused topics related to, but not limited to, pesticides, herbicides and fertilizers; BMPs for farm and pasture animals; post construction; oils, gases and industrial byproducts. Other workshops may be planned as needed. Workshops will reach a diverse target audience group including developers, contractors, engineers, students and staff.

3.6.05 Watershed Organizations

Watershed Organizations bring together representatives from utilities, private industry, environmental awareness groups, farmers and branches of government to coordinate individual efforts, share information and plan water resource and aquatic life protection. These organizations allow participating entities to coordinate individual efforts in order to maximize limited resources.

The County actively participates in, and works closely with, many local and regional watershed organizations. Specific examples of these organizations include the Cahaba River Basin and Coosa River Basin, Renew Our Rivers (Alabama Power Company) and the Alabama Cooperative Extension.

The County will continue to participate, support, and work closely with, these organizations and any other organization interested in watershed education and stewardship. Watershed organizations have the ability to reach all of the target audiences.

3.6.06 Recycling Program

The reduction of waste streams are the key to reductions in environmental impacts. The county maintains one community recycling center throughout the County. This center is located at Heardmont Park off US 119 and accepts cardboard and paper products only. The goal of this operation is to allow citizens to recycle wastes instead of disposing of it in a landfill or improperly disposing of it in our local water resources. The target audience for curbside recycling and recycling drop off locations is the general public.

Figure 3-1
Heardmont Park Recycling Center Drop-off

3.6.07 Storm Drain Marking

Storm Drain Marking sends a clear message to keep trash, debris, leaf litter and pollutants out of the storm sewer system. It also assists in discouraging illegal dumping and discharges. In cooperation with departmental staff the County has initiated marking storm drains located within the Cahaba River Basin. The County's goal is to mark each storm drain inlet located within the permit designated Basin area. County staff began the process of marking the storm drains in 2015 and will continue to mark and replace worn stickers on storm drains within the basin utilizing County staff and citizen alerts to replace or add stickers to visible drain inlets. The storm drain marking program shall be managed within the Development Services Department and made available to volunteers from various organizations including but not limited to scouting, community service groups, schools, and civic organizations.

The County is also working toward geo-referencing each storm drain and major outfall within the basin.

Providing markers on storm drains within the basin is a simple and direct way to remind the general public, contractors and lawn maintenance providers that materials entering the drain flow untreated to the local waterway. The target audiences are those individuals who will be working around storm drain inlets.

Figure 3-2
Storm Drain Marker

3.6.08 Reporting Hotline

In order to inform the public about what to report and how to report it, the County developed an educational pamphlet about storm water management that included, among other things, the storm water hotline information. The "hotline" shall be maintained for public reporting of suspected illicit discharges and improper disposal and to provide the public with general information regarding storm water. The primary contact for the hotline can be reported via eyes@shelbyal.com or by telephone at (205-669-3737) and is managed by Shelby County Environmental Services. The County will continuously work to update the storm water section of the County website which will include links to educational materials, storm water information and a link to report storm water concerns.

3.6.09 Other Public Involvement Initiatives and Special Projects

Shelby County will actively pursue new and innovative programs to educate and involve the public during the permit cycle and will work to implement programs that it believes are likely to be successful in the community.

The County will continue to engage the public in other special projects that may be initiated by the County or in coordination with watershed stakeholder groups (example: Alabama Cooperative Extension Service, Cahaba and Coosa River Keepers, etc.). This may include rain barrel workshops, hands on education about bio-retention facilities or other educational opportunities.

Figure 3-3
DIY Rain Barrel

3.7 Program Goals and Evaluation

Table 3-1 Public Education and Involvement –Program Goals				
Program Component	**BMP**		**Schedule**	**Responsible Department**
	Description	**Frequency**		
Local Partnerships	Participation with previous, existing and new partners	Continuous	Continuously work with partners to achieve results	Development Services
Public Education	Public Service Announcements	As needed based on topic and effectiveness	Reviewed and Reported Annually	Development Services
	Brochures, Posters, Literature	Continuous; Available at distribution sites and via website	Reviewed and Reported Annually	
Direct Mail	Postcards to target audiences	As needed based on topic and effectiveness	Reviewed and Reported Annually	Development Services
Website	Stormwater Information	Update as needed	Review and update frequently	Development Services
	Update brochures	Update as needed	Review annually	
	Low Impact Development Techniques	Update as needed	Review annually	
	Posted SWMP Plan	Update as needed	Review annually	
	MS4 Permit	Issued by ADEM every 5 years	Review during permit cycle	
	Post Annual Report	Annually	Reviewed and Reported Annually	
Public Involvement	Public Involvement	As needed	As Needed	Development Services
	Report and Issue (eyes@shelbyal.com)	Continuous	Reviewed and Reported Annually	

	Classroom Presentations	Track annually	Reviewed and Reported Annually	
	Recycling	Track Annually	Reviewed and Reported Annually	
	Public Events	Track Annually	Reviewed and Reported Annually	
	Water Festival	Annually	Reported Annually	
Program Evaluation	Evaluate program effectiveness	Annually	Reviewed and Reported Annually	Development Services

4.0 Illicit Discharge and Elimination (IDDE)

4.1 Introduction

The MS4 shall implement an ongoing program to detect and eliminate illicit discharges into the MS4 to the maximum extent practicable, as required by Part II.B.3 of the permit.

An illicit discharge is any discharge to the MS4 that is not composed entirely of storm water except for the following direct or indirect non-storm water discharges listed below.

4.2 Authorized Discharges

The following discharges are authorized in accordance with Part I.B.2 of the permit, unless they are determined to be a source of contamination:

- Water line flushing;
- Landscape irrigation (not consisting of treated, or untreated wastewater unless authorized by ADEM);
- Diverted stream flows;
- Uncontaminated ground water infiltration;
- Uncontaminated pumped groundwater;
- Discharges from potable water sources;
- Foundation and footing drains;
- Air conditioning drains;
- Irrigation watering (not consisting of treated, or untreated, wastewater unless authorized by ADEM);
- Rising ground water;
- Springs;
- Water from crawl space pumps;
- Lawn watering runoff;
- Individual residential car washing to include charitable car washes;
- Residual street wash water;
- Discharges or flows from firefighting activities (including fire hydrant flushing);
- Flows from riparian habitats and wetlands;

- De-chlorinated swimming pool discharges.

4.3 Program Administration

Shelby County Department of Development Services
1123 County Services Drive
Pelham, AL 35124

Consulting Engineer
Municipal Consultants, Inc.
200 Century Park South, Suite 212
Birmingham, AL 35226

4.4 Legal Authority

The County shall revise the Storm Water Management Ordinance to conform to this SWMPP and include enforcement procedures as listed in this plan. The ordinance shall be revised once ADEM has provided comments in the SWMPP.

4.5 Reporting Illicit Discharges

The public is encouraged to notify Shelby County Development Services of any suspected illicit discharges by either their website at the following link: www.shelbyal.com , by email at eyes@shelbyal.com or the Environmental Services office by telephone at (205-669-3737). Upon notification, an MS4 representative shall investigate the suspected illicit discharge using the procedures mentioned above.

Should the MS4 be alerted to or discover an illicit discharge of sanitary sewage, the MS4 shall notify the owner of the sewer system causing the illicit discharge so that it may be corrected as quickly as possible.

Should the County suspect an illicit discharge from an adjacent MS4 into the County's MS4, the County shall notify ADEM directly.

4.6 Staff Training

The County shall provide illicit discharge detection training on an annual basis to field personnel within the Shelby County Highway Department, building inspectors within the County's Development Services department, and all field personnel performing dry weather screening activities.

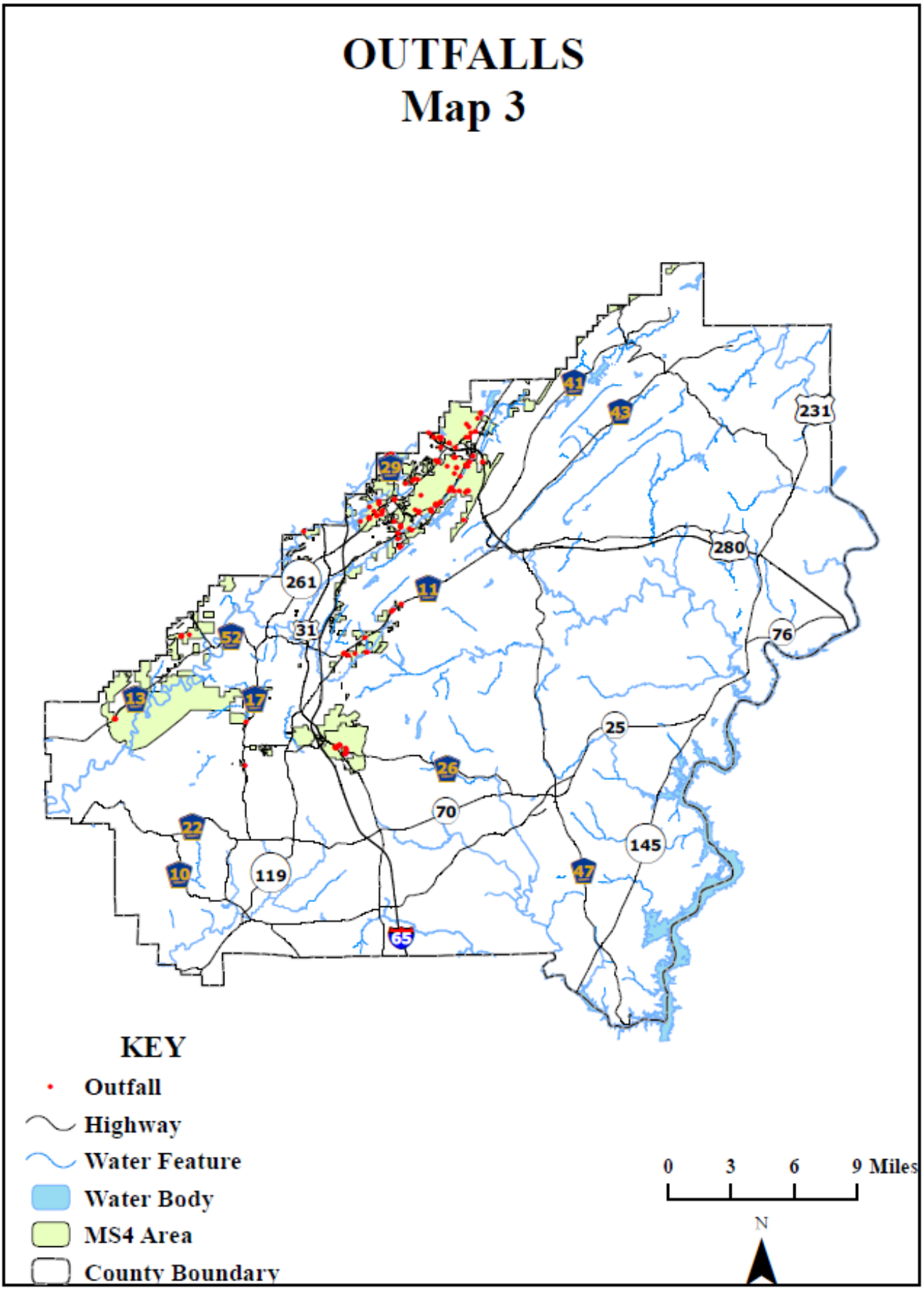
Training shall include identification, documentation, reporting, and corrective action of illicit discharges. Training shall also include a review of basic safety measures and precautions.

Training events shall be documented including, but not limited to, the date and duration of the training event, attendees, and items covered during the training event.

4.7 Outfall Inventory

The County shall develop and annually update a map of all known major storm water outfalls within the MS4. The current map provided as Map 3 is based on recent revisions to the historical MS4 mapping. Based on the recent revisions, there are currently 174 known major outfalls in the project area. A list of these outfalls is located in Appendix 3. It should be noted that this list will be continually revised as annual dry weather screening and outfall mapping is performed.

OUTFALLS
Map 3



4.8 Outfall Screening

4.8.01 Schedule to Screen Outfalls

The County shall maintain a schedule to screen each known major storm water outfall within the MS4 at least once during the life of the permit, as required by the permit. During each year of the permit, the County shall screen a minimum of 15% of the total major outfalls. The minimum number of outfalls screened per year shall increase if more major outfalls are constructed or located. The screening schedule will vary from location to location depending on rainfall totals and seasonal accessibility. Priority outfalls as categorized below shall be inspected annually.

