



# ANNUAL REPORT

2022-2023

**CITY OF MOUNTAIN BROOK**  
**STORM WATER**  
**MANAGEMENT AUTHORITY, INC.**



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# 1 General Information

## 1.1 Introduction

The City of Mountain Brook (City) was issued by the Alabama Department of Environmental Management (ADEM) a Municipal Separate Storm Sewer System (MS4) Individual Phase I Permit (ALS000018) on July 11, 2022. This date is also the effective date of the permit.

As a condition of this permit, “The permittee is required to develop, revise, implement, maintain and enforce a storm water management program (SWMP) which shall include controls necessary to reduce the discharge of pollutants from its MS4 consistent with Section 402(p)(3)(B) of the Clean Water Act and 40 CFR Part 122.26”.

Per the requirements of NPDES Permit Number ALS000018, BMPs, measurable goals, and responsibility designations are provided for each of the following program elements:

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

The passage of **Legislative Act 95-775** in 1997 enabled the mayors of municipalities within Jefferson County to establish Storm Water Management Authority, Inc. (SWMA). SWMA functions on behalf of its members to meet the compliance requirements of each NPDES permit. SWMA has subcontracted with the Jefferson County Department of Health (JCDH) to perform certain responsibilities. SWMA members, the Board of Directors, and mayors are aware that the ultimate responsibility toward permit compliance lies with the municipality. SWMA’s contract with JCDH and SWMA Bylaws are found in **Appendix A**.

The 2022-2023 annual report covers the reporting period from October 1, 2022, through September 30, 2023. The current permit cycle will expire in 2027.

Submission of this report to ADEM is pursuant to Part IV of the permit.

## 1.2 Contact Lists

### 1.2.1 Municipality Contacts

Name	Title	Work #	E-mail Address	Address
Stewart H. Welch, III	Mayor	802-3825	stewart@welchgroup.com	56 Church St., Mountain Brook, AL 35213
Sam Gaston	City Manager	802-3879	gastons@mtnbrook.org	56 Church St., Mountain Brook, AL 35213

### 1.2.2 JCDH Contacts

Name	Title	Work #	E-mail Address	Address
Jeff Swinney	Program Manager	205-930-1279	jeff.swinney@jcdh.org	1400 Sixth Ave S Birmingham, AL 35233
Scott Hofer	Public Health Engineer	205-930-1274	scott.hofer@jcdh.org	1400 Sixth Ave S Birmingham, AL 35233
Jonika Smith	Environmental Health Specialist	205-558-2103	jonika.smith@jcdh.org	1400 Sixth Ave S Birmingham, AL 35233



## **2 Program Evaluation**

### **2.1 *Objective of Program***

The Purpose of Mountain Brook's program is to comply with the requirements of the NPDES permits to reduce the discharge of pollutants from the municipal separate storm sewer system (MS4) to the maximum extent practical.

### **2.2 *Major Findings***

The health of the streams that receive runoff from the MS4 appears to be stable with no signs of improvement or degradation. See Section 4.3 for an explanation of this conclusion.

### **2.3 *Major Accomplishments***

The SWMPP was completed and made available to the public.



## 2.4 *Overall Strengths and Weaknesses*

### 2.4.1 Strengths

**Industrial Storm Water Runoff** – A mobile application is used to document inspections of industrial and high-risk runoff sites. The inspections increase awareness of storm water as well as confirm proper BMPs are in place to prevent and effectively respond to an illicit discharge.

**Complaints and Investigations** - The complaint system used by JCDH allows inspectors to efficiently investigate and resolve violations. The system also provides useful documentation of the number and types of complaints received.

**Reporting** - The online program called Storm Water Online Activity Report (SOAR) allows standardized reporting of storm water related activities. City personnel submit activity information remotely that is stored in a centralized database. Standardization of the data allows for better reporting and statistical information. The mobile application called Construction Site Inspections (CSI) allows inspectors to electronically complete site inspections and automatically submit into SOAR.

**GIS Mapping of Storm Drains** – JCDH has been mapping the City’s storm drain system. Mapping provides a structural inventory allowing for better maintenance and fiscal planning. This data could also be used for future hydrologic modeling.

**Dry Weather Screening** – The illicit discharge program utilizes efficient and precise technology to map and record findings about each outfall. JCDH uses a smart phone to complete an electronic questionnaire and record a photo along with the physical description, and pertinent water quality data. The data is stored in the electronic cloud allowing for quick access on any device.