4.8.02 Priority Outfall Inspections Schedule

A dry-weather screening schedule for all known major outfalls within the MS4 shall be maintained by the County based on the priority system described below. This prioritized list will be compiled from any citizen complaints received and from all wet outfalls discovered during the dry-weather screening process. The priority system shall be based on the following criteria:

- All outfalls whose effluent contained more than 0.2 mg/l of MBAS;
- All outfalls with a pH less than 6 and greater than 8;
- All outfalls whose effluent contained more than 1 mg/l of NH3N or 4.0 mg/l of oil and grease;
- All outfalls whose effluent contained more than 126 colonies/100 mL of E. Coli; and
- All outfalls whose effluent contained more than 10 mg/L of potassium.

The resulting list of outfalls shall be prioritized according to flow rate, with the highest flow rates receiving top priority.

As stated above, priority outfalls shall be screened annually.

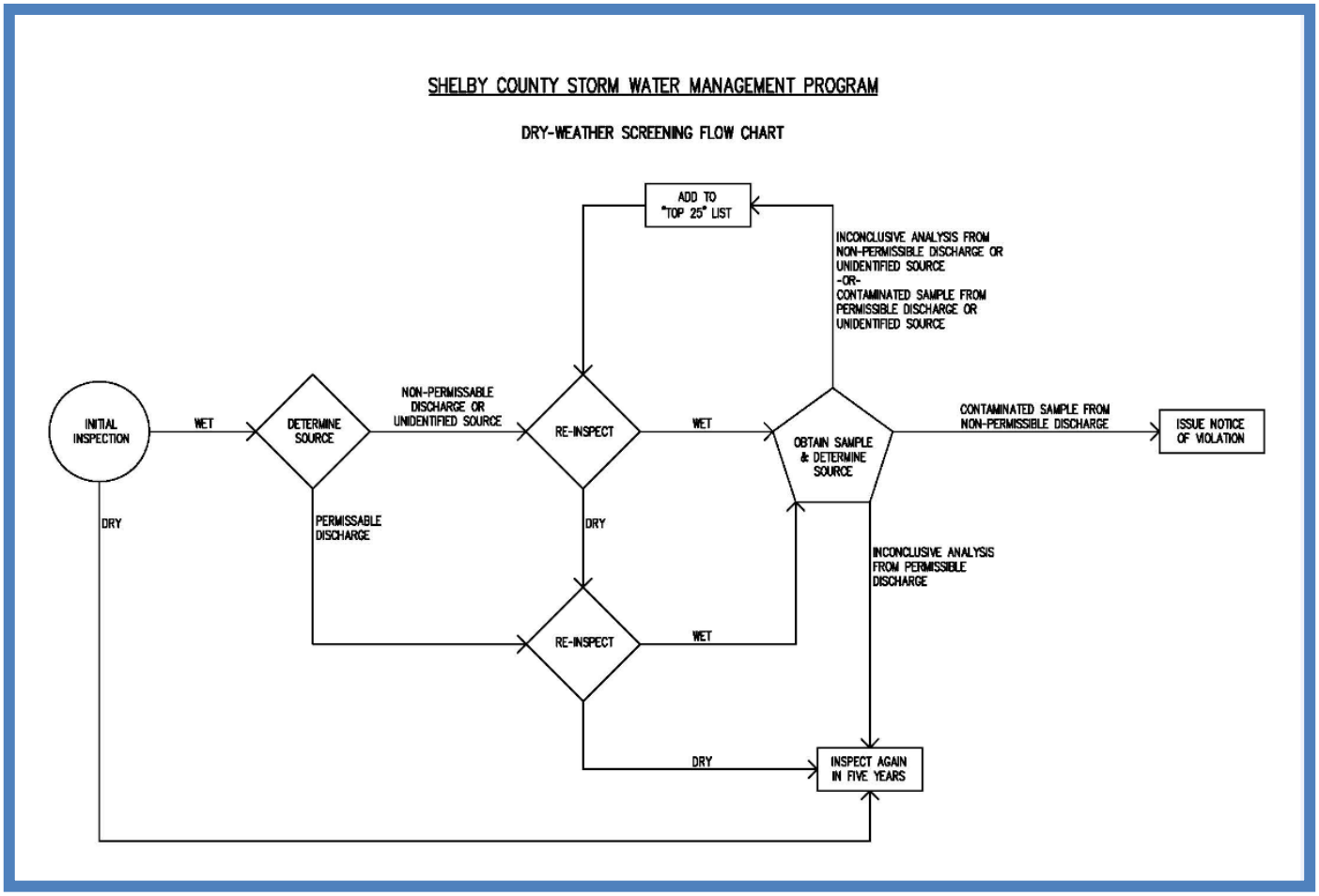
4.8.03 Dry-Weather Screening Procedures

The County shall use the EPA guidance manual, *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments* by the Center for Watershed Protection, as the primary source of investigative techniques and guidance for the MS4's dry weather screening program. This manual has been incorporated as Appendix 4 within this SWMPP.

Screening procedures shall consist of field locating the selected outfalls to be screened for the given year through the use of the MS4 outfall inventory and

map. Outfalls shall be inspected after a minimum of 72 hours of dry weather. A field data sheet shall be filled out for each major outfall encountered by the field crew. Should an outfall be found discharging liquid, the source of the liquid shall be investigated and traced upstream in an effort to determine the source. If the source is unidentifiable or suspected to be illicit, a water sample shall be collected for MBAS, pH, ammonia, potassium, oil and grease, and E. Coli. as listed above. Based on the laboratory analysis of the sample, the outfall shall be prioritized and scheduled for further investigation as needed. A flow chart depicting the screening and investigative process is presented as Figure 4-1. A copy of the field data sheet used for screening outfalls is presented as Appendix 5.

Figure 4-1



4.9 Locating and Removing Illicit Discharges

Once an illicit discharge has been confirmed, by determining the source and collecting samples, the County shall take appropriate actions as needed to eliminate the illicit discharge as described in the “Enforcement” section of this program plan.

Additionally, the County shall limit, to the MEP, the contamination of the MS4 by sanitary sewage. The two primary sources of contamination are sanitary sewage collection systems and septic tanks. Exfiltration from old or damaged sewer collection systems can contaminate storm water drainage systems that are located nearby. In addition, malfunctioning septic tank systems may cause partially treated wastewater to pool on the ground surface and to possibly flow into the storm water drainage system.

This type of contamination shall be detected by physical inspection of the storm water drainage path and by chemical analysis of the runoff. Physical signs might include turbidity, floatables, temperature, color, and odor. The chemical analysis of runoff containing sanitary sewage might reveal high levels of E. Coli., NH_3N, and MBAS. The dry-weather screening program offers one method of detection for sanitary sewage contamination.

A major reduction, to the MEP, of the infiltration and inflow of seepage, sanitary sewage overflows, and bypasses from sanitary sewers into the MS4 can, however, only be accomplished through prudent operation of the local sewer collection system and individual on-site septic tank systems. The County does not currently own or operate any sanitary sewer treatment or collection systems.

The County shall, however, notify the appropriate sewer authorities of all potential sanitary sewage entering the MS4. For a majority of the MS4 receiving sewer collection service, the appropriate sewer authority is:

SouthWest Water Company
728 Volare Drive
Birmingham, AL 35244
(205) 987-8352

Individual on-site septic tank disposal systems are regulated by the Alabama Department of Public Health (ADPH). The County shall notify the following in the event that an illicit discharge is suspected from a failing on-site disposal system:

ADPH-Shelby County Environmental Department
2000 County Services Drive
Pelham, AL 35124
(205) 685-4178

All sanitary sewer infiltration and inflows, overflows, and illicit bypasses discovered by (or reported to) the MS4 shall be reported to the appropriate sewer authority as promptly as possible to reduce the possibility of contamination of the MS4. The County shall make an effort to coordinate with the Alabama Department of Public Health to locate and track existing on-site septic tank systems, particularly known problem areas. Additional educational BMPs (e.g. educational pamphlets) shall be implemented specifically targeting owners of on-site septic tank disposal systems within the MS4. These BMPs shall be relied on to facilitate proper operation and maintenance of individual on-site septic disposal systems.

The MS4 shall keep an updated record of all known raw sewage discharges that occur within the MS4 to better track illicit discharges within the MS4. This record shall be compiled annually by Shelby County Environmental Services for incorporation into the annual storm water report.

The following information shall be included in the record for each unpermitted discharge that occurs:

- The cause of the discharge:
- Date, duration, and volume of discharge (estimate if unknown);
- Description of the source (e.g. Manhole, lift station);
- Location of the discharge, by street address or any other appropriate method;
- The ultimate destination of the flow (e.g. surface waterbody, municipal separate storm sewer to surface waterbody) shown on a USGS quad sheet or copy thereof; and
- Corrective actions or plans to eliminate future discharges.

4.10 Enforcement

Procedures for enforcement shall be included in the revised Shelby County Storm Water Management Ordinance. This ordinance will be revised and incorporated as Appendix 1 of this SWMPP once the Department has reviewed and provided comments on this SWMPP and the final SWMPP is adopted. The Shelby County Storm Water Management Ordinance will be reviewed, at a minimum, annually to insure it is meeting the objectives of the program.

In general, if an illicit discharge is discovered, the discharger shall be provided a written notice of violation. The discharger shall have 10 days upon receipt of this notice to correct the illicit discharge and provide an explanation of the violation and a plan and schedule for the satisfactory correction and prevention of the illicit discharge.

After response from the discharger or 10 days (whichever comes first), the MS4's representative shall ensure that the discharger has ceased the illicit discharge into the MS4. If the illicit discharge continues, a second notice of violation shall be sent to the discharger which shall include notification to the discharger of subsequent penalties, as determined by the MS4. A copy of the second notice shall also be provided to ADEM for their records.

The proposed revised ordinance shall have provisions for fines as well as compensatory action (in lieu of fines), which could include, but not be limited to, attendance of storm water educational workshops, creek cleanups, etc. Additionally, the proposed revised ordinance shall have provisions for the violator to appeal the notice of violation.

4.11 Program Goals and Evaluation

Table 4-1
Illicit Discharge Detection and Elimination –Program Goals

Program Component	BMP		Schedule	Responsible Department
	Description	Frequency		
Legal Authority	MS4 permit and Storm Water Management Ordinance	Update as needed	Permit issued every 5 years; Ordinance reviewed annually	Development Services
Outfall Inventory	Outfall Inventory and Evaluation Schedule	Update as needed	Reviewed Annually	Development Services
	Outfall evaluation and inspection form	Update as needed	Reviewed Annually	
	Outfall map	Update Annually	Reviewed Annually	
	Outfall evaluation and screening	Updated as needed	Reviewed Annually	
	Evaluate priority areas for additional screening	Updated as needed	Reviewed Annually	
Illicit Discharges	Complaint tracking system	Update as needed	Reviewed Annually	Development Services
	Illicit Discharge and inspection form	Update as needed	Reviewed Annually	
Program Evaluation	Evaluate program effectiveness	Annually	Reviewed and Reported Annually	Development Services

5.0 Construction Site Storm Water Runoff

5.1 Introduction

The Shelby County Construction Site Storm Water Runoff Control Program is designed to reduce, to the maximum extent practicable, pollutants from construction sites. The program incorporates an administrative process, legal authority, staff training, and public outreach to address potential pollutants from construction activity and land disturbance activity.

The approach of the program stems from an understanding of phased construction activity and associated potential pollutants. Pollutants derived from general construction activity include, but are not limited to, the following:

- Solid Waste/Litter - General litter, construction materials such as textiles, and other floatables that can be conveyed by a combination of wind and storm water runoff. These pollutant sources can be associated with all phases of construction.
- Sediment – Sediment conveyance associated with clearing and grading, soil stock piles, foundation/tank excavation, construction entrances/exits, and undeveloped areas can be associated with all phases of construction.
- Wash out water - Concrete/Mortar wash out areas. Paint, solvent, chemical wash out water. These pollutants are typically associated post clearing and grading phases of construction.
- Pesticides, herbicides, and fertilizers – These chemical applications typically are associated foundation termite treatments and establishing vegetation.
- Onsite Fuel Storage – Temporary above-ground fuel tanks and ancillary gas cans are often associated with heavy equipment and long-term industrial/commercial projects.
- Sanitary waste – Sanitary facility availability and maintenance is required through all phases of construction.

The program relies on and is structured around the guidance found in the following documents:

- *Alabama Handbook for Erosion Control, Sediment Control, and Storm Water Management on Construction Sites and Urban Areas, Alabama Soil and Water Conservation Committee*, July 2018.
- *Developing Your Storm Water Pollution Prevention Plan, A Guide for Construction Sites, United States Environmental Protection Agency*, May 2007.