**Education** –SWMA has collaborated with Bessemer, Birmingham, and Unincorporated Jefferson County storm water programs to develop and implement a video contest called “Litter Quitters”. A storm water commercial that aired on local television stations resulted from this program. Anti-littering campaign messaging was posted on billboards and on public transit throughout the County. This partnership has allowed SMWA to engage more effectively with high school students and provide a message to county residents in a new and exciting way. One clean-up was held in the City.

### 2.4.2 Weakness

**Standard Operating Procedure (SOP) Manual**- The current SOP manual was completed in 2011. Updates are needed to include new SWMPP protocols and revisions to existing protocols.

## **2.5 *Future Direction of the Program***

Mountain Brook will continue to provide activities to meet MS4 permit requirements. In person educational activities are planned and will be conducted as schedules allow.

## **2.6 *SWMPP Overall Effectiveness***

The SWMPP serves as a guide for the City to identify both the actions required and the responsible personnel needed to accomplish compliance with the permit. The SWMPP was effective overall.

## **2.7 *Actions Not Accomplished***

All actions were accomplished during this reporting period.

## 3 Narrative Report

### 3.1 *Storm Water Collections System Operations*

#### 3.1.1 Objective

The objective of the Storm Water Collections System Operation Program is to inspect and maintain structural controls in order to minimize the contamination of the local waterways by storm water runoff.

#### 3.1.2 Activities Complete or in Progress

**Activity 1: Permittees shall maintain a map of the structural controls.** This activity has been completed.

**Activity 2: Inspect existing and newly constructed structural controls on a semi-annual basis as well as maintain the structural control and remove any litter or sedimentation so that the structural control functions as designed.** This activity has been completed.

**Activity 3: Develop a checklist for inspection and maintenance of structural controls.** This activity has been completed.

**Activity 4: Maintain an inventory of structural controls as well as the inspection and maintenance records for each structural control.** This activity has been completed.

#### 3.1.3 Annual Reporting

The City has an inspection program in place for its structural controls. There is one city-owned structural control and two city-maintained structural controls. A map of the structural controls can be found in **Appendix B**. During this reporting period, required inspections were completed on all sites. Maintenance activities included weed-eating and mowing; no removal of debris was documented. Inspection and maintenance documentation can be found in **Appendix B**.

The status of this element is complete.

Assessment of this element indicates the program is successful overall. A checklist is in place that identifies the items that are to be addressed. The SOAR program is available for documentation of activities. Additionally, the maintenance performed allows the structural control to perform as it was designed. No revisions are proposed at this time.

## ***3.2 Public Education and Public Involvement on Storm Water Impacts***

### **3.2.1 Objective**

The Public Education and Public Involvement Program was designed to inform the community about the impacts from storm water discharges on water bodies and how different segments of the community can reduce possible storm water pollutants.

### **3.2.2 Description of Educational Programs**

#### **SWMPP Involvement**

Public involvement and input in the development of the SWMPP were achieved by announcing the request for input at council meetings and posting the document for public comment. Draft copies of the SWMPP were available on the City's website for the public to review.

#### **Informational Handouts**

The Program employs a campaign to educate citizens on the importance of proper storm water pollution prevention through the use of brochures, calendars, and pamphlets. The use of these materials is an effective way to reach the public. Approximately 135 handouts were provided during this reporting period.

The City distributed brochures covering the following issues: storm water fees, household hazardous waste, pet waste disposal, fertilizers, pesticides, composting, watershed protection, low impact development, and erosion and sedimentation control. These can be found in **Appendix C**.

The City distributed a total of 65 storm water calendars for 2023. The JCDH calendars depict photos of local creeks and wildlife. Additionally, information is included on various storm water topics along with links to informational sites, recycling services and community events. A copy of the calendar can be found in **Appendix C**.

#### **Outreach Materials**

Education and outreach materials have been developed by JCDH in an effort to reach primary and secondary school students. Topics presented include: watershed protection, safety tips to reduce and/or eliminate litter, excess storm water runoff and household chemicals' entry into storm drains within SWMA member cities. The formats that have been distributed include stickers, bookmarks, pens, magnets, branded carabiners, coloring books/activity sheets, t-shirts, and backpacks. Samples of some of these items can be found in **Appendix C**.

#### **Signage and Other Messaging**

In previous years, JCDH distributed road signs denoting the local watershed with an anti-litter message. The signs were designed to bring attention to the local waterways as well as convey an educational message to citizens. During the prior reporting period, "No littering or dumping"

signs received from ADEM were posted throughout the City. See **Appendix C** for pictures of the different signage.