5.2 Program Administration

The Construction Storm Water Runoff Control Program is implemented through the Shelby County Department of Development Services and the Shelby County Department of Environmental Services. The Department of Development Services includes the Planning Services Department and Inspection Services Department who review construction plans, permit, and inspect all construction addressed by the International Code Council International Building Code (IBC) and International Residential Code (IRC) and National Electrical Code (NEC). The jurisdiction of the Department of Development Services, responsible for planning/zoning and construction permitting, supersedes the entire MS4 boundary area to include all of unincorporated Shelby County and seven municipalities through contractual agreement. For infrastructure projects that are outside the jurisdiction of building and electrical codes, the Shelby County Highway Department, in coordination with the Department of Environmental Services, manage, conduct plan reviews and inspect construction projects pertaining to transportation infrastructure.

5.3 Legal Authority

Act No. 95-775, Legislature of Alabama – 11-89C-1 – 14, Code of Alabama 1975, and other provisions thereof, grants the legal authority to set up a local storm water management program, with the associated ordinance and fees, to "the governing bodies of all Class 1 Municipalities with the state and the county governing bodies in which the Class 1 municipalities are located and the governing bodies of all municipalities located within those counties, and where any such municipality is also located partially within an adjoining county, then the governing body of such adjoining county." Among other privileges, the Legislature granted the legal authority to: (1) control discharges and prohibit discharges to and from those portions of the MS4 over which it has jurisdiction, (2) control spills that may pose a threat to the MS4, (3) have interagency agreements, (4) require compliance with applicable local, state, and federal laws, and (5) perform inspections on private property to investigate sources of illicit discharges to the MS4. This legal authority was utilized by the County to develop and adopt the Shelby County Ordinance No. 98-09-28-8.

The current ordinance requires and encourages responsible land disturbing activity, to the maximum extent practicable, through the following low impact development and BMP criteria:

- Stripping, re-grading, clearing, and grubbing shall be conducted so as to minimize erosion, minimize area of disturbance, and sequenced to minimize exposure time cleared surface area;
- Land owners shall be responsible to stabilize sustainable slopes that will not erode through such methods as re-vegetation, mulching, rip-rap and gunite with both erosion and maintenance in mind;

- As feasible, developers shall retain, protect, and supplement natural vegetation buffers to natural drainage ways and to maintain natural stream pathways;

- Permanent or temporary soil stabilization shall be applied to disturbed areas to the extent feasible within seven days on areas that will remain unfinished for more than thirty calendar days. Permanent soil stabilization with perennial vegetation shall be applied as soon as practicable after final grading is completed on any portion of the site;

- A permanent vegetative cover shall be established on disturbed areas not otherwise permanently stabilized;

- To the extent necessary, sediment in runoff shall be trapped by the use of sediment basins, silt traps, or similar BMPs until the disturbed area is stabilized;

- Erosion and sediment BMPs shall be in place and functional before earth moving operations begin and maintained throughout the period of construction;

- Structural controls shall be designed and maintained as required to prevent pollution. Runoff shall be diverted by using berms, channels, or sediment traps as necessary. Erosion and sediment control measures shall be designed according to the size and slope of disturbed and/or drainage areas to effectively detain runoff and trap sediment;

- All control measures shall be checked and repaired as necessary; and,

- Construction site runoff shall contain no floatables, scum, oil, cause objectionable color change, or contain concentrations of any constituent considered detrimental.

5.4 Program Implementation

All construction activity and land disturbance activity, that is not otherwise exempt from permitting, is reviewed, permitted, and inspected, by the Shelby County Department of Development Services. All permit applicants are provided with an information packet that explains the storm water ordinance (98-09-28-8) mandates and procedures. The Construction Storm Water Runoff Program has been incorporated into the planning/zoning and building inspections as a seamless effort.

The primary objectives of the Construction Storm Water Runoff Program are as follows:

- Require qualifying construction sites to obtain coverage under ADEM NPDES General Permit ALR10000 or other applicable NPDES permit;

- Require to the extent allowed by law and ordinance effective sediment and erosion control;
- Require control of waste including building materials, concrete washout, chemicals, litter, and sanitary waste associated with construction that may potentially adversely impact water quality;
- Implement plan review procedures to ensure erosion and sediment controls are consistent with the Alabama Handbook for Erosion Control. Plan reviews may prioritize sites by size and proximity and shall consider all potential water quality impacts;
- Facilitate public reporting of complaints regarding pollution of discharges from construction sites; and
- Inspect construction sites for proper implementation and maintenance of BMPs and adherence to the previously reviewed CBMP Plan. Inspections occur as follows:
    - Minimum Monthly Inspections shall be conducted on the following:
        - Priority Construction Sites or Qualifying Construction Sites within the MS4 that drain to receiving waters identified on most recent 303(d) list of impaired waters or has a TMDL for turbidity, siltation, or sedimentation or identified as an Outstanding Alabama Water or a special designation per 335-6-10-10.
        - Sites identified to be significant threat to water quality, as determined by the Permittee or Permitting Authority based on factors including soil erosion potential, site slope, project size and type, sensitivity of receiving water, proximity to receiving water, non-storm water discharges, and past record of compliance.
    - Minimum Bi-Monthly (every two months) Inspections shall be conducted on the following:
        - Construction sites not meeting the criteria specified above.

5.5 Plan Review

Site plan and construction best management practice (CBMP) plan reviews are conducted by the Planning Services Department within the Department of Development Services. This department includes certified planners, certified flood plain managers and qualified credentialed inspectors. For land disturbance activity greater than one acre or part of a larger common plan greater than one acre, proof of permitting by ADEM under the NPDES General Permit ALR10000 or other applicable permit and copy of the CBMP plan is required prior to construction permit approval. All construction sites not previously permitted by ADEM undergo site plan and CBMP plan review that include the following:

- Site evaluation, assessment, and planning:
  - Project information -responsible operators and location;
  - Site information - size, soils, pervious/impervious area, and slopes;
  - Receiving Waters - sensitivity, proximity, and buffers;
- Erosion and Sediment Control BMPs:
  - Minimizing disturbed areas, sequencing of construction;
  - Stabilizing soils and slopes;
  - Protection of drain inlets and work area boundary for sediment retention on-site;
  - Establishing construction exits;
- Good Housekeeping BMPs:
  - Waste management – solid and sanitary waste;
  - Material storage – materials staging, stockpiles, and chemical/fuel storage;
  - Washout areas – concrete, mortar, and paint;
  - Equipment – wash down and fueling

5.6 Inspections

All permitted construction activity is inspected through the Inspection Services Department within the Department of Development Services. This department currently consists of certified construction inspectors, qualified credentialed inspectors, and a qualified credentialed professional. Inspection Services is made up of inspectors each dedicated to one of three primary disciplines building; plumbing, mechanical, and gas; and electrical. Inspection of erosion/control and good housekeeping BMPs are an integral part of every inspection conducted by this department.

The different types of construction inspections conducted include:

- Footing/Foundation
- Slab/Monolithic Footing
- In-Slab Plumbing
- Temporary Power
- Rough Plumbing
- Rough Mechanical
- Rough Gas
- Rough Gas Vent
- Rough Electrical
- Framing
- Energy
- Final Plumbing
- Final Mechanical
- Final Gas
- Final Gas Vent
- Final Electrical
- Final Building

In addition to the evaluations conducted by Inspection Services, the Land Development Inspector conducts inspection of land disturbance activity prior to an inspection request from a Contractor. Planning Services conducts a weekly meeting in which construction status and schedule is discussed and on-site inspections are scheduled through the Planning Services Department.

5.7 Enforcement

If in the course of inspections it is determined that BMP maintenance or implementation is required or prohibited discharge or other violation has occurred, the Land Development Inspector is notified and in coordination with the Department Manager initiates an escalating enforcement procedure. The typical course of action is as follows:

- The Land Development Inspector makes a site visit and documents the correction.

- The Land Development Inspector contacts the responsible operator to discuss abatement of the correction and schedule for corrective measures.
- The Land Development Inspector will return on-site to ensure and document remediation of the correction has occurred and is sufficient.
- If the responsible operator is not unwilling to take corrective action in a timely fashion, the Land Development Inspector will place a “Stop Work Order” on the project. This notice is posted on-site and notifies all Contractors that it is illegal to proceed with work on this project.
- If the responsible operator continues to refuse to take corrective action measures administrative order, civil penalty, and legal action will proceed as mandated in the Storm Water Ordinance 98-09-28-8.

5.8 Program Goals and Evaluation

Table 5-1 Construction Site Runoff –Program Goals				
Program Component	**BMP**		**Schedule**	**Responsible Department**
	Description	**Frequency**		
Legal Authority	MS4 permit and Storm Water Management Ordinance	Update as needed	Permit issued every 5 years; Ordinance reviewed annually	Development Services
	Subdivision Regulations	Update as needed	Reviewed Annually	
Permitting	SOP	Update as needed	Reviewed Annually	Development Services
	Building Permit Application	Update as needed	Reviewed Annually	
	Tracking System	Update as needed	Reported Annually	
	Permit Review Checklist	Update as needed	Reviewed Annually	
Plan Review	SOP	Update as needed	Reviewed Annually	Development Services/Environmental Services/Highway Department
	Review checklist	Update as needed	Reviewed Annually	
	CBMP Plan Requirements	Update as needed	Reviewed Annually	
	Case Number and type of plan reviewed	Annually	Reported Annually	
Inventory	Construction Site Inventory	Update as needed	Reported Annually	Development Services
Inspections	SOP	Update as needed	Reviewed Annually	Development Services

	Inspection form	Update as needed	Reviewed Annually	
	Track number and type of inspections	Annually	Reported Annually	
Enforcement Actions	Track Number and type	Annually	Reported Annually	Development Services
Training & Education	QCI Training	Annually	Reported Annually	Development Services
	Website Education Materials	Update as needed	Reviewed Annually	
Program Evaluation	Evaluate Program Effectiveness	Annually	Reviewed and Reported Annually	Development Services

6.0 Post-Construction Storm Water Management in New Development and Re-Development

6.1 Introduction

Post construction storm water management involves the implementation of structural and/or non-structural BMPs, including low-impact development practices, to provide permanent storm water management over the life of a property's use. It is important to recognize that not all BMPs are suitable for every site. The County shall evaluate and identify BMPs that are suitable for this area and are within the County's regulatory control. The following sections will generally describe BMPs that have been or shall be considered.

6.2 Program Administration

The Shelby County Department of Development Services will administer the Post-Construction Storm Water Management in New Development and Re-Development for the Shelby County MS4 permit area.

6.3 Legal Authority

Shelby County utilizes zoning regulations and subdivision regulations that have been adopted by both the Shelby County Planning Commission and the Shelby County Commission as the basis for design criteria for developments within the Shelby County MS4 permit area. In addition, Shelby County ensures the requirements of the Municipal Separate Storm Sewer System (MS4) Phase I NPDES Permit Number ALS000008 are implemented to the maximum extent practicable as it pertains to the Post-Construction Storm Water Management in New Development and Re-Development within the permit area.

6.4 Planning and Regulations

6.4.01 Development Regulations

The County has developed a Comprehensive Plan that evaluates the existing land uses, development patterns, redevelopment patterns, and natural resources within the County. The County's zoning regulations and subdivision regulations provide a mechanism to implement a post-construction storm water management program. Non-structural BMPs include but are not limited to the following:

- Design standards;
- Plan review and approval procedures;
- Post construction BMP evaluation and inspection procedures; and,

- BMP maintenance requirements.

6.4.02 Subdivision Regulations

The County has adopted subdivision regulations that contain provisions to address the quantity and quality of post development storm water runoff, stream bank buffers and land disturbance activities. These provisions intend to address the following:

- Protect people and property from the hazards of flooding and excess storm water run-off, and to mitigate future risks of damage associated with the division and development of land;
- Minimize the amount of impervious surfaces directly connected to storm water systems, and establish infiltration into the ground water as the preferred treatment strategy;
- To allow more flexibility in the design of development patterns and sites to promote more regional or watershed-based solutions to storm water management;
- Reduce the amount of runoff entering the storm water system and, alternatively, into the natural wetlands;
- Reduce the speed of flow of runoff that enters the storm water system and into natural wetlands;
- Reduce the pollutant and sediment levels in runoff that enters the storm water system and into the natural wetlands;
- To develop a storm water system that reduces the quantity and speed of flow entering natural wetlands;
- To encourage creative designs and development patterns that allow land areas to perform multiple functions in terms of landscape design, flood hazard mitigation, open space and recreation and storm water treatment, allowing for more efficient development of parcels, blocks, and lots;
- To preserve the water quality and environmental integrity of the Cahaba River and its 1st, 2nd and 3rd order streams through stream buffer zone requirements that include maintenance, management and restrictions;
- To protect those area subject to severe erosion, and off-site areas which are vulnerable to damage from erosion and/or sedimentation;
- To plan for erosion control before and after land disturbing activities commence;

- To limit exposed areas to the shortest feasible time and to minimize the size of the area to be exposed at any one time;
- To control surface water runoff, regardless of source, to reduce erosion and sediment loss; and,
- To minimize accelerated erosion off development sites.