For this reporting period, the Litter Quitters program aired storm water commercials on local television stations. The program also posted anti-littering messaging on billboards and public transit throughout the County.

### **Website**

The City's website includes a storm water webpage with information on many aspects of storm water. The webpage informs citizens of the City's program with information links, educational downloads, hotline numbers, and other pertinent storm water documents as required by the permit. New information is added as necessary.

### **Reporting Hotline**

The City has phone numbers on the webpage for citizens to register complaints, express their concerns and to get information on watershed management in their local area. The phone number is also listed on a poster that is exhibited in the Inspections Office.

### **Municipal Meetings**

JCDH and SWMA are involved in multiple cooperative meetings regarding environmental hazards within Jefferson County, and collaborative efforts to improve storm water awareness. Included in the efforts are ASA Table Talks: Local Stormwater Challenges and Opportunities and Litter Quitters.

### **Public Presentations**

JCDH personnel spoke at the Miles College Environmental Science Program Town Hall and Fall Festival as well as at Friends of Shades Creek Meeting during this reporting period. The objective was to raise awareness of the impacts of storm water.

### **Public Outreach Events**

Throughout the reporting period, numerous events provided JCDH and SWMA opportunities to present educational information to a variety of people of diverse economic and cultural backgrounds. Informational brochures and outreach materials were distributed at these events. Some of the events attended include Fiesta Birmingham, Children's Health Month, Rain Barrel Workshop, 2nd Annual Juneteenth Freedom Celebration, Cahaba River Society Fry Down Expo, Alpha Phi alumni Chapter of Omega Psi Phi Fraternity, Inc. Health Resources Fair, Friends of Shades Creek's Salamander Festival, and Birmingham Area Municipal Administrators Association Exposition. Household Hazardous Waste Collection Day and other similar outreach events are discussed more in section 3.9.

### **Jefferson County Erosion and Sedimentation Control Workshop**

The last erosion and sedimentation control workshop was held on June 21, 2022. The class is marketed to builders within Jefferson County to inform them of the best management practices and the requirements of the municipalities. The class is held every two years. The construction best management practices covered in this workshop is also posted on the City's website.

### **Cleanup Events**

The City had one cleanup event during the reporting period, Friend of Shades Creek Cleanup on Sept 30, 2023. This event resulted in the removal of approximately 13 trash bags of litter and over 30 lbs. or large trash.

### **3.2.3 Annual Reporting**

The Public Education and Public Involvement on Storm Water Impacts program is a combined effort by JCDH and the City. JCDH offers educational materials, presentations, training materials, and cleanup supplies. A detailed list of the public education events and participants can be found in **Appendix C**.

The status of this element is complete. The education program provides a variety of printed and digital materials promoting storm water messaging.

Assessment of the education program appears to be positive. The programs offered are engaging and varied. Communication mechanisms distributed include stickers, branded carabiners, coloring books/activity sheets, t-shirts, and backpacks. Additionally, the public has been actively involved in the removal of litter from the MS4.

Litter Quitters commercials and messaging broadcast throughout the County, as well as outreach materials provided at City Hall and on the website, met the requirement for public education. The Shades Creek Clean-up and County-wide Household Hazardous Waste Collection Day were events that encouraged public involvement. There are no other proposed revisions at this time.

### ***3.3 Illicit Discharge Detection and Elimination (IDDE)***

#### **3.3.1 Objective**

The objective of the Illicit Discharge Detection and Elimination Program is to eliminate illicit discharges into the MS4 to the maximum extent practicable.

#### **3.3.2 Activities Complete or in Progress**

**Activity 1: Develop and annually update an MS4 map that includes the latitude/longitude of all known major outfalls as well as the names of the waters of the state contiguous to the MS4.** This activity was completed.

**Activity 2: Enact an ordinance that prohibits non-storm water discharges to the MS4.** This activity was completed.

**Activity 3: Have a dry weather screening program designed to detect and address non-storm water discharges into the MS4. A minimum of 15% of the major outfalls must be screened each year.** This activity was completed.

**Activity 4: Procedures for tracing the source of a suspect illicit discharge.** This activity was completed.

**Activity 5: Procedures for eliminating an illicit discharge.** This activity has been completed.

**Activity 6: Procedures to notify ADEM of suspect illicit discharge discovered within the Permittee's MS4 from an adjacent MS4.** This activity was completed.

**Activity 7: A mechanism for the public to report illicit discharges and procedures for appropriate investigation.** This activity was completed.

**Activity 8: A training program for appropriate personnel on identification, reporting and corrective action of illicit discharges.** This activity was completed.

**Activity 9: Post ordinances or other regulatory mechanisms on their website.** This activity was completed.



### 3.3.3 Annual Reporting

The current permits require the Permittees to map the outfalls that lead to the waters of the state. JCDH uses the National Hydrography Dataset (NHD) to identify waters of the state. With many unmapped waterways and unknown outfalls, JCDH attempts to inspect over 15% of the total waters of the state within each Permittee's municipal boundary annually. The goal is to inspect 100% of the waters of the state within the five-year permit cycle. JCDH has also documented the procedures for mapping, tracing sources and eliminating illicit discharges in the 2011 SOP Manual.

JCDH offered training videos to SWMA members for educating municipal workers on different aspects of storm water including illicit discharges. The videos are hosted on an FTP server to allow members accessibility.

The status of this element is complete. The goal of inspecting the planned percentage of outfalls for the reporting period was accomplished. An IDDE ordinance was adopted on August 13, 2018. This ordinance can be found at <https://www.mtnbrook.org/pbs/page/storm-water-management>.

Assessment of this element shows approximately 4.8 miles or 19% of the City's waterways were walked, meeting the goal of inspecting over 15% annually. Inspection of the outfalls revealed most illicit discharges were unintentional. Maps of the completed and proposed stream sections for the upcoming years can be found in **Appendix D**. Additionally, staff members inspected 34 illicit discharge complaints (see **Appendix D**). All investigations are documented in JCDH's SOAR Program which includes sampling results, corrective actions taken and dates. These complaint reports are available from JCDH upon request. There are no proposed revisions at this time.

## **3.4 *Construction Site Storm Water Runoff Control***

### **3.4.1 Objective**

The objective of the Construction Site Storm Water Runoff Program is to reduce, to the maximum extent practicable, storm water runoff into the MS4 from qualifying construction sites.

### **3.4.2 Activities Complete or in Progress**

**Activity 1: Procedures to require all applicable construction sites to obtain the applicable NPDES permits.** This activity is complete.

**Activity 2: Having an ordinance that requires effective erosion and sedimentation control.** This activity is complete.

**Activity 3: Requiring construction site operators to control waste at a construction site that may cause adverse impacts to water quality.** This activity is complete.

**Activity 4: Enacting procedures for site plan review to ensure effective erosion and sedimentation controls.** This activity is complete.

**Activity 5: A mechanism for the public to report construction site pollution.** This activity is complete.

**Activity 6: Inspect sites in accordance with frequency specified in the permit.** This activity is complete.

**Activity 7: Training for the construction site inspection staff in the identification of appropriate construction best management practices.** This activity is complete.

**Activity 8: Development of a construction site inspection checklist.** This activity is complete.

**Activity 9: Implementation of an enforcement response plan.** This activity is complete.

**Activity 10: Availability of educational and training materials and resources for construction site operators.** This activity is complete.

**Activity 11: Posting ordinances or other regulatory mechanisms on their website.** This activity is complete.

### 3.4.3 Annual Reporting

The City passed an ordinance that addresses effective erosion and sedimentation control (<https://www.mtnbrook.org/pbs/page/storm-water-management>). Through this ordinance, procedures have been implemented to require all applicable construction sites to obtain necessary NPDES permits. Construction site operators must control waste that may cause water quality issues. Practices have been established for site plan review to ensure effective erosion and sedimentation controls. The frequency of construction site inspections is determined by the permit. The enforcement response is escalating and includes verbal warnings and stop work orders.

A construction site checklist is used to address potential problems and allow an enforcement response. The public may report construction site pollution complaints by calling city hall. Inspection staff are provided an opportunity to receive appropriate best management practices through Qualified Credentialed Inspector (QCI) certification or equivalent courses. Finally, educational and training materials are made available to construction site operators by either printed handouts or the city's website.

The status of this element is complete. The erosion control and sedimentation ordinance detailing construction site protocols was passed on August 13, 2018. Storm water educational materials and other pertinent information have been posted on the city's webpage.

Assessment of this element indicates the program has been effective in reducing storm water runoff. The permit application process has allowed for closer monitoring of construction site activities. City personnel issued 33 construction site permits, one of which was a qualifying site, and performed 331 site inspections. This information can be found in **Appendix E**. Enforcement actions were sometimes needed to gain compliance. These actions ranged from verbal warnings to written notices with fines. A total of 20 enforcement actions were issued during this reporting period. The City has one QCI inspector. Educational materials were provided to construction site operators via brochures and the webpage.