6.4.03 Low Impact Development

The County shall encourage landowners and developers to incorporate the use of low impact development (LID) into development plans. Shelby County Department of Development Services encourages the use of the *Low Impact Development (LID) Handbook for the State of Alabama* to evaluate and determine which LID practices may be most appropriate for use within a project within the MS4 permit area.

6.5 Program Components

The Post-Construction Storm Water Management in New Development and Re-Development program will require developers and landowners to submit for review and maintain BMPs, to consider low impact development techniques, provide as-built BMP certifications and annual performance reports and inspection records, and provide adequate mechanisms to ensure long-term operation and maintenance of BMPs. Shelby County will enforce post construction BMPs at all new and redevelopment projects as part of the *Zoning Regulations of Shelby County*, *Subdivision Regulations of Shelby County*, and *Shelby County Storm Water Management Ordinance*.

6.6 Program Goals and Evaluation

Table 6-1
Post Construction Storm Water Management –Program Goals

Program Component	BMP		Schedule	Responsible Department
	Description	Frequency		
Legal Authority	MS4 permit and Storm Water Management Ordinance	Permit renewed every 5 years by ADEM; Ordinance updated as needed	Permit issued every 5 years; Ordinance reviewed annually	Development Services
	Zoning Regulations	Update as needed	Reviewed as needed	

	Subdivision Regulations	Update as needed	Reviewed as needed	
Post Construction BMPs	Evaluate and Identify BMPs and LID Practices	Update as needed	Review on each qualifying project	Development Services
	Design Requirements	Update as needed	Review on each qualifying project	
	Plan Review Procedures	Develop and Update as needed	Review Annually	
	Review checklist	Update as needed	Review Annually	
	Inventory of Post BMPs	Develop and Update as needed	Review Annually	Development Services
	Maintenance requirements	Develop and Update as needed	Review Annually	Development Services
	As-Built Certifications	Develop and Update as needed	Require on each qualifying	Development Services
Inspections	Develop SOP	Develop and Update as needed	Review Annually	Development Services/Highway Department
	Tracking System	Develop and Update as needed	Review Annually	
	Track number and type of inspections	Annually	Report Annually	
Training & Education	Evaluate Training Needs	Annually	Review Annually	Development Services
	Identify Training sources	Annually	Review Annually	
	Conduct/participate in training	Annually	Review and Report Annually	
Program Evaluation	Evaluate Program Effectiveness	Annually	Review and Report Annually	Development Services

7.0 Spill Prevention and Response

7.1 Introduction and Program Administration

The Shelby County Emergency Management Agency (SCEMA) shall fulfill the spill response requirements of the storm water management permit. SCEMA plans and coordinates the immediate response to spills for the protection of the environment and residents in the event of a major spill.

Notification and/or inquiries can come through direct contact (911, in-person, phone, web/social media, or email) to SCEMA staff. In coordination with the SCEMA, the local emergency operation center, fire departments, and private contractors (when needed) assist in responding to a spill.

In the case of minor spills in the permit area of Shelby County, SCEMA shall coordinate the necessary clean-up efforts with the local fire departments and the Shelby County Highway Department to minimize the effects on the MS4.

7.2 Program Goals and Evaluation

Records of spill events and the responses are on file in the SCEMA office and activities are reported as part of the MS4 annual report to ADEM.

Table 7-1
Spill Prevention and Response –Program Goals

Program Component	BMP		Schedule	Responsible Department
	Description	Frequency		
Spill Prevention	Facility Inventory	Update as needed	Reviewed Annually	EMA
	Facility Inspections	Annually	Reviewed Annually	
	SPCC Plans	Update as needed	As needed	
	Training	Annually	Annually	
Spill Response	Petroleum Leaks and Spill guideline	Update as needed	As needed	EMA
	Non-hazardous Spill Response	Track Spills/year	Reported Annually	
	Hazardous Spill Response	Track Spills/year	Reported Annually	
	Spills Entering MS4	Track Spills/year	Reported Annually	
	Training	Annually	As needed	
	Map of all spill locations	Annually	Reported Annually	EMA/ Development Services
Program Evaluation	Evaluate Program Effectiveness	Annually	Review and Report Annually	EMA

8.0 Pollution Prevention/Good Housekeeping for Municipal Operations

8.1 Introduction

Shelby County is committed to reducing or preventing the discharge of pollutants in storm water run-off from municipal operations to the maximum extent practicable. Due to the residential nature of the MS4 permit area and void of urban settings, many items that apply to larger Phase I MS4s do not apply to the permit area. Shelby County maintains an active litter removal program from the rights-of-ways of roadways and parks within the MS4 permit area. Shelby County does not have any municipal operations that perform fleet maintenance, house external building maintenance equipment, equipment washing, chemical storage, or aggregate storage of county equipment within the Shelby County MS4 permit area. The storage and maintenance of the county fleet is located in the Coosa River basin in Columbiana, Alabama and not within the permit area of the MS4. Additionally, all waste materials are transported to the Shelby County Landfill or to a recycling facility outside the MS4 permit area.

8.2 Program Administration

The Shelby County Department of Development Services will administer the Pollution Prevention/Good Housekeeping for Municipal Operations for the Shelby County MS4 permit area with assistance from the Shelby County Facilities and General Maintenance Department and the Shelby County Highway Department.

8.3 Municipal Facility Inventory

Shelby County does not have any formal municipal facilities within the Shelby County MS4 permit area. Shelby County does manage, operate, and maintain Heardmont Park and periodically stores small lawn maintenance equipment in a covered shed within the park. However, there are no fuel storage facilities or maintenance operations within the site. Shelby County does not own or operate any other municipal facilities within the permitted area.

8.4 Direct Trash Removal

Shelby County provides direct trash removal from the only municipal operation, Heardmont Park, within the permitted MS4 area. Shelby County Facilities and General Services operate daily crews that remove trash generated by the users of the park and surrounding areas. The waste is hauled to a disposal or recycling facility located outside the permitted MS4 area. These Shelby County maintenance crews work at the park a minimum of 5 days per week. Shelby County Department of Development Services utilizes up to three right-of-way road crews to directly pick up and remove trash from the roadways within the MS4 permit area. These crews are typically staffed with one supervisor and a 1-

3 person crew. In addition to direct trash removal, Shelby County Department of Development Services also operates a street sweeper. The Heardmont Park facility also offers large recycle bins to allow the general public to have an alternative method of discarding recyclable materials. Materials are transported to a facility outside the MS4 permitted area.

8.5 Public Right of Ways and Roads

In order to prevent trash from motorists, Shelby County Department of Development Services utilizes up to three right-of-way road crews to directly pick up and remove trash from the roadways within the MS4 permit area. These crews are typically staffed with one supervisor and a 1-3 person crew. In addition to direct trash removal, Shelby County Department of Development Services also operates a street sweeper. Information regarding the program can be found at www.shelbyal.com , requests can be emailed to eyes@shelbyal.com or communicated via telephone at 205-669-3737. Records of volumes of right-of way trash and street sweeping materials removed from the MS4 permitted area are reported annually as part of the annual report to ADEM.

8.6 High Traffic Trash Receptacles and Maintenance

Shelby County provides direct trash removal from the only municipal operation, Heardmont Park, within the permitted MS4 area. Shelby County Facilities and General Services operate daily crews that remove trash generated by the users of the park and surrounding areas. The waste is hauled to a disposal or recycling facility located outside the permitted MS4 area. These Shelby County maintenance crews work at the park a minimum of 5 days per week.

8.7 Standard Operating Procedures

Procedures for Pollution Prevention/Good Housekeeping for Municipal Operations as it pertains to direct trash removal, right-of-way trash removal, street sweeping, and maintenance of Heardmont Park are written and maintained by the Shelby County Department of Development Services.

8.8 Training and Education

Training for county staff for each aspect of the program is performed periodically and documented based on the activity. Training is performed to cover SOP, the MS4 program, and other practices that help prevent pollution from entering the storm water.

8.9 Flood Management Projects

Shelby County will assess the water quality impacts for any flood management projects owned, operated, or the responsibility of Shelby County. These projects will be evaluated annually to determine the feasibility of retro-fitting or designing structural controls to provide additional pollutant removal from the storm water. Currently there are no flood management projects within the MS4 permit area.

8.10 Program Goals and Evaluation

Table 8-1 Pollution Prevention and Good Housekeeping of Municipal Operations –Program Goals				
Program Component	**BMP**		**Schedule**	**Responsible Department**
	Description	**Frequency**		
County Facilities	Inventory	Update as needed	Reviewed Annually	Development Services
SOPs	Street Repair and Maintenance	Update as needed	As required	Highway Department
	Herbicides and pesticides	Update as needed	As required	Highway Department/ Facilities and General Services
	Vehicle Fleets/equipment Maintenance and repair	Not performed within MS4 permit area	Reviewed Annually	All Departments
	Material storage facilities	Not performed within MS4 permit area	Reviewed Annually	Highway Department
	Equipment washing	Not performed within MS4 permit area	Reviewed Annually	Highway Department
Facility Inspections	County Facilities	Heardmont Park; No other locations within MS4 permit area	Reviewed Annually	Development Services/ Facilities and General Services
Roads	Road Inventory	Update as needed	As required	Highway Department
	Bridges Inventory	As required	As required	
	Update Resurfacing Plan	As required	As required	
	Street Maintenance	As needed	As required	
	Resurfacing	Track miles/ year	As required	
	Litter control	Volumes collected and reported in Annual Report	Monday-Friday	Development Services/ Highway Department
	Street Sweeping	Volumes collected and reported in Annual Report	As needed	Development Services
Training	Training Modules	Annually	Reviewed Annually	Development Services/ Highway Department
Program Evaluation	Evaluate Program Effectiveness	Annually	Reviewed Annually	Development Services

9.0 Application of Pesticides, Herbicides, and Fertilizers (PHFs)

9.1 Introduction

Shelby County is committed to reducing or preventing the discharge of pollutants in storm water run-off from the application of Pesticides, Herbicides, and Fertilizers by public employees and contractors to public rights-of-ways, parks, and public properties to the maximum extent practicable. Due to the residential nature of the MS4 permit area, void of urban settings, many items that apply to larger Phase I MS4s do not apply to the permit area. Shelby County utilizes educational materials and planned meetings with applicators to encourage reduction of materials applied within the MS4 permit area. The storage location of PHF materials applied by county operations is located in Columbiana, Alabama and not within the permit area of the MS4.

9.2 Program Administration

The Shelby County Department of Development Services will administer the Pesticides, Herbicides, and Fertilizers for Municipal Operations for the Shelby County MS4 permit area with assistance from the Shelby County Department of Facilities and General Services and the Shelby County Highway Department.

9.3 Program Components

Shelby County shall implement measures to ensure the proper application of pesticides, herbicides, and fertilizers. Shelby County primarily utilizes herbicides in rural areas as road right-of-way vegetation management. In order to minimize the amount of herbicide used, the County implements mowing practices. Within the MS4 jurisdiction, limited amounts of herbicide are applied by Shelby County to rights-of-ways for roadside maintenance. Application and mowing records are reported annually as part of the MS4 annual report to ADEM. The storage location of PHF materials applied by county operations is located in Columbiana, Alabama and not within the permit area of the MS4 where proper inventory and storage is maintained along with application equipment. Shelby County will require all applicators of pesticides and herbicides on municipal property contracted by Shelby County to maintain the proper certification and licensing. In addition, Shelby County will ensure that fertilizer applicators contracted by Shelby County are qualified in proper nutrient management practices.

9.4 Education and Outreach of PHF Use

Shelby County encourages the responsible use of pesticides, herbicides and fertilizers through educational campaigns. Education materials are available on the Shelby County website at www.shelbyal.com and distributed at various locations throughout Shelby County. Shelby County Department of Development Services hosts or participates in annual public education meetings for PHF applicators to discuss the MS4 program and prevention of pollutants into storm water from PHF application.