Changes instituted during this reporting period include providing information to construction site operators regarding the benefits of Low Impact Development (LID) and Green Infrastructure (GI) as part of the permit application process. Applicants are asked to sign a statement acknowledging receipt of this information. No other changes are anticipated at this time.

## ***3.5 Post-Construction Storm Water Management in New Development and Re-Development***

### **3.5.1 Objective**

The objective of the Construction Site Storm Water Runoff Program is to reduce, to the maximum extent practicable, the pollutants in any storm water runoff to the MS4 from qualifying construction sites.

### **3.5.2 Activities Complete or in Progress**

**Activity 1: Require landowners and developers to implement systems to reduce the discharge of pollutants.** This activity is complete.

**Activity 2: Require landowners and developers to mimic pre-construction hydrology runoff in post-construction using permit guidelines.** This activity is complete.

**Activity 3: Encourage landowners and developers to incorporate LID/GI.** This activity is complete.

**Activity 4: Adopt or amend an ordinance to ensure applicability and enforceability of post-construction BMPS.** This activity is complete.

**Activity 5: Require the submittal of a post-construction BMP plan.** This activity is complete.

**Activity 6: Require an “as built” certification within 120 days of completion.** This activity is complete.

**Activity 7: Perform and/or require the performance of, at a minimum, an annual post-construction inspection and maintenance of BMPs on new construction sites.** This activity is complete.

**Activity 8: Require the developer/owner/operator to keep records of the inspection and maintenance activities.** This activity is complete.

**Activity 9: Require and/or perform adequate long-term operation and maintenance of post-construction BMPs through legal means.** This activity is complete.

### **3.5.3 Annual Reporting**

The City passed an ordinance (<https://www.mtnbrook.org/pbs/page/storm-water-management>) addressing post-construction requirements found in the NPDES permit. Landowners and developers are encouraged to incorporate LID and GI. Encouragement of LID/GI has been part of the permitting process.

The status of this element is complete. The ordinance containing post-construction requirements was adopted on August 13, 2018.

Assessment of this program shows that the City does not have a qualifying development that has been completed at this time. Protocols are in place for BMP inspections and reporting. No revisions are proposed at this time.

## 3.6 *Spill Prevention and Response*

### 3.6.1 Objective

The objective of the Spill Prevention and Response Program is to prevent, contain, and respond to spills that may discharge into the MS4.

### 3.6.2 Activities Complete or in Progress

**Activity 1: Investigate, respond and conduct response actions or coordinate with other agencies that may provide response actions.** This activity was completed.

**Activity 2: Develop a mechanism to track spills, responses, and clean-up activities for all spills.** This activity was completed.

**Activity 3: Use an acceptable mapping scheme to identify spill locations, inspection locations and chronic problem areas.** This activity has been completed.

**Activity 4: Implement a spill prevention/spill response plan.** This activity was completed.

**Activity 5: Provide training to appropriate personnel in spill and response procedures.** This activity was completed.

**Activity 6: Establish procedures to ensure that all spills are promptly reported.** This activity has been completed.

### 3.6.3 Annual Reporting

Mountain Brook's Fire Department has a mechanism to investigate, respond, and conduct response actions. Jefferson County also has an Emergency Management Agency (EMA) that coordinates and assists cities with spills and clean-up. The Fire Department and EMA document spills, responses, and clean-up activities. JCDH has the capability to exhibit spill locations, locations for inspections, and chronic problem areas in GIS. All fire response units have training to respond to spills. JCDH provides training videos for non-first responder personnel on spill prevention and response. Also, the City has procedures in place to ensure spills are promptly reported to the appropriate authority.

The status of this element is complete.

Assessment of this element indicates the program has been effective in spill response. No spills were reported during the period. Mountain Brook Fire Department has 64 staff members. Of these members, 64 have Fire Fighter I and II training, 45 are Hazardous Materials Awareness & Operations certified and 35 are certified Hazardous Materials Technicians. Certification details are on file with the Fire Department. There are no proposed revisions at this time.

## ***3.7 Pollution Prevention/Good Housekeeping for Municipal Operations***

### **3.7.1 Objective**

The objective of the Pollution Prevention/Good Housekeeping Program is to prevent and reduce the discharge of pollutants in storm water run-off from municipal operations to the MEP.

### **3.7.2 Activities Complete or in Progress**

**Activity 1: An inventory of all municipal facilities.** This activity is completed.

**Activity 2: Develop and implement a short and long term strategy and program for removal of trash from waterways and tributaries.** This activity is completed.