9.5 Program Goals and Evaluation

Table 9-1 Pesticides, Herbicides and Fertilizers –Program Goals				
Program Component	**BMP**		**Schedule**	**Responsible Department**
	Description	**Frequency**		
Facility Inventory	Inventory of known areas where high amounts of PHF's are applied	Update as needed	Reviewed Annually	Highway Department
	PHF Storage facility inventory	No municipal locations within MS4 permit area	Reviewed Annually	
	Facility Map	Annually	Reviewed Annually	Development Services/ Highway Department
Training	Employee Training	Annually	Reported Annually	Development Services/ Highway Department
Chemical inventory	Update PHF inventory at each municipal location	No municipal locations within MS4 permit area	Reviewed Annually	Highway Department/ Facilities and General Services
	Update MSDS at each location	No municipal locations within MS4 permit area	Reviewed Annually	
SOPs	Application	Update as needed	As needed	Highway Department/ Facilities and General Services
	Storage	Update as needed	As needed	
	Disposal	Update as needed	As needed	
	Equipment Maintenance	Update as needed	As needed	
Chemical Use	Summary by chemical of PHF's applied by municipal operations	Annually	Reviewed and Reported Annually	Highway Department/ Facilities and General Services
Program Evaluation	Evaluate Program Effectiveness	Annually	Reviewed Annually	Development Services

10.0 Oils, Toxics, and Household Hazardous Waste Control

10.1 Introduction

Shelby County is committed to reducing or preventing the discharge of pollutants in storm water run-off from Oils, Toxics, and Household Hazardous Waste from entering storm water to the maximum extent practicable. The storage location of Oils, Toxics, and Household Hazardous Waste materials generated by county operations is located in Columbiana, Alabama and not within the permit area of the MS4.

10.2 Program Administration

The Shelby County Department of Development Services with the assistance of the Shelby County Emergency Management Agency will administer the Oils, Toxics, and Household Hazardous Waste program for the Shelby County MS4 permit area.

10.3 Program Components

Shelby County Department of Development Services will make educational materials available to include proper use and disposal of Oils, Toxics, and Household Hazardous Waste in the MS4 permit area. A list of facilities and business within Shelby County that accept oils for recycling is maintained at www.shelbyal.com along with other applicable educational materials. To report spills or request information regarding disposal, the hotline can be reached via email, eyes@shelbyal.com, or communicated via telephone at 205-669-3737. The storage location of Oils, Toxics, and Household Hazardous Waste materials generated by county operations is located in Columbiana, Alabama and not within the permit area of the MS4 and training for handling, storing, and spill prevention of the materials will be performed by the applicable departments. A Household Hazardous Waste program will be reviewed annually in addition to providing a disposal location at the Shelby County Highway 70 Landfill in Columbiana, Alabama outside the MS4 permit area.

10.4 Program Goals and Evaluation

Table 10-1 Oils, Toxics and Household Hazards –Program Goals				
Program Component	**BMP**		**Schedule**	**Responsible Department**
	Description	**Frequency**		
Public Education	Website-locations for oil recycling	Update as needed	Reviewed at least Annually or as needed	Development Services/EMA
	Website-Educational Materials	Update as needed	Reviewed Annually	
	Report and issue (eyes@shelbyal.com)	Continuous	Reviewed and Reported Annually	
County Facilities	Facility Inventory	No municipal locations within MS4 permit area	Reviewed Annually	Development Services/EMA
	SPCC plans	No municipal locations within MS4 permit area	Reviewed Annually	
Training	Training Modules: Oil, Toxics, Household Hazardous Waste Control Training Workshops	Annually	Reviewed and Reported Annually	Development Services/EMA
Collection	Quantities of Household Hazardous Waste and Used Oil Collected	Annually	Reviewed and Reported Annually	Development Services/EMA
Program Evaluation	Evaluate Program Effectiveness	Annually	Reviewed Annually	Development Services

11.0 Industrial Storm Water Runoff

11.1 Introduction

The purpose of Shelby County's Industrial Storm Water Runoff monitoring program is to reduce pollutant loadings and improve the quality of storm water runoff discharged from specific areas into the local waterways. Due to the residential nature of the Shelby County MS4 permit area, the listing of industrial facilities will include commercial facilities that service vehicles, distribute fuels, or provide a potential for storm water contamination.

11.2 Program Administration

The main objectives of Shelby County's Storm Water Management Plan (SWMP) are to:

- Identify Pollutant Sources – Locate actual and potential sources of pollution that could affect storm water discharges, and how they were identified;
- Control the Sources – Establish practices and controls to prevent or effectively reduce pollution in storm water discharges, ensuring compliance with the general permit;
- Document the Control Methods – Describe how the selected practices and controls are appropriate for the facility and how they effectively prevent or reduce pollution; and,
- Integrate Pollution Prevention – Discuss how controls and practices relate to each other in an integrated, facility-wide approach to pollution prevention.

11.3 Standard Operating Procedures

Shelby County is considered a Phase I community under the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit. As a requirement of the MS4 permit for Shelby County, we must implement a program to inspect, monitor and control pollutants in storm water runoff to the area covered by the MS4 permit. A major component of the Shelby County Storm Water Management Plan (SWMP) is the development and implementation of an Industrial Storm Water Runoff Program. Under this permit, Shelby County does the following:

- Performs annual inspections of municipal waste landfills, hazardous waste treatment, storage, disposal (TSD) and recovery facilities located within the MS4 permit area;
- Performs annual inspections, at a minimum, of industrial facilities and high-risk commercial facilities that do not have an NPDES permit issued by ADEM as outlined in the SWMPP; and,
- Data collected by an NPDES permitted facility may be used to satisfy the monitoring requirements of an NPDES, State, land application or local pretreatment discharge permit may also be used to satisfy Part II.B.10.a of the Permit. Shelby County may also require the facility to conduct self-monitoring to satisfy this requirement, if necessary.

11.4 Facility Inventory

Shelby County maintains a list of the Industrial and High-Risk facilities that are being monitored. This list is updated annually from information provided by the County Tax Assessor's GIS database and records from Tier II EPCRA reporting to the Shelby County Emergency Management Agency. Currently there are no municipal waste landfills or hazardous waste treatment, storage, disposal, and recovery facilities located within the Shelby County MS4 permit area.

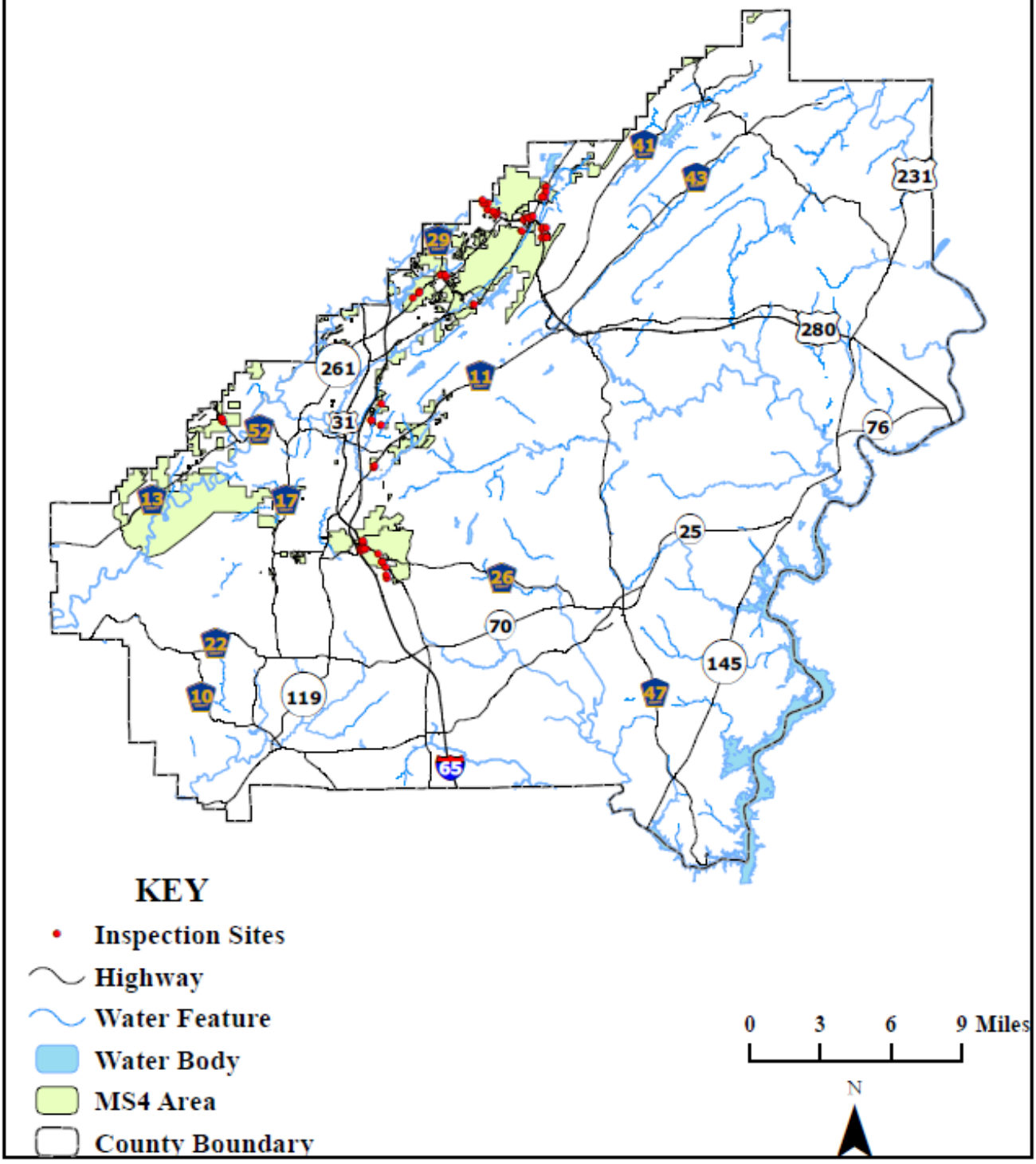
11.5 Facility Inspections

Each year, Shelby County personnel conduct site inspections of the listed Industrial and High-Risk Runoff sites. Copies of the inspection results are provided in the MS4 Annual Report. As part of the inspection, the inspector will:

- Meet with the facility's designated representative;
- Confirm the physical address and other contact information;
- Provide a general description the nature of work performed at the facility and any significant materials or chemicals that may be stored on site;
- Evaluate the effectiveness of any BMPs in place to reduce pollutant loadings and whether additional measures may be needed, such as waste disposal containers;
- Confirm the presence of equipment needed to implement storm water management, such as spill response equipment;
- Verify the presence of storm water management documents and records, such as Material Safety Data Sheets (MSDS);
- Observe drainage areas and outfalls for the presence of non-storm water discharges (illicit discharges);
- Discuss options and alternatives for good housekeeping and BMPs;

- Verify facility inspections and training of key employees;
- Include area and site maps, aerial photographs and site photographs; and,
- Record the site observations and information collected on the County's Storm Water Discharge Inspection Form. A copy of this form is attached as Appendix 6.

INDUSTRIAL INSPECTIONS Map 4



11.6 Program Goals and Evaluation

Table 11-1 Industrial Storm Water Runoff –Program Goals				
Program Component	**BMP**		**Schedule**	**Responsible Department**
	Description	**Frequency**		
Legal Authority				Development Services
SOPs	Facility Inspections	Update as Needed	Reviewed Annually	Development Services
Facility Inventory	NPDES Permitted Facilities	Annually	Reviewed Annually	Development Services
	County Facilities	No current county facilities	Reviewed Annually	
	MSW Disposal or Hazardous Waste Treatment, Storage, Disposal, and Recovery Facilities	None currently located within the MS4 permit area	Reviewed Annually	
	Commercial Facilities	Annually	Reviewed Annually	
	Industrial Facilities	Annually	Reviewed Annually	
Facility Inspections	Facility Inspection Form	Update as needed	Reviewed Annually	Development Services
	NPDES Permitted facilities	Annually if applicable	Reported Annually	
	County Facilities	No current county facilities	Reviewed and Reported Annually	
	Commercial Facilities	As needed	Reported Annually	
	Industrial Facilities	Minimally once per year	Reported Annually	
Training	Training	Update/ 2 years	Reported Annually	Development Services
Program Evaluation	Evaluate Program Effectiveness	Annually	Reviewed and Reported Annually	Development Services

12.0 Monitoring Program

12.1 Introduction

As required by Part III of the NPDES Permit (ALS000008), the MS4 shall implement a monitoring program to assess the effectiveness and adequacy of BMPs implemented under the SWMPP. The MS4 plans to accomplish this by implementing the following monitoring programs:

- Wet Weather Monitoring Program
- TMDL Monitoring Program

12.2 Program Administration

The Shelby County Department of Development Services with the assistance of a consulting engineer (Municipal Consultants, Inc.) will administer the Monitoring program for the Shelby County MS4 permit area.