**Activity 3: Require appropriate Best Management Practices for events.** This activity is completed.

**Activity 4: Provide trash receptacles for high trash generated areas.** This activity is completed.

**Activity 5: Develop a Standard Operating Procedure detailing good housekeeping practices.** This activity is completed.

**Activity 6: Develop a program to inspect municipal facilities with checklists and procedures for correcting noted deficiencies.** This activity is completed.

**Activity 7: Develop a training program for municipal staff on good housekeeping.** This activity is completed.

**Activity 8: Assess the water quality impacts of flood management programs.** This activity is not applicable.

### **3.7.3 Annual Reporting**

An inventory of all municipal facilities has been compiled. The inventory is reviewed annually and updated as necessary (see **Appendix F**). Protocols are in place for the short and long term removal of trash from waterways and tributaries. A SOP for events is included in the SWMPP for SWMA cities. In 2011 the City adopted a SOP manual that contains procedures regarding this program element. The checklist and procedures used for inspections are also found in the SOP manual. Training is provided for municipal employees that covers this program element.



The status of this element is complete. The City does not have a flood management program at this time.

Assessment of this element indicates the program is effective in preventing and reducing the discharge of pollutants in storm water run-off. Staff completed required inspections of municipal facilities. Approximately 283 cubic yards and 353 bags of floatable materials and 11,920 cubic yards of leaves were removed from the MS4. There are no proposed revisions at this time.

### **3.8 *Application of Pesticides, Herbicides and Fertilizers (PHFs)***

#### **3.8.1 Objective**

The objective of the PHF Program is to reduce, to the maximum extent practicable, the discharge of pollutants related to the storage and application of PHFs applied by employees or contractors, to public rights of way, parks, and other public property.

#### **3.8.2 Activities Complete or in Progress**

**Activity 1: Identify all areas known to receive high application of PHFs and develop a program to detect improper usage.** This activity is complete.

**Activity 2: Require evidence of proper certification and licensing for all applicators.** This activity is complete.

**Activity 3: Maintain an inventory of on-hand PHFs with information about the formulation of the product.** This activity is complete.

**Activity 4: Maintain information on equipment use and maintenance.** This activity is complete.

**Activity 5: Have training on safe usage, storage and disposal of PHFs.** This activity is complete.

**Activity 6: Inspect and monitor facilities where PHFs are stored.** This activity is in progress.

**Activity 7: Have recordkeeping.** This activity is in progress.

#### **3.8.3 Annual Reporting**

The City has identified areas that receive application of PHFs and the amounts of application are documented. Responsible personnel are certified in the application of PHFs and maintain an inventory of products including formulation information. Equipment used is maintained as needed with documentation of service. Essential staff receive training on proper usage, storage and disposal of PHFs. PHF storage facilities are inspected as required.

Status of this element is complete.

Assessment of this element indicates the program is effective in reducing discharge of pollutants related to the storage and application of PHFs applied by employees or contractors. Areas of application include sidewalks, guardrails, and at public works See **Appendix G** for application details. The storage facility was inspected during this period. No revisions are reported at this time.

## ***3.9 Oils, Toxics, and Household Hazardous Waste Control***

### **3.9.1 Objective**

The objective of oil, toxics and household hazardous waste control program is to prohibit, to the maximum extent practicable, the discharge of hazardous waste into the MS4.

### **3.9.2 Activities Complete or in Progress**

**Activity 1: Making educational materials on this program available to the public.** This activity is complete.

**Activity 2: Advertise the location of used oil collection facilities.** This activity is complete.

**Activity 3: Provide employee training on spill prevention related to this program.** This activity is complete.

### **3.9.3 Annual Reporting**

Educational materials are available to the public at city hall, the inspections office and on the webpage. Locations of oil collection facilities are included in a storm water calendar and on the webpage. Spill prevention training is provided to employees involved in this activity.

Status of this element is complete.

Assessment of this element shows the program is effective. Information regarding oils, toxics, and household hazardous waste control is provided via printed and digital formats. A county wide household hazardous waste event was held on April 29, 2023. Birmingham Water Works included an announcement of the event on its billing insert. During this event a total of 128.7 tons of waste materials were collected. Additionally, three other electronic take back events were held which collected a total of over 22.6 tons. See **Appendix H** for a report of these events. Universal Environmental Services reported 661,477 gallons of used oil were received from Jefferson County area Express Oil Change Services, Inc., during this reporting period. Amounts for individual cities were not available. Spill prevention training was attended by 32 employees (see **Appendix H**). No revisions are proposed at this time.

### 3.10 *Industrial Storm Water Runoff*

#### 3.10.1 Objective

The objective of the industrial storm water runoff program is to inspect, monitor, and control pollutants in the storm water runoff from high-risk facilities.

#### 3.10.2 Activities Complete or in Progress

**Activity 1: Annual inspection of Municipal waste landfills, hazardous waste treatment, storage, disposal (TSD) and recovery facilities.** This activity is not applicable.

**Activity 2: Annual inspections of industrial facilities and high-risk commercial facilities.** This activity is complete.

**Activity 3: Use data collected from NPDES permitted facility to review sites.** This activity is complete.

#### 3.10.3 Annual Reporting

The City does not have any municipal waste landfills, hazardous waste treatment storage, disposal or recovery facilities. Annual inspections of industrial facilities and high-risk commercial facilities are completed by JCDH on behalf of the City. JCDH also uses Discharge Monitoring Reports (DMR) to review NPDES permitted facilities. The list of sites is reviewed and updated as needed each year and maintained in the annual report (see **Appendix I**).

The status of this element is complete.

Assessment of this elements shows there are four sites identified by the City as industrial and high-risk commercial facilities. Inspections were completed on three of the sites and one of the sites is NPDES permitted. DMRs were reviewed for these sites. There were no instances of exceedance. The inspections and DMR reports can be found in **Appendix I**. There are no proposed revisions at this time.

### 3.11 *Monitoring Program*

#### 3.11.1 Objective

The objective of the Monitoring Program is to provide data necessary to assess the effectiveness and adequacy of BMPs implemented under the SWMPP.

#### 3.11.2 Annual Reporting

Monitoring is accomplished by collecting grab samples from identified waterbodies at the frequency determined by the City’s permit with any rainfall data and associated weather conditions recorded. Samples are tested for the 17 parameters described in the permit. The sampling site location is based upon multiple factors that include, past sampling sites for longevity studies of water quality and ease of access. Analysis of the sampling data is used to assess the water quality of the streams and to identify potential water quality impairments.

The table below describes the sites that receive runoff from the City.

WATERSHED	ADEM PERMIT REQUIREMENTS	SITE NAME	LONGITUDE	LATITUDE	APPROXIMATE WATERSHED SIZE (SQ. MI.)*
SHADES CREEK	SHADES CREEK	MOU-SHC-069M	-86.759513	33.48057	16.5
FULLER CREEK	FULLER CREEK	VES-CAR-086T	-86.712698	33.479676	2.4

\*The watershed size was derived from the United State Geological Survey’s (USGS) Watershed Boundary Dataset in conjunction with USGS topographical maps. The information shown is an approximation of watershed size.

JCDH collected one sample from each of the sites. Overall, values reflect levels that are expected during dry conditions. Test results indicates the water quality has remained relatively constant.

Additionally, JCDH has accumulated data through a Fish Bioassessment Study (Study) which has been a valuable longitudinal study in determining the water quality of the watersheds within SWMA municipalities. The Study has been in existence since the fall of 2010. Each major stream has two sites; one located high in the watershed, and one located lower in the watershed. The procedures used for capturing fish are electrofishing and seining. After processing, all of the fish were released back into the stream. Some of the criteria used to determine the health of a stream include the number of fish species present, the species percentage of the total number present and a physical habitat assessment. The major finding of this study is that no significant trends in water quality have been identified. Therefore, the health of the streams appears to be stable with no signs of improvement or degradation over the length of the study. See **Appendix J** for the Study.

The table below shows grab sample data taken during dry conditions for the 2022-2023 reporting period. The minimum and maximum values represent 11 years of wet and dry sampling.