12.3 Wet Weather Monitoring Program

The Wet Weather Monitoring Program shall consist of continuous and grab sampling collected per the locations and frequencies listed in the following table:

Table 12-1

Waterbody	Representative Watershed	Sampling Frequency
Cahaba Valley Creek	Residential & Commercial	Hourly (sonde) & Semi-Annually (grab)
Lee Branch	Residential & Commercial	Semi-Annually (grab)

12.3.01 Water Quality Probe (sonde)

Water Quality Probe (sonde) data gathered hourly (minimum) shall include:

- Temperature
- pH/ORP

- Turbidity
- Conductivity
- Dissolved Oxygen
- Water Level

12.3.02 Grab Samples

Grab samples shall be collected semi-annually and analyzed for the following:

- Temperature
- pH/ORP
- Turbidity (NTU)
- Conductivity
- Dissolved Oxygen
- Ammonia
- BOD
- COD
- E.Coli
- Fecal Coliform
- Hardness
- Nitrate plus Nitrite Nitrogen
- Oil and Grease
- Total Dissolved Solids
- Total Kjeldahl Nitrogen
- Total Nitrogen
- Total Phosphorus
- Total Suspended Solids
- Water Level (Lee Branch)

Sample type, collection, and analysis shall be as specified in Part III.C. of the NPDES Permit, with grab samples taken within the first two hours of discharge for qualifying rain events. Qualifying rain events are defined as events with greater than 0.1 inch of rainfall that occur at

least 72 hours from the previously measurable (>0.1") storm event. Field data shall be recorded on the field data sheet included as Appendix 7. Additionally, and to the extent possible, the depth of rainfall and duration of the event should not deviate by more than 50% from the average depth and duration as recommended by the EPA NPDES Storm Water Sampling Guidance document (EPA, 1992).

The sampling locations of this program are as listed below:

Table 12-2

Waterbody	Location
Cahaba Valley Creek	Hwy 119 and Caldwell Mill Road Intersection
Lee Branch	LEBS-2 (Greystone Way)

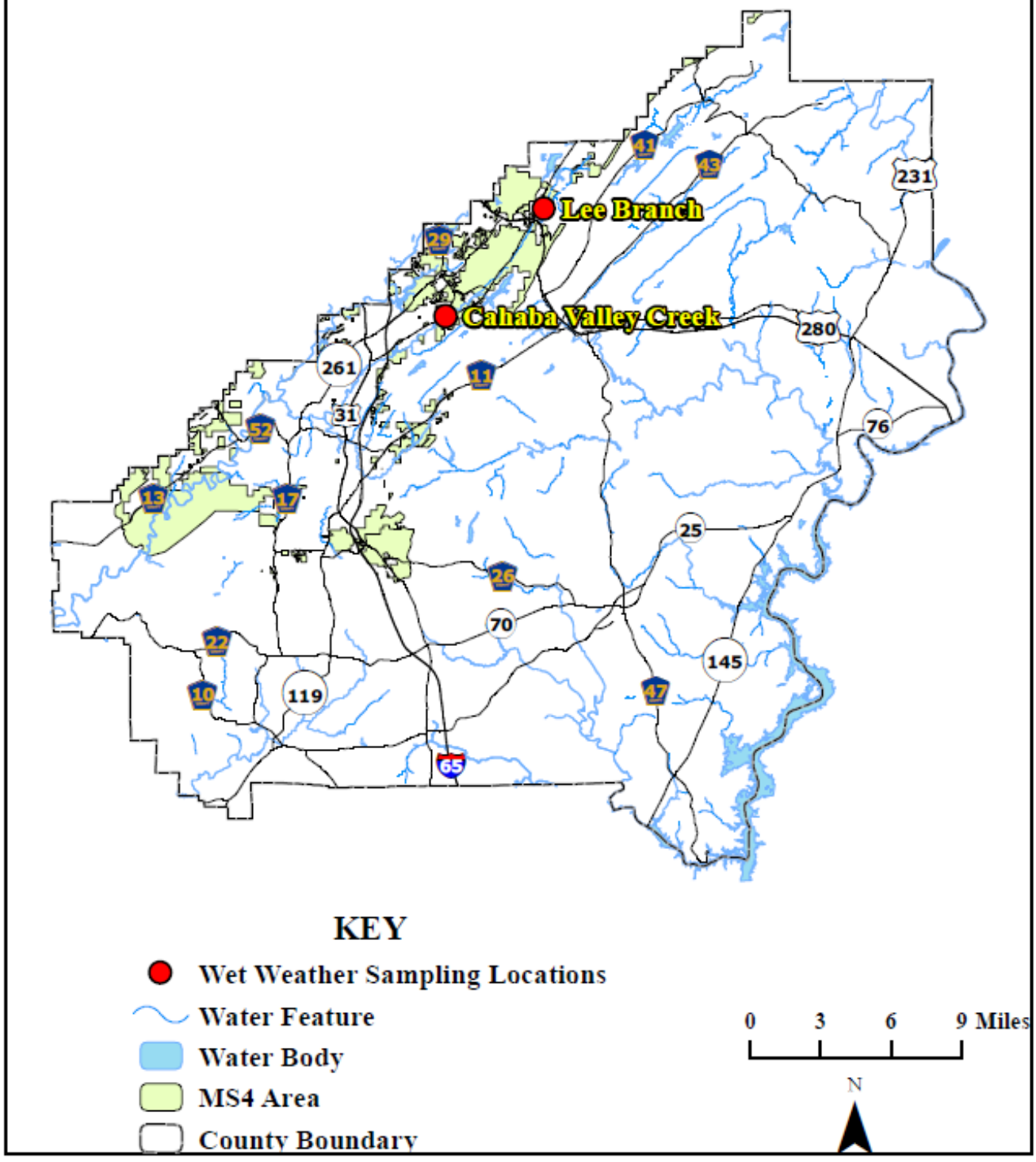
Refer to Map 5 for sampling locations.

12.4 Water Quality Standards

When evaluating Wet Weather sampling results, the MS4 shall use water quality parameters set forth in Chapter 335-6-10 of ADEM's Regulations as a baseline, and can be found at the following link:

http://www.adem.state.al.us/alEnviroRegLaws/files/Division6Vol1.pdf.

WET WEATHER MONITORING
Map 5



12.5 TMDL Monitoring Program

The TMDL Monitoring Program shall consist of monitoring waterbodies that are listed on the latest final 303(d) list, or otherwise designated impaired by the Department, or for which a TMDL is approved or established by the EPA that are either within the MS4 or are suspected to be impaired indirectly by the MS4, as required by Part II.E. and Part III.A.2 of the NPDES Permit.

The following TMDLs exist within the MS4 or in close proximity of the MS4:

Table 12-3

Waterbody	TMDL
Cahaba Valley Creek	Pathogens (Fecal)
Lee Branch	Pathogens (E.Coli)
Buck Creek	Pathogens (Fecal)
Cahaba River	Pathogens (E.Coli), Siltation, Nutrients

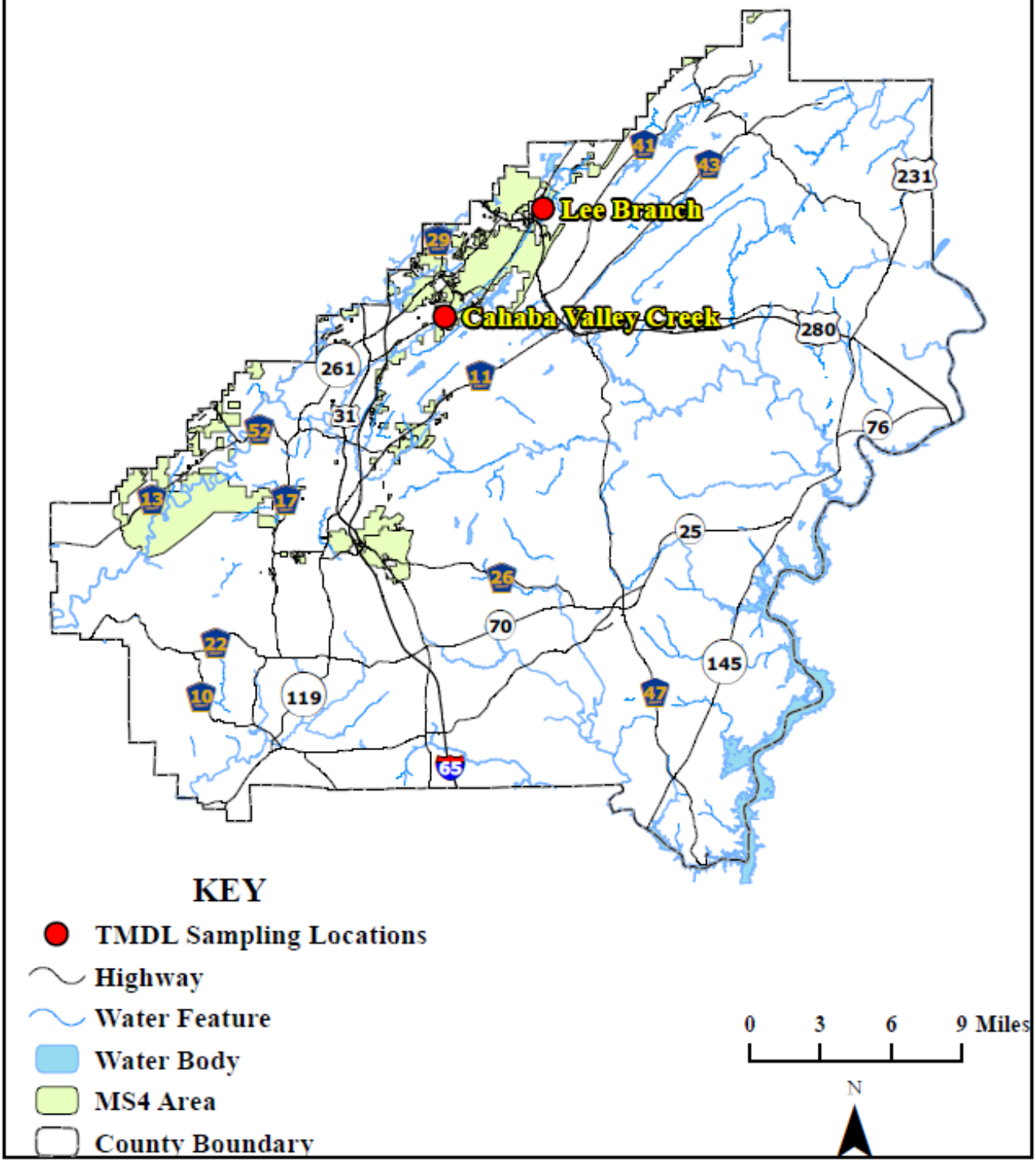
The TMDL Monitoring Program shall consist of collecting in-stream grab samples typically collected at the locations and frequencies outlined below:

Table 12-4

Waterbody	Sampling Frequency	Sampling Location
Cahaba Valley Creek	Semi-Annually (grab)	Hwy. 119 and Caldwell Mill Road Intersection
Lee Branch	Semi-Annually (grab)	LEBS-2 (Greystone Way)

Refer to Map 6 for sampling locations.

TMDL MONITORING Map 6



12.5.01 Sampling Parameters

Sampling parameters include fecal coliform, E.Coli, total suspended solids and total phosphorus. Additional attention shall be given for collection of samples. All sampling shall be conducted in a manner that ensures that hold times are followed. At this time, the shortest hold time is for pathogen parameters (E.Coli and Fecal Coliform). Samples shall be adequately temperature controlled as necessary for each parameter being tested.

12.5.02 TMDL Sampling - Pathogens

An attempt shall be made to conduct sufficient testing to provide two geomean calculations for bacteriological data at the sampling locations listed above. This testing will consist of a minimum of five samples per site. Samples shall be separated by a minimum of 24 hours but within a 30 day period, for the purposes of calculating a geomean. Grab sampling shall be conducted every Tuesday and Thursday of a month, beginning with the first Tuesday of the month (as chosen by the MS4). Additional investigative sampling shall be conducted if the above results indicate levels above the TMDL. Currently the TMDL for Lee Branch, Cahaba Valley Creek, and the Cahaba River adhere to ADEM's water quality standards for the designated use classification of that stream. Since all three streams are classified as Fish and Wildlife, the following water quality parameters in the table below shall apply to all three streams in regards to pathogen testing (as listed in each TMDL). It should be noted that although portions of the Cahaba River are designated as Outstanding Alabama Waterways, the segment of river directly below the Buck Creek confluence into the Cahaba River, where a majority of the MS4 drains from, is listed as Fish and Wildlife.

Table 12-5 Summer (June-September)

	Single Sample (col/100 mL)	Geomean (col/100 mL)
Fecal Coliform	2000	200
E. Coli	487	126

Table 12-6 Winter (October-May)

	Single Sample (col/100 mL)	Geomean (col/100 mL)
Fecal Coliform	2000	1000
E. Coli	2507	548

Sampling rounds shall be independent of weather conditions (i.e. sampling rounds may be conducted either during wet weather or dry weather as determined by the MS4).

As stated above, investigative sampling shall be conducted as determined by the MS4 if water quality standards (listed below) are exceeded for multiple samples and the MS4 suspects an illicit discharge. If investigative sampling is initiated, it shall begin at the sampling location where water quality parameters have been exceeded and continue upstream as needed in an effort to determine the source of contamination.

12.5.03 TMDL Sampling – Nutrients

Nutrient sampling shall be made when pathogen sampling is performed at the same locations, frequencies, and conditions as stated above. Nutrient sampling shall consist of Total Phosphorus sampling since the Cahaba River Nutrient TMDL is centered on Total Phosphorus.

Similar to pathogen sampling, investigative sampling shall be conducted as determined by the MS4 if water quality standards (listed below) are exceeded for multiple samples and the MS4 suspects an illicit discharge. If investigative sampling is initiated, it shall begin at the sampling location where water quality parameters have been exceeded and continue upstream as needed in an effort to determine the source of contamination.

Water quality standards for Total Phosphorus shall be in accordance with the applicable TMDL, which states a target in-stream concentration of 0.035 mg/L of Total Phosphorus during the growing season (April-October).

12.5.04 TMDL Sampling – Siltation

Siltation sampling shall be made when pathogen (and nutrient) sampling is performed at the same locations, frequencies, and conditions as stated above. Siltation sampling shall consist of Total Suspended Solids sampling to be consistent with the Cahaba River Siltation TMDL.

Similar to pathogen sampling, investigative sampling shall be conducted as determined by the MS4 if water quality standards (listed below) are exceeded for multiple samples and the MS4 suspects an illicit discharge. If investigative sampling is initiated, it shall begin at the sampling location where water quality parameters have been exceeded and continue upstream as needed in an effort to determine the source of contamination.

Water quality standards for Total Suspended Solids shall be in accordance with the applicable TMDL, which states a target year-round in-stream concentration of 45 mg/L of Total Suspended Solids.

12.6 Program Goals and Evaluation

Table 12-7 Monitoring –Program Goals				
Program Component	**BMP**		**Schedule**	**Responsible Department**
	Description	**Frequency**		
Continuous Monitoring Stations		Install	Review and Report Annually	Development Services/ Consulting Engineer
		Install	Review and Report Annually	
Continuous Monitoring Station Maintenance	Cleaning Form	Develop and Update as needed	Review and Report Annually	Development Services/ Consulting Engineer
	Cleaning	Every 3-4 weeks	Review and Report Annually	
	Calibration Form	Develop and update as needed	Review and Report Annually	
	Calibration	Every 6-12 weeks	Review and Report Annually	
Grab Sampling		Annually	Review and Report Annually	Development Services/ Consulting Engineer
		Annually	Review and Report Annually	
Program Evaluation	Evaluate Program Effectiveness	Annually	Review and Report Annually	Development Services

APPENDIX 1

Shelby County Storm Water Management Ordinance

This document is currently being revised.

A hard copy of this manual has not been included in an effort to conserve resources. It can be found at www.shelbyal.com .

APPENDIX 2

Structural Control Inspection Field Data Sheet

Shelby County Storm Water
Structural Controls Inspection

Location: _____

Date: _____

Time: _____

Owner: _____

Inspection Team: _____

Initial Site Assessment:

Problems:

Summary:

Resolution: _____

APPENDIX 3

Outfall Inventory

Shelby County Cahaba River Basin MS4
Storm Water Management Program
Outfall List

OUTFALL	DATE INSPECTED	X/Y COORDINATE (UTM)	SITE DESCRIPTION AND/OR PIPE SIZE	LAND USE	FLOW RATE (CFS)	ODOR	COLOR	CLARITY	FLOAT	DEPOS	VEG. CONDITION	STRUC. CONDITION	BIO.	TEMP	SAMPLE
S02-001	9/13/2021	527088/3698819	Open Ditch	C	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S02-005	9/13/2021	527425/3698565	Open Ditch	C	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S02-006	9/21/2020	528004/3698556	42" RCP	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S02-007	8/15/2019	527701/3698405	48" RCP	C	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S02-008	8/15/2019	528089/3698278	Open Ditch	C	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S02-010	8/09/2018	528510/3698037	36" RCP	R	0.006	None	Clear	Clear	None	Sediments	Normal	Normal	Fish Noted	N/A	No
S02-011	8/09/2018	528526/3698005	72" RCP	R	0.003	None	Clear	Clear	None	Sediments	None	Normal	Fish Noted	N/A	No
S02-019	9/21/2020	528050/3697704	42" elliptical RCP	R	None	None	Brown	Opaque	Garbage	None	Normal	Normal	N/A	N/A	No
S02-021	9/21/2020	527821/3697704	36" CMP	C	0.005	None	Brown	Clear	None	None	Normal	Metal Corrosion	N/A	N/A	No
S03-002	9/13/2021	530363/3699030	42" Elliptical RCP (2)	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S03-004	9/13/2021	530241/3698875	48" Ellip. RCP (3) 18" RCP (1)	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S03-007	9/13/2021	529145/3697926	36" RCP	C	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S03-019	9/14/2021	530771/3699949	18" RCP (1) 24" RCP (1) 42" RCP (1)	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S03-020	9/14/2021	530998/3700344	36" RCP	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S03-021	9/14/2021	531038/3700305	36" RCP	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S03-025	9/13/2021	529642/3699448	42" Elliptical RCP	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S03-027	9/22/2020	530111/3698467	Open Ditch	C	None	None	Green	Opaque	None	None	Normal	Normal	N/A	N/A	No
S03-028	9/22/2020	530091/3698372	36" RCP	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S09-002	8/09/2019	530439/3697001	36" RCP	R	None	None	N/A	N/A	Other (Leaves)	None	Normal	Normal	N/A	N/A	No
S09-003	9/21/2020	N/A	4' x 5' Concrete Culvert	C/R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S09-011	8/09/2019	529843/3696865	24" RCP	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S09-016	8/09/2019	530167 / 3696876	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S09-017	8/09/2019	530127 / 3696808	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S09-018	8/09/2019	529924 / 3696514	30" RCP	R	None	None	N/A	N/A	None	None	N/A	Other (HW broken)	N/A	N/A	No
S09-022	8/09/2019	529188 / 3696121	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S09-023	8/09/2019	529259 / 3696080	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S09-030	8/09/2019	529308 / 3695681	36" RCP, Inferred	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S09-031	8/09/2019	529416 / 3695546	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S09-032	8/09/2019	528759 / 3694618	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S09-034	8/09/2019	528671 / 3694571	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S09-035	8/09/2019	528739 / 3694517	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S09-037	8/09/2019	529024 / 3696428	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S09-040	9/14/2020	529709 / 3696400	24" RCP	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S09-043	8/15/2019	530408 / 3696898	36" RCP	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S10-023	9/14/2020	525988 / 3692974	54" RCP	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-027	9/13/2021	To be Verified	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-028	9/13/2021	To be Verified	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-030	9/13/2021	530053 / 3694437	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-031	9/22/2020	529991 / 3694418	Open Ditch	R	2	None	Brown	Cloudy	Biological	None	Normal	Normal	Bacteria/Algae	N/A	No
S10-032	9/13/2021	529843 / 3694283	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-033	9/22/2020	529979 / 3694369	Open Ditch	R	2	None	Brown	Opaque	Biological	None	Normal	Normal	Bacteria/Algae	N/A	No
S10-039	9/13/2021	529356 / 3694388	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-044	9/13/2021	529354 / 3694437	36" Elliptical CMP (2)	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-051	9/21/2020	523416 / 3692862	36" RCP	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-052	9/14/2021	522801 / 3692889	42" CMP	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-054	8/15/2019	522478 / 3693144	Open Ditch	R	None	None	N/A	N/A	None	None	N/A	N/A	N/A	N/A	No
S10-060	9/14/2021	523149 / 3693516	36" RCP	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-062	9/14/2021	523256 / 3693586	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-063	9/14/2021	523207 / 3693632	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-077	9/14/2021	523010 / 3692451	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-078	9/14/2021	523056 / 3692473	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-079	9/14/2021	523095 / 3692503	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-080	9/14/2021	522902 / 3692484	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-083	9/14/2021	522503 / 3692359	Open Ditch	C	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-084	9/14/2021	522463 / 3692385	Open Ditch	C	N/A	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-085	9/14/2021	522441 / 3692348	Open Ditch	C	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-086	9/14/2021	522481 / 3692326	Open Ditch	C	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-094	9/13/2021	526804 / 3693674	Open Ditch	D	None	None	Clear	Clear	None	None	Normal	Normal	N/A	N/A	No
S10-095	9/13/2021	526843 / 3693632	Open Ditch	D	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-096	9/13/2021	526778 / 3693645	Open Ditch	D	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-097	9/13/2021	526807 / 3693656	Open Ditch	D	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-098	9/13/2021	526855 / 3693663	Open Ditch	D	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-109	8/15/2019	526368 / 3696220	36" RCP	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S10-117	9/21/2020	527748 / 3696885	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-118	9/21/2020	527981 / 3696885	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-124	9/14/2021	526169 / 3695293	36" RCP, Inferred	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-125	9/14/2021	526937 / 3695312	36" RCP, Inferred	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-126	9/14/2021	525778 / 3695147	36" RCP	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-133	8/09/2018	526419 / 3694069	36" RCP	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-164	9/13/2021	528564 / 3694368	24" RCP (1) 30" RCP (1)	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-166	9/21/2020	527730 / 3696829	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-167	9/21/2020	527705 / 3696896	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-201	9/22/2020	524171 / 3697211	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-202	9/22/2020	524157 / 3697168	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-203	9/22/2020	524123 / 3697211	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-204	9/22/2020	524108 / 3697163	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-205	9/22/2020	523931 / 3697063	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-206	9/22/2020	523893 / 3697056	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-207	9/22/2020	523903 / 3697006	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-208	9/22/2020	523936 / 3697025	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-247	9/14/2021	525240 / 3694842	48" CMP	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-250	9/21/2020	527941 / 3693854	Open Ditch	D	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-251	9/21/2020	527916 / 3693812	Open Ditch	D	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-252	9/21/2020	527868 / 3693836	Open Ditch	D	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-253	9/21/2020	527902 / 3693846	Open Ditch	D	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-260	9/21/2020	527498 / 3693308	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-262	9/21/2020	527556 / 3693325	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-263	9/21/2020	527536 / 3693291	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-265	9/21/2020	527211 / 3692928	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-266	9/21/2020	527173 / 3692944	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-267	9/21/2020	527143 / 3692911	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-268	9/21/2020	527185 / 3692890	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-271	9/14/2021	521766 / 3692525	48" CMP	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-286	8/15/2018	529888 / 3692180	Open Ditch	D	None	N/A	N/A	N/A	N/A	N/A	Normal	N/A	N/A	N/A	No
S10-307	9/13/2021	529465 / 3692497	42" RCP 18" RCP	D	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-330	9/22/2020	519772 / 3688056	Open Ditch	C	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-332	8/15/2018	519831 / 3688024	Open Ditch	C	None	N/A	N/A	N/A	N/A	Sediments	N/A	N/A	N/A	N/A	No
S10-334	8/15/2018	520421 / 3688064	60" CMP	C	None	N/A	N/A	N/A	N/A	N/A	Excessive	Normal	N/A	N/A	No