### 3.11.2.1 Grab Sample Data

Site Name	Sample Date	Test Name	Value	Minimum Value	Maximum Value	Units
MOU-SHC-069M	11/10/2022 1:03:00 PM	BIOCHEMICAL OXYGEN DEMAND	2.1	1	17	mg/L
MOU-SHC-069M	11/10/2022 1:03:00 PM	CHEMICAL OXYGEN DEMAND	17	5	99	mg/L
MOU-SHC-069M	11/10/2022 1:03:00 PM	DISSOLVED OXYGEN	5.81	2.72	15.15	mg/L
MOU-SHC-069M	11/10/2022 1:03:00 PM	E. COLI	22	0	1750	mg/L
MOU-SHC-069M	11/10/2022 1:03:00 PM	HARDNESS	171	11.6	171	mg/L
MOU-SHC-069M	11/10/2022 1:03:00 PM	NITROGEN, AMMONIA	0.2	0.1	1.54	mg/L
MOU-SHC-069M	11/10/2022 1:03:00 PM	NITROGEN, NITRATE/NITRITE	0.2	0.01	0.59	mg/L
MOU-SHC-069M	11/10/2022 1:03:00 PM	NITROGEN, TOTAL	0.7	0.44	2.03	mg/L
MOU-SHC-069M	11/10/2022 1:03:00 PM	NITROGEN, TOTAL KJELDAHL	0.5	0.5	2.03	mg/L
MOU-SHC-069M	11/10/2022 1:03:00 PM	OIL AND GREASE	5	1.4	26	mg/L
MOU-SHC-069M	11/10/2022 1:03:00 PM	PH	8.86	6.79	8.86	S.U.
MOU-SHC-069M	11/10/2022 1:03:00 PM	PHOSPHATE AS P	0.05	0.02	0.36	mg/L
MOU-SHC-069M	11/10/2022 1:03:00 PM	SPECIFIC CONDUCTANCE	350	70.2	747.1	UMHO/CM
MOU-SHC-069M	11/10/2022 1:03:00 PM	TEMPERATURE	18.0	4.5	28.6	Celsius
MOU-SHC-069M	11/10/2022 1:03:00 PM	TOTAL DISSOLVED SOLIDS	312	28	312	mg/L
MOU-SHC-069M	11/10/2022 1:03:00 PM	TOTAL SUSPENDED SOLIDS	2	1	486	mg/L
MOU-SHC-069M	11/10/2022 1:03:00 PM	TURBIDITY	1.16	0	307	NTU
VES-CAR-086T	11/9/2022 9:18:00 AM	BIOCHEMICAL OXYGEN DEMAND	4.1	1	11.9	mg/L
VES-CAR-086T	11/9/2022 9:18:00 AM	CHEMICAL OXYGEN DEMAND	38	10	53	mg/L

Site Name	Sample Date	Test Name	Value	Minimum Value	Maximum Value	Units
VES-CAR-086T	11/9/2022 9:18:00 AM	DISSOLVED OXYGEN	8.52	7.33	10.38	mg/L
VES-CAR-086T	11/9/2022 9:18:00 AM	E. COLI	730	22	730	mg/L
VES-CAR-086T	11/9/2022 9:18:00 AM	HARDNESS	132	40	132	mg/L
VES-CAR-086T	11/9/2022 9:18:00 AM	NITROGEN, AMMONIA	0.2	0.1	0.2	mg/L
VES-CAR-086T	11/9/2022 9:18:00 AM	NITROGEN, NITRATE/NITRITE	0.29	0.29	1.24	mg/L
VES-CAR-086T	11/9/2022 9:18:00 AM	NITROGEN, TOTAL	1.69	1.12	1.74	mg/L
VES-CAR-086T	11/9/2022 9:18:00 AM	NITROGEN, TOTAL KJELDAHL	1.4	0.5	1.4	mg/L
VES-CAR-086T	11/9/2022 9:18:00 AM	OIL AND GREASE	5	5	5	mg/L
VES-CAR-086T	11/9/2022 9:18:00 AM	PH	8.9	6.79	8.9	S.U.
VES-CAR-086T	11/9/2022 9:18:00 AM	PHOSPHATE AS P	0.81	0.02	0.81	mg/L
VES-CAR-086T	11/9/2022 9:18:00 AM	SPECIFIC CONDUCTANCE	290	90	290	UMHO/CM
VES-CAR-086T	11/9/2022 9:18:00 AM	TEMPERATURE	17.19	12.43	25.87	Celsius
VES-CAR-086T	11/9/2022 9:18:00 AM	TOTAL DISSOLVED SOLIDS	212	64	212	mg/L
VES-CAR-086T	11/9/2022 9:18:00 AM	TOTAL SUSPENDED SOLIDS	338	2	338	mg/L
VES-CAR-086T	11/9/2022 9:18:00 AM	TURBIDITY	143	0.45	143	NTU



## **4 Fiscal Analysis**

For the Permit year 2022-2023, SWMA was paid based on a \$5.00 per residence and \$15.00 per commercial rate by each member according to land usage. In accordance with Act 2014-439, Alabama Department of Revenue received 5% of the storm water fee collected.

The money collected by SWMA was used to help members meet ADEM permit requirements. The most recent fiscal information available is included in **Appendix K**.

**Signatory and Certification Requirements:**

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

\_\_\_\_\_  
Stewart H. Welch, III  
Mayor, City of Mountain Brook

\_\_\_\_\_  
Date

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