Shelby County Cahaba River Basin MS4
Storm Water Management Program
Outfall List

OUTFALL	DATE INSPECTED	X/Y COORDINATE (UTM)	SITE DESCRIPTION AND/OR PIPE SIZE	LAND USE	FLOW RATE (CFS)	ODOR	COLOR	CLARITY	FLOAT	DEPOS	VEG. CONDITION	STRUC. CONDITION	BIO.	TEMP	SAMPLE
S10-335	9/18/2018	520432 / 3698024	36" RCP	C	None	N/A	N/A	N/A	N/A	N/A	None	Normal	N/A	N/A	No
S10-380	9/13/2021	529643 / 3693236	52" CMP	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-385	9/14/2021	527311 / 3694340	24" RCP 30" RCP 54" CMP elliptical	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-366	9/13/2021	528230 / 3693851	Open Ditch	R	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No
S10-373	8/30/2016	To be Verified	Open Ditch	R	None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No
S10-383	9/13/2021	525532 / 3691504	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-400	9/21/2020	524407 / 3693781	36" RCP	C	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-401	9/21/2020	523417 / 3693696	36" RCP	R	None	None	N/A	N/A	None	None	Excessive Growth	Normal	N/A	N/A	No
S10-402	9/21/2020	523425 / 3693694	Concrete spillway	R	None	None	N/A	N/A	None	None	Excessive Growth	Normal	N/A	N/A	No
S10-403	9/21/2020	523368 / 3693113	36" RCP	R	None	None	N/A	N/A	None	None	Excessive Growth	Normal	N/A	N/A	No
S10-410	9/18/2018	519877 / 3698210	Open Ditch	C	None	N/A	N/A	N/A	N/A	N/A	Oily/Sediment	None	Normal	N/A	No
S10-411	9/18/2018	519495 / 3698259	Open Ditch	C	None	N/A	N/A	N/A	N/A	None	None	Normal	N/A	N/A	No
S10-414	9/21/2020	524345 / 3693806	Open Ditch	C/R	None	None	N/A	N/A	None	None	Normal	Normal	N/A	N/A	No
S10-438	9/18/2018	520166 / 3698449	64" RCP	C	None	N/A	N/A	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S10-439	9/18/2018	522116 / 3698446	72" CMP	C	None	N/A	N/A	N/A	N/A	None	Normal	Normal	N/A	N/A	No
S10-454	9/19/2018	524767 / 3690095	36" Elliptical	D	None	None	N/A	N/A	N/A	Sediments	Normal	Normal	N/A	N/A	No
S10-455	9/19/2018	524811 / 3690152	36" Elliptical	D	None	None	N/A	N/A	N/A	Sediments	None	Normal	N/A	N/A	No
S11-002	9/21/2018	517433 / 3691382	Open Ditch	R	None	N/A	N/A	N/A	N/A	N/A	N/A	Concrete Cracking	N/A	N/A	No
S12-007	9/20/2018	508405 / 3692536	6X6 Box Culvert	U	0.02	None	None	Clear	Clear	None	None	Normal	New	N/A	No
S12-008	9/20/2018	508314 / 3692079	Open Ditch	U	None	N/A	N/A	N/A	N/A	N/A	Normal	N/A	N/A	N/A	No
S12-009	9/20/2018	507951 / 3692725	Open Ditch	R	None	N/A	N/A	N/A	N/A	N/A	Normal	N/A	N/A	N/A	No
S12-010	9/20/2018	508314 / 3692636	6X6 Box Culvert	U	0.02	None	Clear	Clear	None	None	Normal	New	N/A	N/A	No
S12-054	9/20/2018	508131 / 3693726	Open Ditch	R	<0.005	None	Clear	Clear	None	Sediments	Normal	Concrete Cracking	N/A	N/A	No
S13-017	9/14/2021	513888 / 3678605	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S13-018	9/14/2021	513751 / 3678997	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S13-020	9/14/2021	513751 / 3678950	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S13-021	9/14/2021	513997 / 3678729	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S13-022	9/14/2021	513702 / 3678729	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S13-023	9/14/2021	513672 / 3678697	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S13-024	9/14/2021	513702 / 3678697	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S13-026	9/14/2021	513632 / 3678521	(3) 48" RCP	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S13-028	9/14/2021	513576 / 3678372	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S13-030	9/14/2021	513996 / 3678335	Open Ditch	R	None	None	Clear	N/A	N/A	N/A	Normal	Normal	N/A	N/A	No
S14-022	9/21/2018	522032 / 3683179	Open Ditch	I	None	N/A	N/A	N/A	N/A	N/A	Normal	N/A	N/A	N/A	No
S14-051	9/21/2018	520427 / 3681943	Open Ditch	R	None	N/A	N/A	N/A	N/A	N/A	Normal	N/A	N/A	N/A	No
S14-052	9/21/2018	520450 / 3681975	Open Ditch	R	None	N/A	N/A	N/A	N/A	N/A	Normal	N/A	N/A	N/A	No
S14-053	9/21/2018	520468 / 3681943	Open Ditch	R	None	N/A	N/A	N/A	N/A	N/A	Normal	N/A	N/A	N/A	No
S14-054	9/21/2018	520476 / 3681908	Open Ditch	R	None	N/A	N/A	N/A	N/A	N/A	Normal	N/A	N/A	N/A	No
S14-057	9/21/2018	520780 / 3681775	Open Ditch	R	None	N/A	N/A	N/A	N/A	Sediments	None	Normal	N/A	N/A	No
S14-064	9/21/2018	528769 / 3687428	Open Ditch	R	None	N/A	N/A	N/A	N/A	N/A	Normal	N/A	N/A	N/A	No
S14-065	9/21/2018	528805 / 3687486	Open Ditch	R	None	N/A	N/A	N/A	N/A	N/A	Normal	N/A	N/A	N/A	No
S14-067	9/21/2018	526058 / 368697	Open Ditch	R	None	N/A	N/A	N/A	N/A	N/A	Normal	N/A	N/A	N/A	No
S14-068	9/21/2018	528016 / 3686945	Open Ditch	R	None	N/A	N/A	N/A	N/A	N/A	Normal	N/A	N/A	N/A	No
S14-077	9/21/2018	520796 / 3685023	Open Ditch	R	None	N/A	N/A	N/A	N/A	N/A	Normal	N/A	N/A	N/A	No
S14-079	9/21/2018	520764 / 3685018	Open Ditch	R	None	N/A	N/A	N/A	N/A	N/A	Normal	N/A	N/A	N/A	No
S14-095	8/19/2019	520911 / 3685177	42" RCP (2)	R	None	None	N/A	N/A	None	None	None	Normal	N/A	N/A	No
S22-011	8/29/2019	520087 / 3674856	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S22-012	8/29/2019	520117 / 3674852	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S22-013	8/29/2019	520067 / 3674823	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S22-014	8/29/2019	520104 / 3674823	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S22-022	8/29/2019	519719 / 3674795	Open Ditch	C	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S22-023	8/29/2019	519800 / 3674799	Open Ditch	C	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S22-024	8/29/2019	519755 / 3674733	Open Ditch	C	None	None	N/A	N/A	None	None	N/A	N/A	N/A	N/A	No
S22-025	8/29/2019	519845 / 3674744	Open Ditch	C	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S22-026	8/29/2019	520551 / 3674726	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S22-027	8/29/2019	520546 / 3674689	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S22-028	8/29/2019	520470 / 3674259	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S22-029	8/29/2019	520526 / 3674269	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S22-035	8/29/2019	520591 / 3674682	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S23-057	8/19/2019	512866 / 3676823	36" RCP	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S23-144	8/19/2019	512958 / 3675599	42" RCP	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S23-152	8/29/2019	UNABLE TO LOCATE	48" CMP	R											
S24-007	8/19/2019	502861 / 3677099	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S24-008	8/19/2019	502806 / 3677056	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S24-009	8/19/2019	502542 / 3677070	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S24-010	8/19/2019	502895 / 3677037	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S24-012	8/19/2019	508422 / 3675638	Open Ditch	U	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S24-013	8/19/2019	508462 / 3675628	Open Ditch	U	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S24-014	8/19/2019	508412 / 3675579	Open Ditch	U	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S24-015	8/19/2019	508442 / 3675579	Open Ditch	U	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S24-016	8/19/2019	504211 / 3674446	Open Ditch	U	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S24-017	8/19/2019	504172 / 3674397	Open Ditch	U	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S24-018	8/19/2019	504197 / 3674384	Open Ditch	U	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S24-019	8/19/2019	503916 / 3674146	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S26-010	8/19/2019	507536 / 3698215	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	N/A	N/A	N/A	No
S26-011	8/19/2019	507546 / 3698164	Open Ditch	R	None	None	N/A	N/A	None	None	Normal	Concrete Cracking	N/A	N/A	No

APPENDIX 4

Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments

by

The Center for Watershed Protection and Dr. Robert Pitt

A hard copy of this manual has not been included in an effort to conserve resources. This manual can be found at the following link: https://www3.epa.gov/npdes/pubs/idde_manualwithappendices.pdf

APPENDIX 5

Dry Weather Screening Field Data Sheet

Shelby County Storm Water Management Program
Dry-Weather Screening Data Sheet

Outfall number:_____ Date: ___/___/___
Inspection Team:_____ Time: _____ AM / PM

Site Description: ☐open channel ☐manhole ☐outfall ☐other_____

Dominant Watershed Land Uses: ☐industrial ☐commercial ☐residential ☐unknown
☐other _____

Location:_____
_____
_____

Flow Present: ☐No ☐Yes 1. width of water surface (ft): _____
2. approximate depth of water (ft): _____
3. approximate flow velocity (fps): _____
flow rate (cfs) = 1x2x3 = _____

Visual Observations:
Odor: ☐none ☐musty ☐sewage ☐rotten eggs ☐sour milk ☐other_____
Color: ☐clear ☐red ☐yellow ☐brown ☐green ☐gray ☐other_____
Clarity: ☐clear ☐cloudy ☐opaque ☐suspended solids ☐other_____
Floatables: ☐none ☐oily sheen ☐garbage/sewer ☐other_____
Deposits/Stains: ☐none ☐sediments ☐oily ☐other_____
Vegetation Condition: ☐none ☐normal ☐excessive growth ☐inhibited growth ☐other_____
Structural Condition: ☐normal ☐concrete cracking/spalling ☐metal corrosion ☐other_____
Biological: ☐mosquito larvae ☐bacteria/algae ☐other_____

Field Analysis:
water temperature (°F): _____
pH_____ Method of Analyis: _____ (Strips/Meter)
Laboratory Sample Collected: ☐yes ☐no

Lab Analysis:
E. Coli (colonies/100ml):_____ Potassium (mg/l):_____ NH_3N (mg/l):_____
Oil & Grease (mg/l):_____ MBAS (mg/l):_____ pH_____

Comments:_____
_____

Data Sheet Filled Out By (signature): _____

APPENDIX 6

Industrial Inspection Field Data Sheet

Shelby County
Public Works Department

STORM WATER DISCHARGE INSPECTION

For Industrial and Commercial Facilities
(Ordinance 98-09-28-8)

Inspection Team: _____
Date:_____ Time: _____ PM

Facility Name		
Facility Contact and Title		
Facility Street Address		
City	State	Zip
Phone Number	Fax Number	

Business License No._____ Facility Size (acres) _____(rounded to nearest tenth)

Provide a description of facility and the nature of work performed.

Provide a description of significant materials that are currently, or were formerly, treated, stored or disposed outside the facility or commercial establishment; materials management practices currently used to minimize contact of these materials with storm water runoff; and a description of any treatment the storm water receives prior to discharge.

Cleanup schedule for debris, material storage areas, garbage storage or disposal areas, or other areas that have the potential to pollute storm water.

Description of plan of instruction, to employees of all levels, in ways to prevent storm water pollution. Identify periodic dates for such training.

Provide a site map showing existing buildings, parking, drives, type of each impervious surface, ditches, pipes, catch basins, drainage basin limits, area of facility, discharge points from the property or to Community Waters, and the name of the receiving waters.

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

Printed Name of Inspection Team Member	Title
Signature	Date

APPENDIX 7

Wet Weather Screening Field Data Sheet

Shelby County Storm Water Management Program
Municipal Consultants, Inc.
Wet Weather Screening - Field Data

Screening Point: ☐ Hwy. 119/Cahaba V. Creek Site ☐ LEBS-2 Site County: Shelby
Date: _____ Time: _____
Inspector Name(s): _____

SAMPLE SITE DATA

Ambient Temperature: _____ Degrees F
Color: ☐ Clear ☐ Red ☐ Yellow ☐ Brown ☐ Green ☐ Gray ☐ Other _____
Clarity: ☐ Clear ☐ Cloudy ☐ Opaque ☐ Turbid ☐ Other _____
Flow: ☐ Rushing ☐ Swift ☐ Slow ☐ Stagnant ☐ Other _____

Grab Samples: Time: _____
Onsite Samples:
Temperature: F or C Time: _____
pH Reading: _____ Time: _____
pH Method of Measurement: Meter or Strips
Dissolved Oxygen Reading: _____ Time: _____
Water Level Reading (LEBS-2 Site Only): _____ Time: _____

STORM EVENT DATA

Rainfall Began at: Time:
Rainfall Ended at: Time: Length of Storm (hr.):
Amount of measured rainfall during sampling (in):
Total rainfall (in):
End of last rainfall event: Date:
Time:
Time since last rainfall (hr.)

Comments: _____

Data Sheet filled out by (signature): _____

Office Staff to fill out shaded portion.

APPENDIX 8

Shelby County MS4 Storm Water Management Permit – Phase I

ALS000008

A hard copy of this manual has not been included in an effort to conserve resources. It can be found at www.shelbyal.com .